

#### Communication for industry

M2M Devices



#08983 Net Price: Call Unit: pcs

# Wireless router M2M, 1x 10/100 (LAN), LTE, 2xSIM (WOI-RMBX-Lx2IO)

The WOI-RMBX-Lx2IO is a small router made for wireless Ine WU-HMBX-LXZID is a small router made for wireless m2m applications. It is a compact device with all the standard interfaces powered by Telit embedded engine. Supporting UMTS/HSPA+/LTE it is dedicated for users seeking for easy and fast mobile Internet access. Internet connection is easily available and configurable via internet browser without any need of installing software or drivers for the device.

need of installing s
Network standard
GPRS: Yes
EDGE: Yes
UMTS: Yes
HSPA+: Yes
LTE: Yes
Band
Quad: Yes
GSM Modem
R\$232: Yes RS232: Yes USB: Yes

RS232: Yes
USB: Yes
Remote communication
RS232: Yes
RS485: Yes
LAN 10/100Mbps: Yes
WiFi: Optional
Operation
Inputs: Yes x4
Outputs: Yes x4
Outputs: Yes x4
Monitoring
I/O state: Yes/Yes
GPS location: Optional
Power supply ON: Yes
Temperature: Yes
External Memory
microSD card: Yes
Retrieving information from the interface and control
CAN: Optional
RS232: Yes
RS485: Yes
IZC: Yes
Monthus Yes

IZC: Yes Modbus: Yes M-Bus: available with external converter

M-Bus: available w Control SMS: Optional E-mail: Optional MMS: Optional DataCall: Optional DataCall: Optional Programmable Python: Yes C: Yes SIM card Dual: Yes Audio interface: Optional Battery powered: Optional

#### Industrial Switches



#07996

Net Price: 982,00 EUR Unit: pcs

# Managed switch, 8x 10/100 RJ-45 PoE+ + 2 slide-in SFP slots w/DDM / RJ-45, O/Open-Ring <10ms (ORing IPS-3082GC-24V)

IPS-3082GC-24V is managed redundant ring Ethernet switch with 8x10/100Base-T(X) ports with PoE (P.S.E.) function and 2xGigabit combo ports. With completely support of Ethernet redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IPS-3082GC-24V also supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IPS-3082GC-24V supports wide range 24-36VDC power inputs and generates 48VDC P.S.E. power output per port. Each IPS-3082GC-24V switch has 8X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will perside experts in a PS-5-three IPS-2008CG-24V switch provide power in a PoE setup. IPS-3082GC-24V support new DDM (Digital Diagnostic Monitoring) function, which can monitor instantly the status of electronic voltage, current and temperature. All function of IPS-3082GC-24V can be managed centralized by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40 to 70oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application with PoE function.

Physical Ports
10700 Base-T(X) Ports in RJ45 Auto MDI/MDIX w/PoE

(PSE): 8
1000 COMBO with SFP: 2
RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (9600bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1V for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1X for Authentication, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.1AB for LLDP (Link Layer Discovery Protocol), IEEE 802.3at PoE+ specification (up to 15.4 Watts per port for P.S.E)

(up to 15.4 Watts per port for P.S.E) MAC Table: 8192 MAC addresses Priority Queues: 4

Processing: Store-and-Forward Switching latency: 7 µs Switching bandwidth: 5.6 Gbps

Switching bandwidth: 5.6 Gbps
Max. Number of Available VLANs: 4096
IGMP multicast groups: 1024
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Supports
Q-in-Q VLAN for performance & security to expand the VLAN
space, Radius centralized password management, SNMPv3
encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security, SNTP for synchronizing of clocks over network, Support PTP Client (Precision Time Protocol) clock synchronization, DHCP Server / Client support, Support ModbusTCP, Port Trunk support, MVR (Multicast VLAN Registration) support

Modous I CP, Port Trunk support, MVR (Multicast VLAN Registration) support
Network Redundancy: STP, RSTP, MSTP, O-Ring,
Open-Ring, O-RSTP
DDM Function: Voltage, Current, Temperature
LED Indicators
Power /PoE Indicator: Green - Ready LED x 3, Green - PoE

Ring Master indicator: Green - Flashing to indicate system operated in O-Ring Master mode O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Amber - Indicate unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Amber for Duplex/Collision 1000X / Fiber port indicator: Green for port Link/Act

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Dual DC inputs. 24 ~ 36VDC on 6-pin terminal block Power consumption (typical): 11.52W

Overload current protection: present Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm

Weight: 1260g Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Regulatory approvals

EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4



Net Price: 659,00 EUR Unit: pcs

# Managed switch, 8x 10/100 RJ-45 PoE+ + 2 slide-in SFP slots w/DDM / RJ-45, O/Open-Ring <10ms (ORing IPS-3082GC-AT)

IPS-3082GC-AT is a managed Redundant Ring Ethernet switch with 8x10/100Base-T(X) ports with PoE (P.S.E.) function and 2xGigabit combo ports. With complete support of Ethernet redundancy protocols, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology.

IPS-3082GC also supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each over standard twisted-pair cable in an Ethernet network. Each IPS-3082GC switch has 8X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. IPS-3082GC supports new a DDM (Digital Diagnostic Monitoring) function, which can monitor instantly the status of electronic voltage, current and temperature. All functions of IPS-3082GC can be managed centralizedly by a powerful windows utility - Open-Vision. In addition, the wide operating temperature, range from -40 to  $70^{\circ}$ C, can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for highly-managed and Fiber Ethernet application with PoE function

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX w/PoE

(PSE): 8 1000 COMBO with SFP: 2 RS-232 Serial Console Port: RS-232 in RJ45 connector with

console cable (9600bps 8 N 1)

console cable (9600bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D
for STP (Spanning Tree Protocol), IEEE 802.1p for COS
(Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE
802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE
802.1x for Authentication, IEEE 802.3ad for LACP (Link
Aggregation Control Protocol), IEEE 802.1AB for LLDP (Link
Layer Discovery Protocol), IEEE 802.3at PoE+ specification
(up to 30 Watts per port for P.S.E)
MAC Table: 8192 MAC addresses
Priority Queues: 4

MÅC Table: 8192 MÅC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 5.6 Gbps
Max. Number of Available VLANs: 4096
IGMP multicast groups: 1024
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Supports
Q-in-Q VLAN for performance & security to expand the VLAN
space, Radius centralized password management, SNMPv3
encrypted authentication and access security

space, Radius centralized password mánagement, SNMPv3 encrypted authentication and access security Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security, SNTP for synchronizing of clocks over network, Support PTP Client (Precision Time Protocol) clock synchronization, DHCP Server / Client support, Support ModbusTCP, Port Trunk support, MVR (Multicast VLAN Registration) support

Network Redundancy: STP, RSTP, MSTP, O-Ring,

Open-Ring, O-RSTP
DDM Function: Voltage, Current, Temperature

LED Indicators

Power /PoE Indicator: Green - Ready LED x 3, Green - PoE

Ring Master indicator: Green - Flashing to indicate system

operated in O-Ring Master mode O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Amber - Indicate unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Amber for Duplex/Collision

1000X / Fiber port indicator: Green for port Link/Act

Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 50÷57VDC on 6-pin terminal

DIOCK
Power consumption (typical): 7.68W
Overload current protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm
Weight: 1185g
Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+185°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32





#07656 Net Price: 1 160,00 EUR Unit: pcs

#### Managed switch, 8x 10/1000 RJ-45 PoE + 4 slide-in SFP slots, O/Open-Ring <20ms (ORing IGPS-9084GP)

IGPS-9084GP is managed redundant ring PoE Ethernet switch with  $8\times10/100/1000Base-T(X)$  P.S.E. ports and  $4\times100/1000Base-X$  SFP ports. The switch support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IGPS-9084GP also support Power over Ethernet, a system to transmit electrical power up to 30 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IGPS-9084GP switch has 8x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And support wide operating temperature from -40 oC to 70 oC. IGPS-9084GP can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with PoE): 8

100/1000 SFP: 4

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX and 100Base-FX, IEEE 802.3ab for
1000Base-T, IEEE 802.z for 1000Base-X, IEEE 802.3x for 1000Base-T, IEEE 802.z for 1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.10 for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol), IEEE 802.3at PoE specification (up to 30 Watts per port for P.S.E.), IEEE 1588-2002
MAC Table: 8192 MAC addresses
Priority Queues: 8

port for P.S.E., IEEE 1588-2002
MAC Table: 8,192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 28 Gbps
Max. Number of Available VLANs: 256
IGMP multicast groups: 256 for each VLAN
Port rate limiting: User Define
Security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted
authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 30ms over 250
units, TOS/Diffserv supported, Quality of Service (802.1p) for
real-time traffic, VLAN (802.1q) with VLAN tagging and
GVRP supported, IGMP Snooping for multicast filtering, Port
configuration, Port status, Port statistics, Port monitoring, Port
security, Modbus TCP
Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP,
MSTP (RSTP/STP compatible)
LED Indicators

LED Indicators

Ring Master indicator: Green - indicates system operated in O-Ring Master mode Ring Indicator: Green - Indicates that the system operating in

O-Ring mode, Green Blinking - Indicates that the Ring is broken.

Fault indicator: Amber - Indicates unexpected event occurred 100/1000Base-X SFP Port Indicator: Green for port Link/Act 10/100/1000TX RJ45 port indicator: Dual color LED - Green for 1000Mbps Link/Act indicator. Amber for 10/100Mbps Link/Act indicator
PoE indicator: Green - PoE enabled LED x 8

Input power: Dual DC inputs. 50~57VDC on 6-pin terminal Power consumption (typical): 13.2Watts (power device not

Power consumption (typical): 13.2Watts (power device not included)
Overload current protection: present
Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 96.4 (W) x 105.5 (D) x 154 (H) mm
(3.8 x 4.15 x 6.06 inch)
Weight: 1205g
Environmental

Environmental

Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (CFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950 Warranty

Warranty

Warranty period: 5 years





Net Price: 1 260,00 EUR Unit: pcs

# Managed switch, 8x 10/1000 RJ-45 PoE + 4 slide-in SFP slots, O/Open-Ring <20ms (ORing IGPS-9084GP-60W)

IGPS-9084GP-60W is managed redundant ring PoE Ethernet switch with 8x10/100/1000Base-T(X) 60Watts P.S.E. ports and 4x100/1000Base-X SFP ports. The switch support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IGPS-9084GP-60W also support Power over Ethernet, a system to transmit electrical power up to 60 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IGPS-9084GP-60W switch has 8x10/100/1000Base-T(X) 60Watts P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And support wide operating temperature from -40 oC to 75 oC. IGPS-9084GP-60W can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with

10/1001 1000 Base-1(A) Forts in R043 Adio Microbial (Mail PoE): 8
100/1000 SFP: 4
RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX and 100Base-FX, IEEE 802.3ab for 100Base-T, IEEE 802.2 for 1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation

Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protoco), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol), IEEE 802.1s for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol), IEEE 802.3at PoE++ specification (up to 60 Watts per port for P.S.E.)
MAC Table: 8192 MAC addresses
Priority Queues: 8

Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 24 Gbps
Throughput (packet per second): 14.8Mpps@64Bytes packet
Max. Number of Available VLANs: 256
IGMP multicast groups: 256 for each VLAN

Port rate limiting: User Define Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN

security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.10) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security, Modbus TCP
Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP, MSTP (RSTP/STP compatible)
LED Indicators

LED Indicators

Ring Master indicator: Green - indicates system operated in O-Ring Master mode Ring Indicator: Green - Indicates that the system operating in

O-Ring mode, Green Blinking - Indicates that the Ring is broken.

broken.
Fault indicator: Amber - Indicates unexpected event occurred 100/1000Base-X SFP Port Indicator: Green for port Link/Act. 10/100/1000TX RJ45 port indicator: Dual color LED - Green for 1000Mbps Link/Act indicator. Amber for 10/100Mbps Link/Act indicator

PoE indicator: Green - PoE enabled LED x 8 Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 50~57VDC on 6-pin terminal

Power consumption (typical): 13.2Watts (power device not

included)
PoE Power Budget: 240 Watts

Overload current protection: present Reverse polarity protection: not present Physical Characteristic

Enclosure: IP-30
Dimension (W x D x H): 96.4 (W) x 105.5 (D) x 154 (H) mm (3.8 x 4.15 x 6.06 inch)

Weight: 1290g Environmental

Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+75°C (-40+167°F) Operating Humidity: 5%+95% Non-condensing

Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6





#07997 Net Price:

839,00 EUR Unit: pcs

# Managed switch, 8x 10/1000 RJ-45 PoE + 4 slide-in SFP slots, O/Open-Ring <20ms (ORing IGPS-9084GP-LA-24V)

IGPS-9084GP-LA-24V is a managed redundant ring PoE Ethernet switch with 4x10/100/1000Base-T(X) IEEE 802.3at P.S.E. ports and 2x100/1000Base-X SFP ports. The switch support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology.
IGPS-9042GP-24V also support Power over Ethernet, a system to transmit electrical power up to 30 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IGPS-9042GP-24V switch has 4x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And support wide operating temperature from -40°C to 75°C. IGPS-9042GP-24V can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed PoE

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with

and Fiber Ethernet application.

10/100/1000 Base-1(A) Forts in R343 Auto Microsoft (Main PoE): 8 100/1000 SFP: 4 RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1) Technology Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 10Base-T,

for 100Base-TX and 100Base-FX, IEEE 802.3ab for 100Base-T, IEEE 802.2 for 1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protoco), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol), IEEE 802.1s for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol), IEEE 802.3at PoE specification (up to 30 Watts per port for P.S.E.)
MAC Table: 8192 MAC addresses
Priority Queues: 8

Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 12 Gbps
Max. Number of Available VLANs: 4095
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define

Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius

centralized password management, SNMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Software Features: STP/RSTP (IEEE 802.1D/W), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security, Modbus TCP
Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP, MSTP (RSTP/CTD compatible)

MSTP (RSTP/STP compatible) LED Indicators

Power Indicator (PWR) Green: Power LED x 3

Ring Master indicator: Green - indicates system operated in O-Ring Master mode
Ring Indicator: Green - Indicates that the system operating in

O-Ring mode, Green Blinking - Indicates that the Ring is

broken.
Fault indicator: Amber - Indicates unexpected event occurred 100/1000Base-X SFP Port Indicator: Green for port Link/Act. 10/100/1000TX RJ45 port indicator: Dual color LED - Green for 1000Mbps Link/Act indicator. Amber for 10/100Mbps Link/Act indicator

PoE indicator: Green - PoE enabled LED x 8
Power

Input power: Dual DC inputs. 12 ~ 57VDC on 6-pin terminal block Power consumption (typical): 13.2 Watts (power device not

Power consumption (typical): 13.2 Watts (power device not included)
PoE Power Output: 12 ~ 24VDC - total power budget is 60Watts with maximum 30Watts per port, 24 ~ 57VDC - total power budget is 120Watts with maximum 30Watts per port
Overload current protection: present
Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 54.3 x 120 x 145.1 mm
Weight: 924a

Weight: 924g Environmental

Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+75°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing

Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6





#06520 Net Price:

677,00 EUR Unit: pcs

# Managed switch, 8x 10/1000 RJ-45 PoE + 4 slide-in SFP slots, O/Open-Ring <20ms, slim housing (ORing IGPS-9084GP-LA)

IGPS-9084GP-LA is layer2 managed PoE Ethernet switch with 8x10/100/1000Base-T(X) P.S.E. ports and 4x100/1000Base-X SFP ports. The switch support Ethernet Redundancy protocol, O-Ring (recovery time < 20ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IGPS-9084GP-LA also support Power over Ethernet, a system to transmit electrical power up to 30 watts. total PoE power budget is 240W max, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IGPS-9084GP-LA switch has 8x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And support wide operating temperature from -40 oC to 75 oC. IGPS-9084GP-LA can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with

PoE): 8 100/1000 SFP: 4 RS-232 Serial Console Port: RS-232 in RJ45 connector with

console cable (115200bps 8 N 1)

Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX and 100Base-FX, IEEE 802.3a for 1000Base-T, IEEE 802.z for 1000Base-X, IEEE 802.3x for 1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3d for LACP (Link Aggregation Control Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.10 for VLAN Tagging, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol), IEEE 802.3at PoE specification (up to 30 Watts per port for P.S.E.)

IEEE 802.3at PoE specification (up to 30 Watts per port for P.S.E.)

MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 24 Gbps
Throughput (packet per second): 17.856Mpps@64Bytes
Max. Number of Available VLANs: 256
IGMP multicast groups: 256 for each VLAN
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted
authentication and access security

authentication and access security

authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 30ms over 250
units, TOS/Diffserv supported, Quality of Service (802.1p) for
real-time traffic, VLAN (802.1Q) with VLAN tagging and
GVRP supported, IGMP Snooping for multicast filtering, Port
configuration, Port status, Port statistics, Port monitoring, Port
security, Modbus TCP
Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP,
MSTP (RSTP/STP compatible)
LED Indicators

LED Indicators

Ring Master indicators: Green - indicates system operated in O-Ring Master mode
Ring Indicator: Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the Ring is

Fault indicator: Amber - Indicates unexpected event occurred 100/1000Base-X SFP Port Indicator: Green for port Link/Act 10/100/1000TX RJ45 port indicator: Dual color LED - Green

for 1000Mbps Link/Act indicator. Amber for 10/100Mbps Link/Act indicator PoE indicator: Green - PoE enabled LED x 8

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 50~57VDC on 6-pin terminal

Power consumption (typical): 13.2Watts (power device not

included)
PoE Power Budget: 240 Watts
Hi-POT: 1.5KV AC
Overload current protection: present

Overload current protection: present
Reverse polarity protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 54.3 (W) x 108.3 (D) x 145.1 (H) mm
(2.13 x 4.26 x 5.71 inches)
Weight: 779g
Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068 2.7

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6



Net Price: 955,00 EUR Unit: pcs

#### Managed switch, 8x 10/1000 RJ-45 PoE + 4 slide-in SFP slots, O/Open-Ring <30ms (ORing RGPS-9084GP-P-EU)

RGPS-9084GP-P is managed redundant ring PoE Ethernet switch with 8x10/100/1000Base-T(X) P.S.E. ports and 4x100/1000Base-X SFP ports. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection), Open-Ring ,O-Chain,Fast Recovery,MRP and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology.

RGPS-9084GP-P also support Power over Ethernet, a system to transmit electrical power up to 30 watts (-40  $\sim 60^{\circ}C$  provided total 240watts max., and 60 to 75°C provided total 120watts max.), along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each RGPS-9084GP-P switch has 8x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And support wide operating temperature from -40 °C to 75 °C. RGPS-9084GP-P can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choices and highly-managed Ethernet application

#### Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with PoE): 8 (-40 ~ 60oC : provided total 240watts maximum, 60 ~ 75oC : provided total 120watts maximum) 1000 SFP: 4

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1) (support backup unit

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u EITHER STANDAMS: IEEE 802.3 for TUBASE1, IEEE 802.3v for 100 Base-TX, IEEE 802.3x for Flow control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1x for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1X for Authentication, IEEE 802.3ad for LACP (Link Aggregation Control Protocol)
MAC Table: 8192 MAC addresses
Priority Queue: 4

MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 24 Gbps
Max. Number of Available VLANs: 256
IGMP multicast groups: 128/VLAN
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted

centralized password management, SNMPv3 encrypted authentication and access security Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security, Modbus TCP, NTP server Network Redundancy: STP, RSTP, O-Ring, MSTP LED Indicators

Ring Master indicator: Green - indicates system operated in O-Ring Master mode Fault indicator: Amber - Indicates unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Amber for Duplex/Collision 10/100/1000TX RJ45 port indicator: Green for port Link/Act, Amber for 100Mpage for

Amber for 100Mbps

Fiber port indicator: Green for port Link/Act PoE indicator: Blue PoE LED x 8

Power

Input power: 100~240VAC, 50~60Hz (power supply included) Power consumption (typical): 260Watts (Typ.) Overload current protection: present

Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 443.7 x 230 x 44 mm

Weight: 3730 g Environmental

Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EI (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-1 (SS), EN61000-4-8, EN61000-4-7 (Fe Fall: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 EN61000-4-4

Vibration: IEC60068-2-6

Safety: EN60950 Warranty

Warranty period: 5 years





Net Price: 1 260,00 EUR Unit: pcs

#### Managed switch, 8x 10/1000 RJ-45 PoE + 4x 10/1000 RJ-45 + 2 slide-in SFP slots, O/Open-Ring <20ms (ORing IGPS-9842GTP)

ORing's managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. IGPS-9842GTP is managed redundant ring PoE Ethernet switch with 8x10/100/1000Base-T(X) P.S.E. ports and 4x10/100/1000Base-T(X) copper ports and 2x100/1000Base-X SFP ports which is compliant with EN50155 request. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) ,Open-Ring ,O-Chain,MRP and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IGPS-9842GTP also support Power over Ethernet, a system to transmit electrical power up to 30 watts (total 120watts max.), along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IGPS-9842GTP switch has 8x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And support wide operating temperature from -40 oC to 70 oC. IGPS-9842GTP can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed Ethernet application.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with

PoE): 8 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100/1000 SEP: 2

T00/1000 SFP: 2 RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX and 100Base-FX, IEEE 802.3ab for
1000Base-T, IEEE 802.7 for 1000Base-X, IEEE 802.3x for
Flow control, IEEE 802.3ad for LACP (Link Aggregation
Control Protocol), IEEE 802.1p for COS (Class of Service),
IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP
(Rapid Spanning Tree Protocol), IEEE 802.1x for
MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x for
Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery
Protocol), IEEE 802.3at PoE specification (up to 30 Watts per
port for P.S.E.)
MAC Table: 8192 MAC addresses
Priority Queues: 8

port for F.S.E.)
MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 28 Gbps
Max. Number of Available VLANs: 256
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security, Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted
authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 30ms over 250
units, TOS/Diffserv supported, Quality of Service (802.1p) for
real-time traffic, VLAN (802.1q) with VLAN tagging and
GVRP supported, IGMP Snooping for multicast filtering, Port
configuration, Port status, Port statistics, Port monitoring, Port
security, Modbus TCP
Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP,
MSTP (RSTP/STP compatible)
LED Indicators

LED Indicators

Power Indicators (PWR) Green: Power LED x 3
Ring Master indicator: Green - indicates system operated in
O-Ring Master mode

Ring Indicator: Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the Ring is

broken. Fault indicator: Amber - Indicates unexpected event occurred 100/1000Base-X SFP Port Indicator: Green for port Link/Act. 10/100/1000TX RJ45 port indicator: Dual color LED - Green for 1000Mbps Link/Act indicator. Amber for 10/100Mbps Link/Act indicator PoE indicator: Green - PoE enabled LED x 8

Input power: Dual DC inputs. 50~57VDC on 6-pin terminal

Power consumption (typical): 13.2Watts (power device not included)
PoE Power Output 50 ~ 57VDC: total power budget is

PoE Power Output 50 ~ 57VDC: total power budget is 240Watts with maximum 30Watts per port Overload current protection: present Reverse polarity protection: not present Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 74.3 x 109.2 x 153.6 mm Weight: 1270g Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+70°C (-40+185°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-6 (CS),





Net Price: 1 410,00 EUR Unit: pcs

#### Managed switch, 8x 10/1000 RJ-45 PoE + 4x 10/1000 RJ-45 + 2 slide-in SFP slots, O/Open-Ring <20ms (ORing IGPS-9842GTP-24V)

ORing's managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. IGPS-9842GTP is managed redundant ring PoE Ethernet switch with 8x10/100/1000Base-T(X) P.S.E. ports and 4x10/100/1000Base-T(X) copper ports and 2x100/1000Base-X SFP ports which is compliant with EN50155 request. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) ,Open-Ring ,O-Chain,MRP and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IGPS-9842GTP also support Power over Ethernet, a system to transmit electrical power up to 30 watts (total 120watts max.), along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IGPS-9842GTP switch has 8x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And support wide operating temperature from -40 oC to 70 oC. IGPS-9842GTP can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed Ethernet application.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with PoE): 8 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4

100/1000 SEP: 2

T00/1000 SFP: 2 RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX and 100Base-FX, IEEE 802.3ab for
1000Base-T, IEEE 802.7 for 1000Base-X, IEEE 802.3x for
Flow control, IEEE 802.3ad for LACP (Link Aggregation
Control Protocol), IEEE 802.1p for COS (Class of Service),
IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP
(Rapid Spanning Tree Protocol), IEEE 802.1x for
MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x for
Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery
Protocol), IEEE 802.3at PoE specification (up to 30 Watts per
port for P.S.E.)
MAC Table: 8192 MAC addresses
Priority Queues: 8

port for F.S.E.)
MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 28 Gbps
Max. Number of Available VLANs: 256
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security, Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted
authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 30ms over 250
units, TOS/Diffserv supported, Quality of Service (802.1p) for
real-time traffic, VLAN (802.1q) with VLAN tagging and
GVRP supported, IGMP Snooping for multicast filtering, Port
configuration, Port status, Port statistics, Port monitoring, Port
security, Modbus TCP
Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP,
MSTP (RSTP/STP compatible)
LED Indicators

LED Indicators

Power Indicators (PWR) Green: Power LED x 3
Ring Master indicator: Green - indicates system operated in
O-Ring Master mode

Ring Indicator: Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the Ring is

broken. Fault indicator: Amber - Indicates unexpected event occurred 100/1000Base-X SFP Port Indicator: Green for port Link/Act. 10/100/1000TX RJ45 port indicator: Dual color LED - Green for 1000Mbps Link/Act indicator. Amber for 10/100Mbps Link/Act indicator

PoE indicator: Green - PoE enabled LED x 8

Input power: Dual DC inputs. 12 ~ 57VDC on 6-pin terminal

Power consumption (typical): 13.2Watts (power device not included)
PoE Power Output: 12 ~ 24VDC - total power budget is

60Watts with maximum 30Watts per port, 24 ~ 57VDC - total power budget is 120Watts with maximum 30Watts per port

Overload current protection: present
Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 74.3 x 109.2 x 153.6 mm
Weight: 1270g

Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A

Vibration: IEC60068-2-6 Safety: EN60950 Warranty period: 5 years

#### #07980

Net Price: 1 800,00 EUR Unit: pcs



#07981

Net Price: 2 100,00 EUR Unit: pcs

# Managed switch, 22x 10/1000 RJ-45 PoE + 2x 10/100/1000 COMBO Ports with SFP + 2 slide-in SFP slots, O/Open-Ring <30ms, 19" (ORing RGPS-92222GCP-NP-LP)

RGPS-92222GCP-NP series are Gigabit managed redundant ring PoE Ethernet switch with 22x10/100/1000Base-T(X) IEEE802.3at P.S.E. ports and 2xGigabit combo IEEE802.3at P.S.E. ports and 2x100/1000Base-X SFP ports. These switches support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RGPS-92222GCP-NP series also support Power over Ethernet, a system to transmit electrical power up to 30 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each RGPS-92222GCP-NP switch has (22+2)x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection And RGPS-92222GCP-NP / -P models support wide operating temperature from -40 oC to 70 oC. RGPS-92222GCP-NP series can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber PoE Ethernet application.

Physical Ports 10/10/01000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with PoE): 22

Toc.): 22 Gigabit Combo port with 10/100/1000Base-T(X) P.S.E. and 100/1000Base-X SFP ports: 2 100/1000 SFP: 4

RS-232 Serial Console Port: RS-232 in DB9 connector with console cable (115200bps, 8, N, 1) Technology

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3 to for 10DBaseT, IEEE 802.1 to fro 10DBaseT(X), IEEE 802.3 to Flow control, IEEE 802.1 D for STP (Spanning Tree Protocol), IEEE 802.1 p for COS (Class of Service), IEEE 802.1 Q for VLAN Tagging, IEEE 802.1 W for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1 X for Authentication, IEEE 802.3 ad for LACP (Link Aggregation Control Protocol), IEEE 802.3 at PoE specification (up to 30 Watts per port for P.S.E.)
MAC Table: 8192 MAC addresses
Priority Queues: 8

Priority Queues: 8

Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 52 Gbps
Max. Number of Available VLANs: 256
IGMP multicast groups: 128/VLAN
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1a). b. segregate and secure network traffic Radius (802.1q ) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security

Network Redundancy: STP, RSTP, O-Ring, MSTP LED Indicators Ring Master indicator: Green - indicates system operated in

Ring Master indicator: Green - indicates system operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring mode, Green Blinking - Indicates that the Ring is broken.
Fault indicator: Amber - Indicates unexpected event occurred 10/100/1000TX RJ45 port indicator: Green for port Link/Act Fiber port indicator: Green for port Link/Act PoE indicator: Green PoE LED x 24

Power Input power: 100~240VAC with power socket Power supply: 450 Watts power supply included (320W power budget)
Power consumption (typical): 37Watts (Typ.)

Overload current protection: present Reverse polarity protection: not present Physical Characteristic

Enclosure: IP-30

Dimension (W x D x H): 431mm x 342mm x 44mm Weight: 5000 g

Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+60°C (-40+140°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (CFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950

Warranty period: 5 years

#### Managed switch, 22x 10/1000 RJ-45 PoE + 2x 10/100/1000 COMBO Ports with SFP + 2 slide-in SFP slots, O/Open-Ring <30ms, 19" (ORing RGPS-92222GCP-NP-P)

RGPS-92222GCP-NP series are Gigabit managed redundant ring PoE Ethernet switch with 22x10/100/1000Base-T(X) IEEE802.3at P.S.E. ports and 2xGigabit combo IEEE802.3at P.S.E. ports and 2x100/1000Base-X SFP ports. These switches support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RGPS-92222GCP-NP series also support Power over Ethernet, a system to transmit electrical power up to 30 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each RGPS-92222GCP-NP switch has (22+2)x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection And RGPS-92222GCP-NP / -P models support wide operating temperature from -40 oC to 70 oC. RGPS-92222GCP-NP series can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber PoE Ethernet application.

Physical Ports 10/10/01000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with

Gigabit Combo port with 10/100/1000Base-T(X) P.S.E. and 100/1000Base-X SFP ports: 2 100/1000 SFP: 4

RS-232 Serial Console Port: RS-232 in DB9 connector with console cable (115200bps, 8, N, 1)

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3 to for 10DBaseT, IEEE 802.3 to for Flow control, IEEE 802.1 for STP (Spanning Tree Protocol), IEEE 802.1 p for COS (Class of Service), IEEE 802.1 Q for VLAN Tagging, IEEE 802.1 w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1 for Authentication, IEEE 802.3 and for LACP (Link Aggregation Control Protocol), IEEE 802.3 at PoE specification (up to 30 Watts per port for P.S.E.)
MAC Table: 8192 MAC addresses

MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 52 Gbps
Max. Number of Available VLANs: 256
IGMIP multicast groups: 128/VLAN
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius (802.1g) to segregate and secure network traffic, Radius cock. 14 ) to sepregate airu secure interwirk traine, Nadius centralized password management, SNMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security

Network Redundancy: STP, RSTP, O-Ring, MSTP

Remark regularity. 31F, 131F, 51Ring, M31F LED Indicators Ring Master indicator: Green - indicates system operated in

Ring Master indicator: Green - indicates system operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring mode, Green Blinking - Indicates that the Ring is broken.
Fault indicator: Amber - Indicates unexpected event occurred 10/100/1000TX RJ45 port indicator: Green for port Link/Act Fiber port indicator: Green for port Link/Act PoE indicator: Green PoE LED x 24

Power Input power: 100~240VAC with power socket Power supply: 1000 Watts power supply included (720W power budget)
Power consumption (typical): 37Watts (Typ.)

Overload current protection: present Reverse polarity protection: not present Physical Characteristic

Enclosure: IP-30

Dimension (W x D x H): 431mm x 342mm x 44mm Weight: 5730 g

Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+60°C (-40+140°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (CFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fail: IEC60068-2-32

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950 Warranty period: 5 years





Net Price: 2 820,00 EUR Unit: pcs

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#### #07985

Net Price: 3 160,00 EUR Unit: pcs

# Managed switch, 24x 10/1000 RJ-45 PoE + 4 1G/10G SFP+ slots, O/Open-Ring <30ms, L3 (ORing RGPS-R9244GP+-LP)

RGPS-R9244GP+-P is Layer-3 Gigabit managed redundant ring PoE Ethernet switch with 24x10/100/1000Base-T(X) IEEE802.3at P.S.E. ports and 4x1G/10GBase-X SFP+ ports. The switch support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RGPS-R9244GP+-P also support Power over Ethernet, a system to transmit electrical power up to 30 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each RGPS-R9244GP+-P switch had 24x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for ristance) that will provide power in a PoE connection. And RGPS-R9244GP+-P support wide operating temperature from -40 oC to 60 oC. RGPS-R9244GP+-P can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber PoE Ethernet application.

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with

RS-232 Serial Console Port: RS-232 in DB9 connector with console cable (115200bps, 8, N, 1)

console cable (115200bps, 8, N, 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.3u
for 10Gigabit Ethernet, IEEE 802.1D for STP (Spanning Tree
Protocol), IEEE 802.1p for COS (Class of Service), IEEE
802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid
Spanning Tree Protocol), IEEE 802.1X for Authentication,
IEEE 802.3ad for LACP (Link Aggregation Control Protocol),
IEEE 802.3at PoE specification (up to 30 Watts per port for
P.S.E.) P.S.E.)

MAC Table: 8192 MAC addresses Priority Queues: 8

Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching latency: 7 µs
Switching bandwidth: 128 Gbps
Max. Number of Available VLANs: 256
IGMP multicast groups: 128/VLAN
Port rate limiting: User Define
Security Features: Hardware routing, RIP and static routing,
IEEE 1588V clock synchronization, IEEE 802.1D Bridge,
auto MAC address learning/aging and MAC address (static),
Multiple Registration Protocol (MRP), MSTP (RSTP/STP
compatible), Redundant Ring (O-Ring) with recovery time
less than 30ms over 250 units, TOS/Diffserv supported,
Quality of Service (802.1p) for real-time traffic, VLAN
(802.1Q) with VLAN tagging, IGMP v2/v3 Snooping, IP-baser (802.10) with VLAN tagging, IGMP v2/v3 Snooping, IP-based bandwidth management, Application-based QoS management, DOS/DDOS auto prevention, Port configuration, status, statistics, monitoring, security, DHCP Server/Client, DHCP Relay, Modbus TCP, DNS client proxy, SMTP Client

Network Redundancy: STP, RSTP, O-Ring, MSTP

LED Indicators
Ring Master indicator: Green - indicates system operated in

Ring Master indicator: Green - indicates system operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring mode, Green Blinking - Indicates that the Ring is broken.
Fault indicator: Amber - Indicates unexpected event occurred 10/100/1000TX RJ45 port indicator: Green for port Link/Act, Amber for 100Mbps
Fiber port indicator 10/10G: Green for port Link/Act

PoE indicator: Blue PoE LED x 24 Power

Input power: 100~240VAC with power socket Power supply: 400W Power supply: 400W
Power consumption (typical): 75Watts (Typ.)

Overload current protection: present

Reverse polarity protection: not present Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 431 x 342 x 44 mm

Weight: 6520 g Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+60°C (-40+140°F)
Operating Humidity: 5%+95% Non-condensing

Regulatory approvals

EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4

EMS. ENG1000-4-2 (ESJ), ENG1000-4-3 (KS), EI (EFT), ENG1000-4-5 (Surge), ENG1000-4-6 (CS), ENG1000-4-8, ENG1000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: ENG0950

Warranty period: 5 years

# Managed switch, 24x 10/1000 RJ-45 PoE + 4 1G/10G SFP+ slots, O/Open-Ring <30ms, L3 (ORing RGPS-R9244GP+-P)

RGPS-R9244GP+-P is Layer-3 Gigabit managed redundant ring PoE Ethernet switch with 24x10/100/1000Base-T(X) IEEE802.3at P.S.E. ports and 4x1G/10GBase-X SFP+ ports. The switch support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RGPS-R9244GP+-P also support Power over Ethernet, a system to transmit electrical power up to 30 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each RGPS-R9244GP+-P switch had 24x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And RGPS-R9244GP+-P support wide operating temperature from -40 oC to 60 oC. RGPS-R9244GP+-P can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber PoE Ethernet

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with

TG/10CBase-X with SFP+ port: 4 RS-232 Serial Console Port: RS-232 in DB9 connector with console cable (115200bps, 8, N, 1)

console cable (115200bps, 8, N, 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.3e
for 10Gigabit Ethernet, IEEE 802.1D for STP (Spanning Tree
Protocol), IEEE 802.1p for COS (Class of Service), IEEE
802.1Q for VLAN Tagging, IEEE 802.1x for RSTP (Rapid
Spanning Tree Protocol), IEEE 802.1x for Authentication,
IEEE 802.3ad for LACP (Link Aggregation Control Protocol),
IEEE 802.3at PoE specification (up to 30 Watts per port for
P.S.E.)

P.S.E.) P.S.E.)
MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 128 Gbps
Max. Number of Available VLANs: 256
IGMP multicast groups: 128/VLAN
Port rate limiting: User Define
Security Features: Hardware routing R

For rate limiting: User Define Security Features: Hardware routing, RIP and static routing, IEEE 1588v2 clock synchronization, IEEE 802.1D Bridge, auto MAC address learning/aging and MAC address (static), Multiple Registration Protocol (MRP), MSTP (RSTP)STP compatible), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAV (802.10) with VI AN tagging IGMP v/2/V3 Separation IP had (802.1Q) with VLAN tagging, IGMP v2/v3 Snooping, IP-based bandwidth management, Application-based QoS management, DOS/DDOS auto prevention, Port

configuration, status, statistics, monitoring, security, DHCP Server/Client, DHCP Relay, Modbus TCP, DNS client proxy, Network Redundancy: STP, RSTP, O-Ring, MSTP

Network Redundancy: STP, RSTP, O-Ring, MSTP LED Indicators
Ring Master indicator: Green - indicates system operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring mode, Green Blinking - Indicates that the Ring is broken.
Fault indicator: Amber - Indicates unexpected event occurred 10/100/1000TX RJ45 port indicator: Green for port Link/Act, Amber for 100Mbps
Fiber port indicator 1G/10G: Green for port Link/Act
Poer indicator: Blue Poer LED x 24

PoE indicator: Blue PoE LED x 24

Power
Input power: 100~240VAC with power socket
Power supply: 1000 Watts power supply included (-40 ~ 55°C
PoE output 720W Max., 55 ~ 60°C PoE output 360W Max.)
Power consumption (typical): 75Watts (Typ.)
Overload current protection: present
Reverse polarity protection: not present
Physical Characteristic
Explorers IP 30

Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 431 x 342 x 44 mm
Weight: 6520 g
Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+60°C (-40+140°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty
Warranty period: 5 years





Net Price: 1 410,00 EUR Unit: pcs

#### Managed switch, L3, 8x 10/1000 RJ-45 PoE + 4 slide-in SFP slots, O/Open-Ring <20ms (ORing IGPS-R9084GP)

IGPS-R9084GP is Layer-3 managed redundant ring PoE Ethernet switch with 8x10/100/1000Base-T(X) P.S.E. ports and 4x100/1000Base-X SFP ports. The IGPS-R9084GP supports Layer-3 routing for better network performance on large-scale LANs into multiple subnets to support long-haul and EMI immunity communications. The hardware Layer-3 switch is optimized to transmit data as fast as Layer-2 switches. The switch support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IGPS-R9084GP also support Power over Ethernet, a system to transmit electrical power up to 30 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IGPS-R9084GP switch has 8x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection and support wide operating temperature from -40°C to 75°C. IGPS-R9084GP can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX (with

PoE): 8 100/1000 SFP: 4

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1) Technology Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u

Ethernet Štandards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX and 100Base-FX, IEEE 802.3ab for 1000Base-T, IEEE 802.7 for 1000Base-T, IEEE 802.3 x for Flow control, IEEE 802.3 and for LACP (Link Aggregation Control Protocol), IEEE 802.1 p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1 w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1 x for Authentication, IEEE 802.1 AB for LLDP (Link Layer Discovery Protocol), IEEE 802.3 at PoE specification (up to 30 Watts per port for P.S.E.)
MAC Table: 8192 MAC addresses
Priority Queues: 8

MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 24 Gbps
Max. Number of Available VLANs: 256
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted
authentication and access security
Software Features: Hardware routing, RIP and static routing,
IEEE 1588v2 clock synchronization, IEEE 802.1D Bridge,

Software Features: Hardware routing, RIP and static routing, IEEE 1588v2 clock synchronization, IEEE 802.1D Bridge, auto MAC address learning/aging and MAC address (static), Multiple Registration Protocol (MRP), RSTP/MSTP (IEEE 802.1w/s), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging, Voice VLAN, IGMP v2/v3 Snooping, IP-based bandwidth management, Application-based QoS management, DOS/DDOS auto prevention, Port configuration, status, statistics, monitoring, security, DHCP

configuration, status, statistics, monitoring, security, DHCP Server/Client/snooping, DHCP Relay, Modbus TCP, ARP inspection, SMTP Client Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP,

MSTP (RSTP/STP compatible) LED Indicators

Power Indicator (PWR): Green - Power LED x 2

Ring Master indicator: Green - indicates system operated in O-Ring Master mode

Ring Indicator: Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the Ring is

broken.
Fault indicator: Amber - Indicates unexpected event occurred 100/1000Base-X SFP Port Indicator: Green for port Link/Act. 10/100/1000TX RJ45 port indicator: Green for Link/Act indicator, Dual color LED for speed indicator ~ Green for 1000Mbps / Amber for 100Mbps / Off-light for 10Mbps PoE indicator: Green - PoE enabled LED x 8 Power

Input power: Dual DC inputs. 50~57VDC on 6-pin terminal block
Power consumption (typical): 19Watts (PoE output not

included)
Overload current protection: present

Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 96.4 (W) x 108.5 (D) x 154 (H) mm
Weight: 1560g
Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+75°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals

Vibration: IEC60068-2-6 Safety: EN60950

Warranty Warranty period: 5 years



#06589

Net Price: 457,00 EUR Unit: pcs

## Smart switch, 4x 10/100 RJ-45 PoE + 2x 10/100 RJ-45, O-Ring <10ms (ORing IPS-2042TX)

IPS-2042TX/2042FX are lite-managed Redundant Ring Ethernet switches with 4x10/100TX ports with PoE PSE function and 2x10/100TX or 2x100Base-FX ports. IPS series support Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IPS switch has 4X10/100TX PSE (Power Sourcing Equipment) ports. PSE is a device (switch or hub for instance) that will provide power in a PoE setup. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection) and RSTP/STP (IEEE 802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IPS-2042TX / 2042FX can be managed centralized and convenient by a powerful windows utility, Open-Vision. The wide operating temperature range from -40 to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for easy managed and Fiber Ethernet application.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX w/PoE

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 2

10/100 Base-1(X) Ports in RJ45 Auto MDI/MDIX: 2 Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1v for STP (Spanning Tree Protocol), IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1AB dla LLDP (Link Layer Discovery Protocol), IEEE 802.3af PoE specification (up to 25 Watts per port for PSE) MAC Table: 2048 MAC addresses

Priority Queues: 4

Processing: Store-and-Forward Switching bandwidth: 1.0 Gbps

VLAN: Port Based Security Features: Enable/disable ports, VLAN to segregate and secure network traffic Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Soliware seatures. STANDTR (LELE 202: 10/W), reduction Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics, Port monitoring, Port security

Network Redundancy: STP, RSTP, O-Ring

LED Indicators
Power / Ready indicator: Green - Ready LED x 3 Ring Master indicator: Green - Flashing to indicate system operated in O-Ring Master mode O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Yellow - Indicate unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Triple DC inputs. 12÷48VDC on 7-pin terminal block, 12÷45VDC on power jack

Power consumption (typical): 5W Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 52mm x 106mm x 144mm

Weight: 696a

Environmental Storage Temperature: -40÷85°C (-40÷185°F)

storage I emperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IFC60068-2-2

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950

Warranty period: 5 years

#06590

Net Price: 584,00 EUR Unit: pcs

# Smart switch, 4x 10/100 RJ-45 PoE + 2x 100 MM SC, O-Ring <10ms (ORing IPS-2042FX-MM-SC)

IPS-2042TX/2042FX are lite-managed Redundant Ring Ethernet switches with 4x10/100TX ports with PoE PSE function and 2x10/100TX or 2x100Base-FX ports. IPS series support Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IPS switch has 4X10/100TX PSE (Power Sourcing Equipment) ports PSE is a device (switch or hub for instance) that will provide power in a PoE setup. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection) and RSTP/STP (IEEE 802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IPS-2042TX / 2042FX can be managed centralized and convenient by a powerful windows utility, Open-Vision. The wide operating temperature range from -40 to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for easy managed and Fiber Ethernet application.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX w/PoE

100Base-FX Multimode ports (2km, 1310nm, SC connector):

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
TOV and 100BaseFX. IEEE 802.3x for Flow Ethernet Standards: IEEE 802.3 for 10base1, IEEE 802.3v for 100Base5(X) and 10bBase5(X), IEEE 802.3x for Flow control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1AB dla LLDP (Link Layer Discovery Protocol), IEEE 802.3af PoE specification (up to 25 Watts per port for PSE) MAC Table: 2048 MAC addresses

Priority Queues: 4 Processing: Store-and-Forward

Switching bandwidth: 1.0 Gbps VLAN: Port Based

Security Features: Enable/disable ports, VLAN to segregate and secure network traffic

anu secure network traffic Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics, Port monitoring, Port security Network Redundancy: STP, RSTP, O-Ring

LED Indicators

Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - Flashing to indicate system operated in O-Ring Master mode

O-Ring indicator: Green - Indicate system operated in O-Ring

mode
Fault indicator: Yellow - Indicate unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Triple DC inputs. 12÷48VDC on 7-pin terminal block, 12÷45VDC on power jack Power consumption (typical): 7W Overload current protection: present

Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 52mm x 106mm x 144mm
Weight 706

Environmental

Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4

(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950





#07646 Net Price: 491,00 EUR Unit: pcs

# Smart switch, 4x 10/100 RJ-45 PoE + 2x 100 SFP, O-Ring <10ms (ORing IPS-2042P)

IPS-2042TX/2042FX are lite-managed Redundant Ring Ethernet switches with 4x10/100TX ports with PoE PSE function and 2x100Base-FX SFP ports. IPS series support Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IPS switch has 4X10/100TX PSE (Power Sourcing Equipment) ports. PSE is a device (switch or hub for instance) that will provide power in a PoE setup. With completely support of Ethernet
Redundancy protocol, O-Ring (recovery time < 10ms over
250 units of connection) and RSTP/STP (IEEE 802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IPS-2042TX / 2042FX can be managed centralized and convenient by a powerful windows utility, Open-Vision. The wide operating temperature range from -40 to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for easy managed and Fiber Ethernet application.

Physical Ports
10700 Base-T(X) Ports in RJ45 Auto MDI/MDIX w/PoE

100 Base-FX SFP Ports: 2

100 Base-FX SFP Ports: 2 Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow control, IEEE 802.1b for STP (Spanning Tree Protocol), IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.14B dla LLDP (Link Layer Discovery Protocol), IEEE 802.3af PoE specification (up to 25 Watts per port for PSE) MAC Table: 2048 MAC addresses Priority Queues: 4 Processing: Store-and-Forward

Processing: Store-and-Forward Switching bandwidth: 1.0 Gbps

VLAN: Port Based Security Features: Enable/disable ports, VLAN to segregate and secure network traffic Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Soliware Features. STF/NCTE 202: 10/Wi, recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics, Port monitoring, Port security
Network Redundancy: STP, RSTP, O-Ring

Network Redundancy: STP, RSTP, O-Ring
LED Indicators
Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - Flashing to indicate system
operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Yellow - Indicate unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow

Fiber port indicator: Green for port Link/Act, Yellow for Link

Relay: Relay output to carry capacity of 1A at 24VDC

Hower Input power: Triple DC inputs. 12+48VDC on 7-pin terminal block, 12+45VDC on power jack Power consumption (typical): 7W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 54.2mm x 106.1mm x 145.4mm

Weight: 709g Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huminuty, 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-72 Free Fall: IEC60068-2-32 Vibration; IEC60068-2-32

Vibration: IEC60068-2-6

Safety: EN60950

Warranty

Warranty period: 5 years



#06592 Net Price: 641,00 EUR Unit: pcs

## Smart switch, 4x 10/100 RJ-45 PoE + 2x 100 SM SC, O-Ring <10ms (ORing IPS-2042FX-SS-SC)

IPS-2042TX/2042FX are lite-managed Redundant Ring Ethernet switches with 4x10/100TX ports with PoE PSE function and 2x10/100TX or 2x100Base-FX ports. IPS series support Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IPS switch has 4X10/100TX PSE (Power Sourcing Equipment) ports. PSE is a device (switch or hub for instance) that will provide power in a PoE setup. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection) and RSTP/STP (IEEE 802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IPS-2042TX / 2042FX can be managed centralized and convenient by a powerful windows utility, Open-Vision. The wide operating temperature range from -40 to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for easy managed and Fiber Ethernet application.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX w/PoE

100Base-FX Singlemode ports (30km, 1550nm, SC

connector): 2

Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10base1, IEEE 802.3u for 10base57(X) and 10bBaseFX, IEEE 802.3x for Flow control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1AB dla LLDP (Link Layer Discovery Protocol), IEEE 802.3af PoE specification (up to 25 Watts per port for PSE) MAC Table: 2048 MAC addresses

Priority Queues: 4 Processing: Store-and-Forward

Switching bandwidth: 1.0 Gbps VLAN: Port Based

Security Features: Enable/disable ports, VLAN to segregate

and secure network traffic Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics, Port

monitoring, Port security
Network Redundancy: STP, RSTP, O-Ring

LED Indicators

Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - Flashing to indicate system
operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Yellow - Indicate unexpected event occurred

10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision Fiber port indicator: Green for port Link/Act, Yellow for Link

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Flower: Triple DC inputs. 12+48VDC on 7-pin terminal block, 12+45VDC on power jack Power consumption (typical): 7W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic

Enclosure: IP-30

Dimension (W x D x H): 52mm x 106mm x 144mm Weight: 709g

Environmental

Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(FET) EN61000 4.5 (ESD), EN61000-4-6 (CSS)

(CFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Snock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950 Warranty Warranty period: 5 years



#07990

Net Price: 398,00 EUR Unit: pcs

#### Unmanaged switch, 4x 10/100 RJ-45 PoE + 2x 100 MM SC, slim housing (ORing IPS-1042-FA-MM-SC)

PS-1042FA series are unmanaged PoE Ethernet switches with 4 x 10/100Base-T(X) P.S.E. and 2x100Base-FX ports. IPS-1042FA series supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IPS-1042FA series has 4X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. IPS-1042FA series support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 70oC can satisfy most of operating environment.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100Base-SX Multimode ports (2km, 1310nm, SC connector):

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X), IEEE 802.3x for Flow control, 802.3at PoE

specyfication
MAC Table: 2048 MAC addresses
Processing: Store-and-Forward

LED Indicators

Power indicator: Green - Power LED x 2
Fault indicator: Amber - Indicate PWR1 or PWR2 failure
10/100TX RJ45 port Indicator: Green for port Link/Act., Green

for PoE power injected 100Base-FX Fiber Port Indicator: Green for port Link/Act.

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Input power: Dual DC inputs. 50~57VDC on 6-pin terminal block

Dlock
Power consumption (typical): 6.78W
Overload current protection: present
Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm
Weight: 305

Environmental

Storage Temperature: -40+85°C
Operating Temperature: -40+70°C
Operating Humidity: 5%+95% Non-condensing

Operating Humindity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1





#07992 Net Price: 461,00 EUR Unit: pcs

# Unmanaged switch, 4x 10/100 RJ-45 PoE + 2x 100 MM SC, slim housing (ORing IPS-1042-FX-MM-SC-24V)

IPS-1042FX-24V series are unmanaged PoE Ethernet switches with 4 x 10/100Base-T(X) P.S.E. and 2x100Base-FX ports. IPS-1042FX-24V series supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IPS-1042FX-24V series has 4X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. IPS-1042FX-24V series support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 70oC can satisfy most of operating environment.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100Base-SX Multimode ports (2km, 1310nm, SC connector):

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, 802.3at PoE specyfication MAC Table: 2048 MAC addresses

Processing: Store-and-Forward LED Indicators

Power indicator: Green - Power LED x 2

Fault indicator: Amber - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port Indicator: Green for port Link/Act., Green for PoE power injected 100Base-FX Fiber Port Indicator: Green for port Link/Act.

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12~57VDC on 6-pin terminal

Power consumption (typical): 6.78W
Overload current protection: present
Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 41mm x 94.9m x 144.3mm

Weight: 530g Environmental

Storage Temperature: -40÷85°C

Operating Temperature: -40÷70°C Operating Humidity: 5%÷95% Non-condensing

Operating Humbiny: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950-1 Warranty

Warranty period: 5 years



#07993 Net Price: 520,00 EUR Unit: pcs

## Unmanaged switch, 4x 10/100 RJ-45 PoE + 2x 100 SM SC (ORing IPS-1042-FX-SS-SC-24V)

IPS-1042FX-24V series are unmanaged PoE Ethernet switches with 4 x 10/100Base-T(X) P.S.E. and 2x100Base-FX ports. IPS-1042FX-24V series supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IPS-1042FX-24V series has 4X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. IPS-1042FX-24V series support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 70oC can satisfy most of operating environment.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100Base-SX Multimode ports (30km, 1310nm, SC connector): 2

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, 802.3at PoE

specyfication
MAC Table: 2048 MAC addresses
Processing: Store-and-Forward

LED Indicators

Power indicator: Green - Power LED x 2
Fault indicator: Amber - Indicate PWR1 or PWR2 failure
10/100TX RJ45 port Indicator: Green for port Link/Act., Green

for PoE power injected 100Base-FX Fiber Port Indicator: Green for port Link/Act. Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12~57VDC on 6-pin terminal block

Diock
Power consumption (typical): 5.6W
Overload current protection: present
Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 41mm x 94.9m x 144.3mm

Weight: 530g Environmental

Storage Temperature: -40+85°C
Operating Temperature: -40+70°C
Operating Humidity: 5%+95% Non-condensing

Operating Huminity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1

Warranty period: 5 years

Warranty



#07991

Net Price: 430,00 EUR Unit: pcs

# Unmanaged switch, 4x 10/100 RJ-45 PoE + 2x 100 SM SC, slim housing (ORing IPS-1042-FA-SS-SC)

PS-1042FA series are unmanaged PoE Ethernet switches with 4 x 10/100Base-T(X) P.S.E. and 2x100Base-FX ports. IPS-1042FA series supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IPS-1042FA series has 4X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. IPS-1042FA series support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 70oC can satisfy most of operating environment.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100Base-SX Multimode ports (30km, 1310nm, SC connector): 2

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X), IEEE 802.3x for Flow control, 802.3at PoE

specyfication
MAC Table: 2048 MAC addresses
Processing: Store-and-Forward

LED Indicators

Power indicator: Green - Power LED x 2
Fault indicator: Amber - Indicate PWR1 or PWR2 failure
10/100TX RJ45 port Indicator: Green for port Link/Act., Green

for PoE power injected 100Base-FX Fiber Port Indicator: Green for port Link/Act. Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 50~57VDC on 6-pin terminal block

Dlock
Power consumption (typical): 5.6W
Overload current protection: present
Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm

Environmental

Storage Temperature: -40+85°C
Operating Temperature: -40+70°C
Operating Humidity: 5%+95% Non-condensing

Operating Humindity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950-1





#07972 Net Price: 441,00 EUR Unit: pcs

# Unmanaged switch, 4x 10/1000 RJ-45 PoE + 2x 1000 SFP , slim housing (ORing IGPS-1042GP-24V)

IGPS-1042GP-24V is an slim type unmanaged PoE Ethernet switch with P.S.E. function. IGPS-1042GP-24V supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IGPS-1042GP-24V has 4x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports, and 2x100/1000Base-X SFP port. The SFP port optical network speed can be set by changing the settings of the DIP-Switch below. IGPS-1042GP-24V supports wide range 50~57VDC power inputs and generates 50VDC P.S.E. power output per port. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. The wide operating temperature range from -40oC to 70oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for PoE Ethernet application.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 with P.S.E. Auto

MDI/MDIX: 4 100/1000Base-X SFP Ports: 2

100/100/Base-X, SFP Ports: 2
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3z for
1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3at Poe
specification (up to 30 Watts per port for P.S.E.)
MAC Table: 1024 MAC addresses
Processing: Store-and-Forward
LED Indicators

LEU Indicators
Power Indicator: Green - Power LED x 2
Fault indicator: Amber - Indicate PWR1 or PWR2 failure
10/100/1000T1X RJ45 port Indicator and PoE indicator (P1 ~
P4): Green for port Link/Act., Green for PoE power injected
1000X SFP port Indicator (P5 ~ P6): Green for port Link/Act Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 24-36 VDC on 6-pin terminal

Power consumption (typical): 6.5W Overload current protection: present Reverse polarity protection: not present Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm Weight: 410g Environmental

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -10+60°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (CFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950 Warranty

Warranty Warranty period: 5 years



#07971 Net Price: 393,00 EUR Unit: pcs

# Unmanaged switch, 4x 10/1000 RJ-45 PoE + 2x 1000 SFP , slim housing (ORing IGPS-1042GPA)

IGPS-1042GPA is an slim type unmanaged PoE Ethernet switch with P.S.E. function. IGPS-1042GPA supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IGPS-1042GPA has 4x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports, and 2x100/1000Base-X SFP port. The SFP port optical network speed can be set by changing the settings of the DIP-Switch below. IGPS-1042GPA supports wide range 50~57VDC power inputs and generates 50VDC P.S.E. power output per port. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. The wide operating temperature range from -40oC to 70oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for PoE Ethernet application

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 with P.S.E. Auto

100/1000Base-X SFP Ports: 2

Tourioubase-X SPP Ports: 2
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3z for
1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3at Poe
specification (up to 30 Watts per port for P.S.E.)
MAC Table: 1024 MAC addresses

Processing: Store-and-Forward LED Indicators

Power indicator: Green - Power LED x 2

Fower Indicator: Green - Power LED X; Fault indicator: Amber - Indicate PWR1 or PWR2 failure 10/100/1000TX RJ45 port Indicator and PoE indicator (P1 ~ P4): Green for port Link/Act., Green for PoE power injected 1000X SFP port Indicator (P5 ~ P6): Green for port Link/Act

Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 50~57VDC on 6-pin terminal

Power consumption (typical): 6.3W
Overload current protection: present
Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm

Weight: 410g Environmental

Storage Temperature: -40÷85°C (-40÷185°F)
Operating Temperature: -40÷70°C (-40÷185°F)

Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950

Warranty
Warranty period: 5 years

#08432

Net Price: Call Unit: pcs

#### Unmanaged switch, 4x 10/100/1000 RJ-45 PoE, Gigabit PoE Ethernet, PCle slot (ORing IGPCS-E140)

IGPCS-E140 is a PCI-Express unmanaged Gigabit PoE Ethernet switch card with P.S.E. function, IGPCS-E140 supports 4x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE port. IGPCS-E140 could be installed on any IPC motherboard with PCle socket to make the IPC/embedded system able to communication with other Ethernet devices. Therefore, IGPCS-E140 is the best solution to IPC/embedded system to feature Ethernet

Physical Ports

10/100/1000Base-T(X) Ports in RJ45 With P.S.E.: 4

10/100/100UBase-T(A) POIS INTEGED TO TECHNOLOGY
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX, IEEE 802.3ab for 1000Base-T, IEEE 802.3x
for Flow control, IEEE 802.3at POE specification (total power
budget is 65Watts with maximum 30Watts per port)
MAC Table: 8192 MAC addresses

Priority Queues: 4
Processing: Store-and-Forward

LED Indicators

Power Indicators

Power Indicator: Green - Power LED x 1

PoE Power Indicator: Green - PoE power LED x 1

10/100/1000Base-T(X) RJ45 port indicator and PoE indicator:

Green for port Link/Act, Green for PoE power injected.

Input power: PCIe bus-powered(for switch card system) / 12VDC of ATX power(for PoE)
Power consumption (typical): 4.2 W (power device not

included)
POE output power: IEEE802.3at/af compliant, up to 30 Watts
per port, totally 65 Watts maximum
Overload current protection: present
Physical Characteristic
Dimension (WxDxH): 21.3mm x 178mm x 121mm

Weight: 150g

Weight: 150g
Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -10-60°C (14+140°F)
Operating Humidity: 5%+95°N Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Operating System Supports

Operating System Supports
Microsoft System: DOS / Win98 / WinMe / WinXP / Win2000 /
WinServer2003 / Vista / WinServer 2008 / Win7 / Win8

Unix (Linux): Linux for Kernel 3.x / 2.6.x / 2.4 x, FreeBSD for 7.x / 8.0, SCO OpenServer for 6 / UnixWare 7.1.x Novell: Novell client for DOS (ODI driver) / Novell server

driver (Support OS 5.x and 6.x) Others: MacOS 10.4 / 10.5 / 10.6 / 10.7





#07645 Net Price: 365,00 EUR Unit: pcs

# Unmanaged switch, 4x 10/1000 RJ-45 PoE, 1x 10/1000 RJ-45, 1x 1000 SFP socket, slim housing (ORing IGPS-1411GTPA)

IGPS-1411GTPA is an unmanaged PoE Ethernet switch with P.S.E. function. IGPS-1411GTPA support Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IGPS-1411GTPA has 4X10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. The wide operating temperature range from -40oC to 70oC can satisfy most of operating environment. Therefore, the switch is one

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX with PoE (PSE): 4

of the most reliable choices for PoE Ethernet application.

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 1 100/1000Base-X SFP port: 1

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10DBaseT(X), IEEE 802.3ab for 100DBaseT, IEEE 802.3x for Flow control, 802.3at PoE specyfication MAC Table: 1024 MAC addresses
Processing: Store-and-Forward
LED Indicators

LED Indicators

Power indicator: Green - Power LED x 2

Power indicator: Green - Power LED x 2 Fault indicator: Amber - Indicate PWR1 or PWR2 failure 10/100/1000Base-T(X) RJ45 port indicator and PoE indicator (P1+P4): Green for port Link/Act., Green for power injected 10/100/1000Base-T(X) RJ45 port indicator (P5): Green for port Link/Act., Amber for 100Mbps indicator 100/1000Base-X port indicator: Green for port Link/Act. SFP Speed DIP-Switch 10/2: DIP-Switch 10/2:

SFP speed setting to 100Mbps DIP-Switch 1 (OFF) and DIP-Switch 2 (OFF) - SFP speed setting to 1000Mbps DIP-Switch

DIP-Switch 1: Power-1 failed warning - (ON) enable, (OFF) disable
DIP-Switch 2: Power-2 failed warning - (ON) enable, (OFF)

disable

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Dual DC inputs. 50~57VDC on 6-pin terminal

Power consumption (typical): 6.2W

Overload current protection: present Reverse polarity protection: not present Physical Characteristic

Enclosure: IP-30
Dimension (W x D x H): 26.1(W) x 94.9(D) x 144.3(H) mm

Dimension (W x D x H): 26.1(W) x 94.9(D) x 144.3(H) mm Weight: 407 g
Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IFC60068-2-27

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty

Warranty period: 5 years



#08433 Net Price: 420,00 EUR Unit: pcs

# Unmanaged switch, 4x 10/1000 RJ-45 PoE, 1x 10/1000 RJ-45, 1x 1000 SFP socket, slim housing (ORing IGPS-1411GTP-24V)

IGPS-1411GTP-24V is an unmanaged PoE Ethernet switch with P.S.E. function. IGPS-1411GTP-24V supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IGPS-1411GTP-24V has 4x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports, 1 additional Gigabit port, and 1x100/1000Base-X SFP port. The SFP port optical network speed can be set by changing the settings of the DIP-Switch below. IGPS-1411GTP-24V supports wide range 12~36VDC power inputs and generates 50VDC P.S.E. power output per port. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. The wide operating temperature range from -40oC to 60oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for PoE Ethernet application.

Physical Ports

Fifysical Folia 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX with PoE+ (P.S.E.): 4 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 1 100/1000Base-X SFP port: 1

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 100Base-T, IEEE 802.3x for Flow control, 802.3at POE specyfication MAC Table: 1024 MAC addresses

Processing: Store-and-Forward LED Indicators Power indicator: Green - Power LED x 2

Power Indicator: Green - Power LED x 2
Fault indicator: Amber - Indicate PWR1 or PWR2 failure
10/100/1000Base-T(X) RJ45 port indicator and PoE Indicator
(P1+P4): Green for port Link/Act., Green for power injected
10/100/1000Base-T(X) RJ45 port Indicator (P5): Green for
port Link/Act., Amber for 100Mbps Indicator
100/1000Base-X SFP port indicator: Green for port Link/Act.
SFP Speed DIP-Switch
100 RD Switch 100 RD Script (CAN) and RD Script (CAN)

SIP - Speed DIP-Switch 1 (ON) and DIP-Switch 2 (ON) -SIP speed setting to 100Mbps DIP-Switch 1 (OFF) and DIP-Switch 2 (OFF) - SIP speed setting to 1000Mbps

DIP-Switch
DIP-Switch 1: Power-1 failed warning - (ON) enable, (OFF)

DIP-Switch 2: Power-2 failed warning - (ON) enable, (OFF) disable

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12~36VDC on 6-pin terminal

Power consumption (typical): 6.5W Overload current protection: present Reverse polarity protection: not present Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 41 (W) x 94.9 (D) x 144.3(H) mm Weight: 580 g

Environmental

Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+60°C (-40+140°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (CFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fail: IEC60068-2-32

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1

Warranty Warranty period: 5 years



#07989

Net Price: 398,00 EUR Unit: pcs

## Unmanaged switch, 8x 10/100 RJ-45 PoE, slim housing (ORing IPS-1080-24V)

IPS-1080 is slim type unmanaged PoE Ethernet switch with P.S.E. function. IPS-1080A supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IPS-1080A switch has 8X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. The wide operating temperature range from -40oC to 70oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for PoE Ethernet

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, 802.3at PoE

specyfication
MAC Table: 2048 MAC addresses

Processing: Store-and-Forward LED Indicators Power indicator: Green - Power LED x 2 Fault indicator: Amber - Indicate PWR1 or PWR2 failure 10/100TX R.45 port Indicator: Green for port Link/Act., Green for PoE power injected

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 2x 12~57VDC on 6-pin terminal block

Diock
Power consumption (typical): 4.5W
Overload current protection: present
Reverse polarity protection: not present
Physical Characteristic
Enclosure: IP-30

Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm Weight: 412g

Environmental

Storage Temperature: -40+85°C
Operating Temperature: -40+70°C
Operating Humidity: 5%+95% Non-condensing

Operating Humindity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty

Warranty period: 5 years





#07988 Net Price: 318,00 EUR Unit: pcs

# Unmanaged switch, 8x 10/100 RJ-45 PoE, slim housing (ORing IPS-1080A)

IPS-1080A is slim type unmanaged PoE Ethernet switch with P.S.E. function. IPS-1080A supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IPS-1080A switch has 8X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. The wide operating temperature range from -40oC to 70oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for PoE Ethernet

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X), IEEE 802.3x for Flow control, 802.3at POE

specyfication
MAC Table: 2048 MAC addresses

Processing: Store-and-Forward
LED Indicators
Power indicator: Green - Power LED x 2
Fault indicator: Amber - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port Indicator: Green for port Link/Act., Green

for PoE power injected Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Dual DC inputs. 50VDC on 6-pin terminal block

Power consumption (typical): 4.5W Overload current protection: present

Reverse polarity protection: not present Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm

Weight: 412g Environmental

Storage Temperature: -40÷85°C

Operating Temperature: -40÷70°C
Operating Humidity: 5%÷95% Non-condensing

Operating Humidity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950-1

Warranty period: 5 years



#06517 Net Price: 609,00 EUR Unit: pcs

# Unmanaged switch, 8x 10/1000 RJ-45 PoE + 2x 1000 SFP, slim housing (ORing IGPS-1082GP)

IGPS-1082GP series is full Gigabit unmanaged PoE Ethernet switches with 8x10/100/1000Base-T(X) P.S.E. ports and 2x100/1000Base-X SFP ports. IGPS-1082GP series also support Power over Ethernet, a system to transmit electrical power up to 30 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IGPS-1082GP series switch has 8x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And support wide operating temperature from -40 oC to 75 oC. Therefore, the switch is one of the most reliable choices for rolling stock and highly-unmanaged PoE Ethernet application.

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 with P.S.E. Auto

MDI/MDIX: 8 100/1000Base-X SFP Ports: 2

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3z for 1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3af/at PoE specification (up to 30 Watts per port for P.S.E.)
MAC Table: 8k MAC addresses
Prepagating: Stan and Exceed

Processing: Store-and-Forward Switch Properties: Switching latency less than 7us, Switching bandwidth 20Gbps

Jumbo frame: Up to 9.6K Bytes

Packet buffer: 4Mbit LED Indicators

Power indicator: Green - Power LED x 3
Fault indicator: Amber - Indicate power failed even warning 10/100/1000TX RJ45 port Indicator and PoE indicator (P1 ~ P4): Green for port Link/Act., Green for PoE power injected 1000X SFP port Indicator: Green for port Link/Act

DIP-Switch 1: Power-1 failed warning (ON) enable, (OFF)

DIP-Switch 2: Power-2 failed warning (ON) enable, (OFF)

DIP-Switch 3: DIP switch 3 and 4 (ON) SFP speed setting to

100Mbps

DIP-Switch 4: DIP switch 3 and 4 (OFF) SFP speed setting to 1000Mbps(default) Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Power Input power: Dual DC inputs. 50-57 VDC on 6-pin terminal

Power consumption (typical): 11W PoE Power budget: 180W

Overload current protection: present Reverse polarity protection: present Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 54.3(W) x 108.3(D) x 145.1(H) mm (2.13x4.26x5.71 inches.)
Weight: 889g

Rought 6009 Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+75°C (-40+167°F)

Operating Temperature: -40+75°C (-40+167°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMC: EN55032, EN55024(CE EMC), FCC Part 15B,
EN61000-3-2, EN61000-3-3
EMI: CISPR 32, EN55032, FCC Part 15B class A
EMS: IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC
61000-4-4 (EFT), IEC 61000-4-5 (Surge), IEC 61000-4-6
(CS), IEC 61000-4-8 (PFMF), IEC 61000-4-11 (DIP)
Shock: IEC60068-2-27
Free Fall: IEC60068-2-3

Vibration: IEC60068-2-6 Safety: EN60950-1

Warranty period: 5 years



#06518 Net Price: 677,00 EUR Unit: pcs

#### Unmanaged switch, 8x 10/1000 RJ-45 PoE + 2x 1000 SFP, slim housing (ORing IGPS-1082GP-24V)

IGPS-1082GP series is full Gigabit unmanaged PoE Ethernet switches with 8x10/100/1000Base-T(X) P.S.E. ports and 2x100/1000Base-X SFP ports. IGPS-1082GP series also support Power over Ethernet, a system to transmit electrical power up to 30 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IGPS-1082GP series switch has 8x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And support wide operating temperature from -40 oC to 75 oC. Therefore, the switch is one of the most reliable choices for rolling stock and highly-unmanaged PoE Ethernet application

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 with P.S.E. Auto

MDI/MDIX: 8

100/1000Base-X SFP Ports: 2

Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX,, IEEE 802.3z for 1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3af/at PoE specification (up to 30 Watts per port for P.S.E.) MAC Table: 8k MAC addresses Processing: Store-and-Forward Switch Properties: Switching latency less than 7us, Switching bandwidth 20Gbps
Jumbo frame: Up to 9.6K Bytes
Packet buffer: 4Mbit
LED Indicators

LED Indicators

Power indicator: Green - Power LED x 3

Fower Indicator: Green - Power LED x 3
Fault indicator: Amber - Indicate power failed even warning
10/100/1000TX RJ45 port Indicator and PoE indicator (P1 ~
P4): Green for port Link/Act., Green for PoE power injected
1000X SFP port Indicator: Green for port Link/Act

DIP-Switch 1: Power-1 failed warning (ON) enable, (OFF)

DIP-Switch 2: Power-2 failed warning (ON) enable, (OFF)

DIP-Switch 3: DIP switch 3 and 4 (ON) SFP speed setting to

100Mbps
DIP-Switch 4: DIP switch 3 and 4 (OFF) SFP speed setting to 1000Mbps(default)

Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Power

Input power: Dual DC inputs. 12-57 VDC on 6-pin terminal

block
Power consumption (typical): 11W
PoE Power budget: 60W at 12~24VDC, 120W at 24~57VDC
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic

Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 54.3(W) x 108.3(D) x 145.1(H) mm (2.13x4.26x5.71 inches.) Weight: 916g Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+75°C (-40+167°F)
Operating Humidity: 5%+95% Non-condensing

Regulatory approvals EMC: EN55032, EN55024(CE EMC), FCC Part 15B, EN61000-3-2, EN61000-3-3 EMI: CISPR 32, EN55032, FCC Part 15B class A

EMS: IEC 61000-4-2 (ESD), IEC 61000-4-3 (RS), IEC 61000-4-4 (EFT), IEC 61000-4-5 (Surge), IEC 61000-4-6 (CS), IEC 61000-4-8 (PFMF), IEC 61000-4-11 (DIP)

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950-1 Warranty Warranty period: 5 years





#07642 Net Price: 414,00 EUR Unit: pcs

IGPS-1080-24V is the unmanaged Gigabit PoE Ethernet switch with P.S.E. function and relay output of 24VDC at 1A IGPS-1080-24V supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IGPS-1080-24V supports wide-range 24~36VDC power inputs and generates 50VDC P.S.E. power output per port. IGPS-1080-24V PoE switch has 8 x 10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for PoE Ethernet application.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX with PoE (PSE): 8

Technology Technology

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, 802.3at PoE specyfication

MAC Table: 2048 MAC addresses

Processing: Store-and-Forward

LED Indicators

Power indicator: Green - Power LED x 2

Fault indicator: Amber - Indicate PWR1 or PWR2 failure

10/100/1000TX RJ45 port Indicator: Green on only for 1000Mbit, Green and Amber on for 100Mbit, Amber on only for 10Mbit Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12–36VDC on 6-pin terminal block.

Power consumption (typical): 7,8W Overload current protection: present Reverse polarity protection: not present Physical Characteristic

Enclosure: IP-30
Dimension (W x D x H): 41(W) x 94.9(D) x 144.3(H) mm
Weight: 452 g Environmental

Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty

Warranty Warranty period: 5 years



#08166 Net Price: 400,00 EUR Unit: pcs

# Unmanaged switch, 8x 10/1000 RJ-45 PoE, slim housing (ORing IGPS-1080A)

IGPS-1080A is unmanaged PoE Ethernet switch with P.S.E. function. IGPS-1080A supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IGPS-1080A switch has 8X10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. The wide operating temperature range from -40 to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for PoE Ethernet application.

IGPS-1080A can be used in connecting several PoE P.D. Ethernet devices like IP-Camera or other Ethernet devices. In addition, there are two different power inputs at terminal block to avoid interruption caused by power down. When the primary DC power input fails, the backup power input will take over immediately to guarantee a non-stop operation.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 with P.S.E. Auto MDI/MDIX: 8

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, 802.3at PoE specyfication MAC Table: 2048 MAC addresses

Processing: Store-and-Forward LED Indicators Power indicator: Green - Power LED x 2 Fault indicator: Amber - Indicate PWR1 or PWR2 failure 10/100/1000TX RJ45 port Indicator: Green for port Link/Act., Green for PoE power injected

Fault contact Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs, 50VDC on 6-pin terminal block Power consumption (typical): 8W PoE Power budget: 180W

Overload current protection: present Reverse polarity protection: not present Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm

Weight: 390g Environmental

Storage Temperature: -40+85°C
Operating Temperature: -40+70°C
Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty

Warranty

Warranty period: 5 years

#06654 Net Price: 184,00 EUR Unit: pcs

# Unmanaged switch, 4x 10/100 RJ-45 + 1x 100 MM SC, slim housing (ORing IES-1041FX-MM-SC)

IES-1041FX/1042FX series are unmanaged Ethernet switches with 4 x 10/100Base-T(X) and 100Base-FX ports. IES-1041FX/1042FX series support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100Base-FX Multimode ports (2km, 1310nm, SC connector):

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X) and 100BaseFX, IEEE 802.3x for Flow

MAC Table: 1024 MAC addresses Processing: Store-and-Forward LED Indicators Power indicator: Green - Power LED x 2

Fault indicator: Yellow - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 5W

Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 33mm x 95mm x 144mm

Dimension (W x D x H): 33mm x 95mm x 144mm Weight: 378g Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950 Warranty Warranty period: 5 years



#06655 Net Price: 198,00 EUR Unit: pcs

# Unmanaged switch, 4x 10/100 RJ-45 + 1x 100 SM SC, slim housing (ORing IES-1041FX-SS-SC)

IES-1041FX/1042FX series are unmanaged Ethernet switches with 4 x 10/100Base-T(X) and 100Base-FX ports. IES-1041FX/1042FX series support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100Base-FX Singlemode ports (30km, 1310nm, SC connector): 1 Technology

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X) and 100BaseFX, IEEE 802.3x for Flow

for 100Base I (X) and 100BaseFX, IEEE control
MAC Table: 1024 MAC addresses
Processing: Store-and-Forward
LED Indicators
Power indicator: Green - Power LED x 2

Fault indicator: Yellow - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 5W

Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 33mm x 95mm x 144mm

Dimension (W x D x H): 33mm x 95mm x 144mm Weight: 378g Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950

Warranty
Warranty period: 5 years



#06656 Net Price: 227,00 EUR Unit: pcs

# Unmanaged switch, 4x 10/100 RJ-45 + 2x 100 MM SC, slim housing (ORing IES-1042FX-MM-SC)

IES-1041FX/1042FX series are unmanaged Ethernet switches with 4 x 10/100Base-T(X) and 100Base-FX ports. IES-1041FX/1042FX series support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100Base-FX Multimode ports (2km, 1310nm, SC connector):

Fethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow

MAC Table: 1024 MAC addresses

Processing: Store-and-Forward LED Indicators Power indicator: Green - Power LED x 2

Fault indicator: Yellow - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 7W

Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 33mm x 95mm x 144mm

Dimension (W x D x H): 33mm x 95mm x 144mm Weight: 382g Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950

Warranty
Warranty period: 5 years



#06657 Net Price: 255,00 EUR Unit: pcs

# Unmanaged switch, 4x 10/100 RJ-45 + 2x 100 SM SC, slim housing (ORing IES-1042FX-SS-SC)

IES-1041FX/1042FX series are unmanaged Ethernet switches with 4 x 10/100Base-T(X) and 100Base-FX ports. IES-1041FX/1042FX series support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100Base-FX Singlemode ports (30km, 1550nm, SC connector): 2 Technology

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X) and 100BaseFX, IEEE 802.3x for Flow

MAC Table: 1024 MAC addresses

Processing: Store-and-Forward
LED Indicators
Power indicator: Green - Power LED x 2

Fault indicator: Yellow - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 7W Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 33mm x 95mm x 144mm

Dimension (W x D x H): 33mm x 95mm x 144mm Weight: 382g Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950





#07961 Net Price: 74,10 EUR Unit: pcs

#06652 Net Price: 112,00 EUR Unit: pcs

#08159 Net Price: 92,00 EUR Unit: pcs

## Unmanaged switch, 5x 10/100 RJ-45, slim housing (ORing IES-1050)

IES-1050 is unmanaged Ethernet switch with 5x10/100TX ports. With very compact size of housing, you can install IES-1050 easily. In addition, IES-1050 is with rigid IP-30 housing design and can operate under harsh environment.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 5

Technology
Ethernet Standards; IEEE 802.3 for 10BaseT, IEEE 802.3u

Ethernet Standards: IEEE 802.3 for 10Base1, for 10bBase1, for 10bBase1X), IEEE 802.3 for 10bw control MAC Table: 2048 MAC addresses
Processing: Store-and-Forward
LED Indicators
Power indicator: Green - Power LED x 1

10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision
Power

Input power: 9÷30VDC Power consumption (ty Power consumption (typical): 3W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 87.6mm x 23.75mm x 102.2mm

Weight: 305g Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -10+60°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Geraling Hullindy, 3/8-93/8 Notification Regulatory approvals

EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4

(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),

EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty

Warranty period: 5 years

## Unmanaged switch, 5x 10/100 RJ-45, slim housing (ORing IES-1050A)

IES-1050A is unmanaged Ethernet switches with 5 or 8 x 10/100Base-T(X) ports. IES-1050A support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 5

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u

for 100BaseT(X), IEEE 802.3x for Flow control MAC Table: 2048 MAC addresses Processing: Store-and-Forward

LED Indicators

Power indicators

Fower indicator: Green - Power LED x 2

Fault indicator: Yellow - Indicate PWR1 or PWR2 failure

10/100TX R.45 port indicator: Green for port Link/Act, Yellow

for Duplex/Collision Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Power Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 3.5W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 33mm x 95mm x 144mm

Weight: 382g Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950

Warranty Warranty period: 5 years

Unmanaged switch, 5x 10/100 RJ-45, slim housing (ORing IES-150B)

IES-150B is an unmanaged Ethernet switch with 5x10/100Base-T(X) ports. With very mini size of housing, you can install IES-150B easily. In addition, IES-150B is with rigid IP-30 housing design and can operate under harsh

environment. The extended operating temperature range from -40 to 70°C is ready and can satisfy most requirement of

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 5

Torriou Base-I (A) Ports in RJ45 Auto MDI/MDIX: 5 Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control MAC Table: 2048 MAC addresses Processing: Store-and-Forward

LED Indicators

Power indicators: Green - Power LED x 2
Fault indicator: Yellow - Indicate PWR1 or PWR2 failure
10/100TX RJ45 port indicator: Green for port Link/Act, Yellow
for Duplex/Collision

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 4-pin terminal block

Power consumption (typical): 3W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 26.1mm x 70mm x 95mm

Weight: 205g Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Humbolist: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-36

Vibration: IEC60068-2-6

Safety: EN60950 Warranty

Warranty period: 5 years



#### #06610

# Unmanaged switch, 5x 10/100 RJ-45, slim housing (ORing IES-C1050)

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 5

Input power: single. 12÷48VDC on 4-pin terminal block

Environmental
Storage Temperature: -10+60°C
Operating Temperature: -10+60°C
Operating Humidity: 5%+95% Non-condensing

Warranty period: 5 years

Net Price: 70.00 EUR Únit: pcs

10/100 Base-1(X) Ports in RJ45 Auto MDI/MDIX: 5 Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control MAC Table: 2048 MAC addresses Processing: Store-and-Forward LED Indicators

Power indicators

Power indicator: Green - Power LED x 2

Fault indicator: Yellow - Indicate PWR1 or PWR2 failure

10/100TX RJ45 port indicator: Green for port Link/Act, Yellow
for Duplex/Collision

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Power consumption (typical) 3W Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 26mm x 64mm x 103mm Environmental

Operating Huminity: 5/6-95/6/Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: JEC60068-2-36

Vibration: IEC60068-2-6 Safety: EN60950



#06595 Net Price: 225,00 EUR Unit: pcs

#06605 Net Price: 363,00 EUR Unit: pcs

#07915 Net Price: Call Unit: pcs

## Unmanaged switch, 6x 10/100 RJ-45 + 2x 10/1000 RJ-45 (ORing IES-1062GT)

IES-1080/1062 series are unmanaged Ethernet switches with

6x10/100Base-T(X) and 2x100Base-FX, 10/100/100Base-T(X), 1000Base-FX or 1000Base-LX ports. IES-1080/1062 series support redundant power input, relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 6 1000 Base-T Ports in RJ45 Auto MDI/MDIX: 2

Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X), IEEE 802.3ab for 1000BaseTX, IEEE 802.3x for Flow control

MAC Table: 8192 MAC addresses
Processing: Store-and-Forward
Software Features: Port configuration, Port status, Port statistics, Port monitoring, Port security

LED Indicators

Power indicator: Green - Power LED x 3
Fault indicator: Yellow - Indicate PWR1 or PWR2 failure
10/100TX RJ45 port indicator: Green for port Link/Act, Yellow
for Duplex/Collision

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Triple DC inputs. 12÷48VDC on 7-pin terminal

block, 12+45VDC on power jack Power consumption (typical): 7W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 52mm x 106mm x 144mm

Weight: 677g Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huminus, 3/8-93/8 Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950

Warranty period: 5 years

Unmanaged switch, 6x 10/100 RJ-45 + 2x 100 MM SC (ORing IES-1062FX-MM-SC)

IES-1080/1062 series are unmanaged Ethernet switches with

6x10/100Base-T(X) and 2x100Base-FX, 10/100/100Base-T(X), 1000Base-FX or 1000Base-LX ports. IES-1080/1062 series support redundant power input, relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 6 100Base-FX Multimode ports (2km, 1310nm, SC connector):

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow

Control
MAC Table: 8192 MAC addresses
Processing: Store-and-Forward
Software Features: Port configuration, Port status, Port statistics, Port monitoring, Port security

LED Indicators

Power indicator: Green - Power LED x 3

Fault indicator: Yellow - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Power Input power: Triple DC inputs. 12÷48VDC on 7-pin terminal block, 12÷45VDC on power jack

Power consumption (typical): 8W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 52mm x 106mm x 144mm

Dimension (W x D x H): 52mm x 106mm x 144mm Weight: 680g Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IFC60068-2-27

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950

Warranty period: 5 years

Unmanaged switch, 6x 10/100 RJ-45 + 2x 100 MM SC (ORing IES-162FX-MM-SC-L)

IES-162FX-L series are unmanaged Ethernet switches with 6 x 10/100Base-T(X) and 2 x 100Base-TX ports. With very compact size of housing, you can install IES-162FX-L series easily. In addition, IES-162FX-L series are with rigid IP-30 housing design and can operate under harsh environment. The extended operating temperature range from -20°C to 60°C is ready and can satisfy most requirement of operation.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 6 100Base-FX Multimode ports (2km, 1310nm, SC connector):

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow control MAC Table: 1024 MAC addresses

LED Indicators

Power indicator: Green - Power LED x 1 10/100TX RJ45 port indicator: Green for port Link/Act, Amber for speed indicator - Amber for 100Mbps, off-light for 10Mbps Fiber port indicator: Green for port Link/Act

Power
Input power: 10~30VDC on 3-pin terminal block.
Power consumption (typical): 3.6W
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 41mm x 83.98mm x 115mm

Weight: 328g

Weight: 328g
Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -20-60°C
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fail: IEC60068-2-32

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty Warranty period: 5 years





#06608 Net Price: 411,00 EUR Unit: pcs

## Unmanaged switch, 6x 10/100 RJ-45 + 2x 100 SM SC (ORing IES-1062FX-SS-SC)

IES-1080/1062 series are unmanaged Ethernet switches with

6x10/100Base-T(X) and 2x100Base-FX, 10/100/100Base-T(X), 1000Base-FX or 1000Base-LX ports. IES-1080/1062 series support redundant power input, relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 6 100Base-FX Singlemode ports (30km, 1550nm, SC

connector): 2
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow

Control
MAC Table: 8192 MAC addresses
Processing: Store-and-Forward
Software Features: Port configuration, Port status, Port statistics, Port monitoring, Port security

LED Indicators

Power indicator: Green - Power LED x 3
Fault indicator: Yellow - Indicate PWR1 or PWR2 failure
10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Power Input power: Triple DC inputs. 12+48VDC on 7-pin terminal block, 12+45VDC on power jack Power consumption (typical): 8W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic

Enclosure: IP-30
Dimension (W x D x H): 52mm x 106mm x 144mm

Dimension (W x D x H): 52mm x 106mm x 144mm Weight: 680g Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 55%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IFC60068-2-27

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty Warranty period: 5 years



Net Price: Unit: pcs

#07916

## Unmanaged switch, 6x 10/100 RJ-45 + 2x 100 SS SC (ORing IES-162FX-SS-SC-L)

IES-162FX-L series are unmanaged Ethernet switches with 6 x 10/100Base-T(X) and 2 x 100Base-FX ports. With very compact size of housing, you can install IES-162FX-L series easily. In addition, IES-162FX-L series are with rigid IP-30 housing design and can operate under harsh environment. The extended operating temperature range from -20°C to 60°C is ready and can satisfy most requirement of operation.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 6 100Base-FX Singlemode ports (30km, 1310nm, SC connector): 2

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow

MAC Table: 1024 MAC addresses LED Indicators

LED Indicators

Power indicator: Green - Power LED x 1

10/100TX RJ45 port indicator: Green for port Link/Act, Amber for speed indicator - Amber for 100Mbps, off-light for 10Mbps Fiber port indicator: Green for port Link/Act

Power
Input power: 10-30VDC on 3-pin terminal block.
Power consumption (typical): 3.6W
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 41mm x 83.98mm x 115mm

Weight: 328g

Environmental Storage Temperature: -40÷85°C(-40÷185°F)

storage I emperature: -40-85°C(-40+185°F)
Operating Temperature: -20-60°C
Operating Humidity: 5%-95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty Warranty period: 5 years



#06599

Net Price: 476,00 EUR Unit: pcs

## Unmanaged switch, 6x 10/100 RJ-45 + 2x 1000 MM SC (ORing IES-1062GF-MM-SC)

IES-1080/1062 series are unmanaged Ethernet switches with

6.10/100Base-T(X) and 2.110Base-FX, 10/100/100Base-T(X), 1000Base-FX or 1000Base-LX ports. IES-1080/1062 series support redundant power input,

relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 6 1000Base-SX Multimode ports (550m, 850nm, SC

connector): 2

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X), IEEE 802.3z for 100Base-X, IEEE 802.3x for Flow control

MAC Table: 8192 MAC addresses
Processing: Store-and-Forward
Software Features: Port configuration, Port status, Port statistics, Port monitoring, Port security

LED Indicators

Power indicator: Green - Power LED x 3
Fault indicator: Yellow - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow

for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Power Input power: Triple DC inputs. 12÷48VDC on 7-pin terminal block, 12÷45VDC on power jack
Power consumption (typical): 6W
Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 52mm x 106mm x 144mm

Dimension (W x D x H): 52mm x 106mm x 144mm Weight: 685g Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IFC60068-2-27

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950



Net Price: 518,00 EUR Unit: pcs

# Unmanaged switch, 6x 10/100 RJ-45 + 2x 1000 SM SC (ORing IES-1062GF-SS-SC)

IES-1080/1062 series are unmanaged Ethernet switches with

6x10/100Base-T(X) and 2x100Base-FX, 10/100/100Base-T(X), 1000Base-FX or 1000Base-LX ports. IES-1080/1062 series support redundant power input, relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 6 1000Base-LX Singlemode ports (10km, 1310nm, SC

connector): 2
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3z for 1000Base-X, IEEE 802.3x for Flow control

tor Flow control
MAC Table: 8192 MAC addresses
Processing: Store-and-Forward
Software Features: Port configuration, Port status, Port
statistics, Port monitoring, Port security
LED Indicators

Power indicator: Green - Power LED x 3
Fault indicator: Yellow - Indicate PWR1 or PWR2 failure
10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Power
Input power: Triple DC inputs. 12+48VDC on 7-pin terminal block, 12+45VDC on power jack
Power consumption (typical): 6W
Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic

Enclosure: IP-30
Dimension (W x D x H): 52mm x 106mm x 144mm

Dimension (W x D x H): 52mm x 106mm x 144mm Weight: 685g Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 55%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IFC60068-2-27

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty Warranty period: 5 years



#06651

Net Price: 340,00 EUR Unit: pcs

## Unmanaged switch, 8x 10/100 RJ-45 + 2x 1000 SFP (ORing IES-1082GP)

IES-1082GP is an unmanaged Ethernet switches with 8x10/100Base-T(X) and 2x1000Base-X in SFP ports. IES-1082GP supports redundant power input, relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8 1000 Mbps SFP Ports: 2

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control
MAC Table: 8192 MAC addresses

Processing: Store-and-Forward
Software Features: Port configuration, Port status, Port statistics, Port monitoring, Port security

LED Indicators
Power indicator: Green - Power LED x 3 Fault indicator: Yellow - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Hower Input power: Triple DC inputs. 12+48VDC on 7-pin terminal block, 12+45VDC on power jack Power consumption (typical): 8W Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 52mm x 106mm x 144mm

Dimension (W x D x H): 52mm x 106mm x 144mm
Weight: 675g
Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+185°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950

Warranty Warranty period: 5 years



#06653

Net Price: 116,00 EUR Unit: pcs

## Unmanaged switch, 8x 10/100 RJ-45, slim housing (ORing IES-1080A)

IES-1050A/1080A is unmanaged Ethernet switches with 5 or  $8\times10/100$ Base-T(X) ports. IES-1050A/1080A support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control
MAC Table: 2048 MAC addresses

MAC Table: 2040 MAC addresses
Processing: Store-and-Forward
LED Indicators
Power indicator: Green - Power LED x 2
Fault indicator: Yellow - Indicate PWR1 or PWR2 failure
10/100TX RJ45 port indicator: Green for port Link/Act, Yellow
for Duplex/Collision

Fault contact Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 4W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30

Dimension (W x D x H): 33mm x 95mm x 144mm Weight: 391g Environmental

Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+185°F)
Operating Humidity: 59%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty



#07962 Net Price: 146,00 EUR Unit: pcs

## Unmanaged switch, 8x 10/100 RJ-45, slim housing (ORing IES-180B)

IES-180B is an unmanaged Ethernet switch with 8x10/100Base-T(X) ports. With very mini size of housing, you can install IES-180B easily. In addition, IES-180B is with rigid IP-30 housing design and can operate under harsh environment. The extended operating temperature range from -40 to 70°C is ready and can satisfy most requirement of operation.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8

Tor 100 Base-1(X) Ports in RJ45 Auto MDI/MDIX: 8 Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X), IEEE 802.3x for Flow control MAC Table: 2048 MAC addresses
Processing: Store-and-Forward

LED Indicators

Power indicator: Green - Power LED x 2

10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Input power: Dual DC inputs. 12÷48VDC on 4-pin terminal

Input power: Dual DC Inputs. 12-48 VDC on 4-pin term block
Power consumption (typical): 4W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 41mm x 90mm x 95mm

Weight: 205g Environmental Storage Temperature: -40+85°C (-40+185°F)

Operating Temperature: -40÷70°C (-40÷158°F) Operating Humidity: 5%÷95% Non-condensing

Operating Hullings, 3/8-95/8 Notifications (Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (RS), EN61000-4-4 (RS), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-7 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-32 Vibration: IEC60068-2-8

Vibration: IEC60068-2-6 Safety: EN60950 Warranty

Warranty period: 5 years



#06612 Net Price: 84,30 EUR Unit: pcs

## Unmanaged switch, 8x 10/100 RJ-45, slim housing (ORing IES-C1080)

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u

for 100BaseT(X), IEEE 802.3x for Flow control MAC Table: 2048 MAC addresses

Processing: Store-and-Forward

Processing, Store-and Gradual Clauding Control 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Dual DC inputs. 12÷48VDC on 4-pin terminal

Power consumption (typical): 3W

Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-40

Dimension (W x D x H): 43,5mm x 64mm x 103mm Environmental Storage Temperature: -10÷60°C

Operating Temperature: -10÷60°C Operating Humidity: 5%÷95% Non-condensing

Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty Warranty period: 5 years



#07914 Net Price: 486,00 EUR Unit: pcs

## Unmanaged switch, 14x 10/100 RJ-45 + 2x 100 SFP (ORing IES-1142)

IES-1142P is a din-rail unmanaged Ethernet switch with 14x10/100Base-T(X) and 2x100Base-FX in SFP ports. IES-1142P supports redundant power inputs. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 14 100 Mbps SFP Ports: 2 Technology

Technology

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control MAC Table: 4096 MAC addresses

Processing: Store-and-Forward

Software Features: Port configuration, Port status, Port statistics, Port monitoring, Port security

LED Indicators

Power indicator: Green - Power I FD x 3

10/100TX RJ45 port indicator: Green for port Link/Act, Amber for speed indicator - Amber for 100Mbps, off-light for 10Mbps

Fiber port indicator: Green for port Link/Act

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

block Power consumption (typical): 10W

Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 74mm x 140mm x 170mm

Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huminity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950





#08160 Net Price: 473,00 EUR Unit: pcs

# Unmanaged switch, 16x 10/100 RJ-45 (ORing IES-1160)

IES-1160 is the unmanaged Ethernet switch with 16x10/100Base-T(X) port. IES-1160 support redundant power inputs, relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments. Especially, IES-1160 features dual different redundant DC power inputs, two DC power inputs are on terminal block to avoid any unexpected fails on power on. Thus, IES-1160 could guarantee a non-stop operation. Therefore, the switch is one of the most reliable choice for highly-unmanaged Ethernet application

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 16

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X), IEEE 802.3x for Flow control MAC Table: 8192 MAC addresses Processing: Store-and-Forward Software Features: Port configuration, Port status, Port exhibition.

statistics, Port monitoring, Port security LED Indicators

Power indicator: Green - Power LED x 3

Fault indicator: Yellow - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 9W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm Weight: 1060g

Environmental Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huministy: 5%-595% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950

Warranty

Warranty period: 5 years



#07637 Net Price: 541,00 EUR Unit: pcs

# Unmanaged switch, 16x 10/100 RJ-45 + 2x SFP (ORing IES-1162GC)

IES-1162GC is the unmanaged Ethernet switch with 16x10/100Base-T(X) and 2xgigabit combo ports. IES-1162GC supports redundant power inputs, relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments. Especially, IES-1162GC features dual different redundant DC power inputs, two DC power inputs are on terminal block to avoid any unexpected fails on power on. Thus, IES-1162GC could guarantee a non-stop operation Therefore, the switch is one of the most reliable choice for highly-unmanaged Ethernet application

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 16 1000 SFP: 2

Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u

for 100BaseT(X), IEEE 802.3x for Flow contro MAC Table: 8192 MAC addresses

Processing: Store-and-Forward Software Features: Port configuration, Port status, Port statistics, Port monitoring, Port security

LED Indicators

Power indicator: Green - Power LED x 3
Fault indicator: Yellow - Indicate PWR1 or PWR2 failure 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision
Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 9W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm

Weight: 1060g Environmental

Storage Temperature: -40÷85°C(-40÷185°F)

Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Hullings, 3/8-95/8 Noticondensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-72 Vibration: IEC60068-2-32 Vibration: IEC60068-2-32

Vibration: IEC60068-2-6

Safety: EN60950 Warranty

Warranty period: 5 years



#08161

Net Price: 611,00 EUR Unit: pcs

# Unmanaged switch, 24x 10/100 RJ-45 (ORing IES-1240)

IES-1240 is the unmanaged Ethernet switch with 24x10/100Base-T(X) port. IES-1240 support redundant power inputs, relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments. Especially, IES-1240 features dual different redundant DC power inputs, two DC power inputs are on terminal block to avoid any unexpected fails on power on. Thus, IES-1240 could guarantee a non-stop operation. Therefore, the switch is one of the most reliable choice for highly-unmanaged Ethernet application

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 24

10/100 Base-1(A) Foris in 1945 Auto intermed. Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control
MAC Table: 8192 MAC addresses
Processing: Store-and-Forward
Software Features: Port configuration, Port status, Port
etailetics Port monitoring. Port security

statistics, Port monitoring, Port security

statistics, Port monitoring, Port security
LED Indicators
Power indicator: Green - Power LED x 3
Fault indicator: Yellow - Indicate PWR1 or PWR2 failure
10/100TX RJ45 port indicator: Green for port Link/Act, Yellow
for Duplex/Collision

Fault contact Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 9.6W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 96mm x 109.2mm x 153.6mm

Weight: 1052g

Environmental

Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing

Operating Huminity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950

Warranty

Warranty period: 5 years





#06587 Net Price: 425,00 EUR Unit: pcs

IES-2060/2042FX series are lite-Managed Redundant Ring Ethernet switches with 6x10/100Base-T(X) ports or 4x10/100Base-T(X) and 2x100Base-FX ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-Chain and STP/RSTP (IEEE802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IES-2060/2042FX series can be managed centralized and convenient by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40°C to  $70^{\circ}\text{C}$  can satisfy most of operating environment. Therefore, these switch is one of the most reliable choice for easy managed Fiber Ethernet application.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100Base-FX Multimode ports (2km, 1310nm, SC connector):

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 1008ase1, IEEE 802.33 for Flow control, IEEE 802.10 for STP (Spanning Tree Protocol), IEEE 802.10 for STP (Spanning Tree Protocol), IEEE 802.10 for STP (Rapid Spanning Tree Protocol), IEEE 802.3ad for LACP (Link Aggregation Control Protocol) MAC Table: 2048 MAC addresses

Priority Queues: 4

Processing: Store-and-Forward Switching bandwidth: 1.0 Gbps

VLAN: Port Based Security Features: Enable/disable ports, VLAN to segregate and secure network traffic Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics, Port monitoring, Port security Network Redundancy: STP, RSTP, O-Ring

Network Redundancy: STP, RSTP, O-Ring
LED Indicators
Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - Flashing to indicate system
operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring

mode
Fault indicator: Yellow - Indicate unexpected event occurred
10/100TX RJ45 port indicator: Green for port Link/Act, Yellow
for Duplex/Collision
Fiber port indicator: Green for port Link/Act, Yellow for Link

Relay: Relay output to carry capacity of 1A at 24VDC

Power
Input power: Triple DC inputs. 12+48VDC on 7-pin terminal block, 12+45VDC on power jack
Power consumption (typical): 7W
Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 52mm x 106mm x 144mm

Weight: 670g Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Humindity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-32 Vibration; IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950 Warranty

Warranty period: 5 years



#06588 Net Price: 457,00 EUR Unit: pcs

## Smart switch, 4x 10/100 RJ-45 + 2x 100 SM SC, O-Ring <10ms (ORing IES-2042FX-SS-SC)

IES-2060/2042FX series are lite-Managed Redundant Ring Ethernet switches with 6x10/100Base-T(X) ports or 4x10/100Base-T(X) and 2x100Base-FX ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-Chain and STP/RSTP (IEEE802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IES-2060/2042FX series can be managed centralized and convenient by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40°C to  $70^{\circ}\text{C}$  can satisfy most of operating environment. Therefore, these switch is one of the most reliable choice for easy managed Fiber Ethernet application.

Physical Ports
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4
100Base-FX Singlemode ports (30km, 1550nm, SC connector): 2

Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Etnemet Standards: IEEE 802.3 for 1008ase1, IEEE 802.33 for Flow control, IEEE 802.10 for STP (Spanning Tree Protocol), IEEE 802.10 for STP (Spanning Tree Protocol), IEEE 802.10 for Lee Spanning Tree Protocol), IEEE 802.3 for LACP (Link Spanning Tree Protocol), IEEE 802.3 and for LACP (Link Aggregation Control Protocol) MAC Table: 2048 MAC addresses

Priority Queues: 4

Processing: Store-and-Forward Switching bandwidth: 1.0 Gbps

VLAN: Port Based Security Features: Enable/disable ports, VLAN to segregate and secure network traffic Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics, Port

monitoring, Port security Network Redundancy: STP, RSTP, O-Ring

LED Indicators
Power / Ready indicator: Green - Ready LED x 3

Ring Master indicator: Green - Flashing to indicate system operated in O-Ring Master mode O-Ring indicator: Green - Indicate system operated in O-Ring

Floult indicator: Yellow - Indicate unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link

Relay: Relay output to carry capacity of 1A at 24VDC

Power
Input power: Triple DC inputs. 12+48VDC on 7-pin terminal block, 12+45VDC on power jack
Power consumption (typical): 7W
Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 52mm x 106mm x 144mm

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration; IEC60068-2-36

Vibration: IEC60068-2-6 Safety: EN60950

Warranty

Warranty period: 5 years



#06884

Net Price: Call Unit: pcs

## Smart switch, 5x 10/100 M12, O-Ring <10ms, IP67 housing (ORing IES-2050-M12)

IES-2050-M12 is a waterproof lite-managed redundant ring Ethernet switch with 5x10/100Base-T(X) ports which is full compliant with IP-67 standard. With complete support of Ethernet redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-Chain and STP/RSTP (IEEE802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technologies. It is specifically designed for the toughest industrial environments. In combination with its IP-67 design and the superb management functionalities. IES-2050-M12 is constructed of a rugged aluminum case and designed with IP-67 rated RJ45 Ethernet ports (M12 type connector), which provide a waterproof, and dust-tight connection. IES-2050-M12 can be managed centralized by a powerful windows utility -Open-Vision. In addition, the wide operating temperature, range from -40 to 70°C, can satisfy most of operating environment. The IES-2050-M12 can be easily adopted in almost all kinds of applications and provides the most rugged solutions for managing your network in outdoor. Therefore, IES-2050-M12 is one of the most reliable choices for industrial networking applications.

Physical Ports

Physical Ports
10/100 Base-T(X) Ports w/Auto MDI/MDIX: 5
Connector Type: Waterproof M12
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 10DBaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D
for STP (Spanning Tree Protocol), IEEE 802.1w for RSTP
(Rapid Spanning Tree Protocol), IEEE 802.1AB for LLDP
(Link Layer Discovery Protocol)
MAC Table: 2048 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward

Processing: Store-and-Forward Switching bandwidth: 1.0 Gbps

VLAN: Port Based

Security Features: Bable/disable ports, VLAN to segregate and secure network traffic Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Soliware Features. STFN FILEL 202.1D/w), recorder Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics, Port monitoring, Port security

Network Redundancy: STP, RSTP, O-Ring

LED Indicators
Power Indicator: Green - Power LED x 1, Indicates power

Ready Indicator: Amber - Ready LED x 1, Indicates system

O-Ring Indicator: Amber - Indicates port operating in O-Ring

mode (per port) 10/100TX Port Indicator: Green for port Link/Act. (per port)

Input power: 9÷30VDC

Input power: 9+30/DC Connector Type: Waterproof M12 Power consumption (typical): 3W Overload current protection: present Reverse polarity protection: present Physical Characteristic

Enclosure: IP-67
Dimension (W x D x H): 90mm x 40.5mm x 155mm

Weight: 470g

Weight: 470g
Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-7
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950

Safety: EN60950 Warranty Warranty period: 5 years





#06583 Net Price: 218,00 EUR Unit: pcs

## Smart switch, 5x 10/100 RJ-45, O-Ring <10ms (ORing IES-2050A)

compact size of housing, you can install IES-2050A easily. In addition, it also supports of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-Chain and STP/RSTP (IEEE802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IES-2050A provide the setting ability of Web-GUI technology. IES-2050A provide the setting ability of web-soli and Windows Utility, also support the simple DIP-Switch setting function which offer great flexibility to set up the Ring. IES-2050A is with rigid IP-30 housing design and can operate under harsh environment. The feature of wide operating temperature range from -40 to 70°C can satisfy most requirement of operation.

10/100 Base-1(X) Ports in RJ45 Auto MDI/MDIX: 5
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D
for STP (Spanning Tree Protocol), IEEE 802.1w for RSTP
(Rapid Spanning Tree Protocol), IEEE 802.3ad for LACP
(Link Aggregation Control Protocol)
MAC Table: 2048 MAC addresses

Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Dimension (W x D x H): 88mm x 102mm x 24mm

Weight: 308g Environmental

IES-2050A is a lite-managed Ethernet switch. With very

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 5

MAC Table: 2048 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching bandwidth: 1.0 Gbps
VLAN: Port Based
Security Features: Enable/disable ports, VLAN to segregate

and secure network traffic
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 10ms over 250
units, Port configuration, Port status, Port statistics, Port
monitoring, Port security
Network Redundancy: STP, RSTP, O-Ring
LED Indicators

LED Indicators

Power / Ready indicator: Green - Ready LED
Ring Master indicator: Green - Flashing to indicate system
operated in O-Ring Master mode

O-Ring indicator: Green - Indicate system operated in O-Ring

10/100TX RJ45 port indicator: Green for port Link/Act

Input power: 9÷30 VDC voltage power input Power consumption (typical): 3W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huminity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950

Warranty period: 5 years



#08162

Net Price: 1,00 EUR Unit: pcs

# Managed switch, 4x 10/100 RJ-45 + 2x100 SFP, O/Open-Ring <10ms (ORing IES-2042PA)

IES-2042PA is a Lite-Managed Redundant Ring Ethernet switch. With very compact size of housing, you can install IES-2042PA easily. In addition, it also supports of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-Chain and STP/RSTP (IEEE802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IES-2042PA provides the setting ability of Web-GUI and Windows Utility, also support the simple DIP-Switch setting function which offers great flexibility to set up the Ring. With it's rigid IP-30 housing design, it can execute under hearb environment. The feature of wide operate under harsh environment. The feature of wide operating temperature range from -40 to 70°C can satisfy most requirement of operation.

Physical Ports

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100 Mbps SFP Ports: 2 RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (9600bps 8 N 1)

console cable (9600bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D
for STP (Spanning Tree Protocol), IEEE 802.1p for COS
(Class of Service), IEEE 802.1x for RSTP (Rapid Spanning
Tree Protocol), IEEE 802.1x for Authentication, EEE 802.3ab
dla LLDP (Link Layer Discovery Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward

Processing: Store-and-Forward Switching latency: 7 µs Switching bandwidth: 1.2 Gbps

Switching bandwith: 1.2 obps

[GMP multicast groups: 256

Port rate limiting: User Define

Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
to segregate and secure network traffic, Radius centralized
password management, SNMPv3 encrypted authentication

and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 20ms over 250
units, TOS/Diffserv supported, Quality of Service (802.1p) for
real-time traffic, VLAN (port based), IGMP Snooping for
multicast filtering, Port configuration, Port status, Port
statistics, Port monitoring, Port security
Network Redundancy: STP, RSTP, O-Ring, Open-Ring,
O-RSTP and access security

O-RSTP LED Indicators

LEU Indicators Power / Ready indicator: Green - Ready LED x 3 Ring Master indicator: Green - Flashing to indicate system operated in O-Ring Master mode O-Ring indicator: Green - Indicate system operated in O-Ring

mode
Fault indicator: Yellow - Indicate unexpected event occurred
10/100TX RJ45 port indicator: Green for port Link/Act, Yellow

for Duplex/Collision
Fiber port indicator: Green for port Link/Act, Yellow for Link Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 7W

Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 26.1mm x 95mm x 144.3mm

Weight: 395g Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+185°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-32
Vibration; IEC60068-2-36

Vibration: IEC60068-2-6 Safety: EN60950

Warranty Warranty period: 5 years



#06606

Net Price: 572,00 EUR Unit: pcs

#### Managed switch, 6x 10/100 RJ-45 + 2x100 MM SC, O/Open-Ring <10ms (ORing IES-3062FX-MM-SC)

IES-3080 / IES-3062 series are managed Redundant Ring Ethernet switches with 6x10/100Base-T(X) and 2x10/100Base-T(X), 100Base-FX, 1000Base-T, 1000Base-SX or 1000Base-LX ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology Another Open-Ring technology is also supported which can applied for other vendor's proprietary ring. IES-3080 / IES-3062 series can be managed centralized and convenient by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40°C to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for highly-managed Fiber Ethernet application.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 6 100Base-FX Multimode ports (2km, 1310nm, SC connector):

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (9600bps 8 N 1) Technology

Technology

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u

for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow
control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE
802.1p for COS (Class of Service), IEEE 802.1Q for VLAN
Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree
Protocol), IEEE 802.1x for Authentication, IEEE 802.3ad for
LACP (Link Aggregation Control Protocol), IEEE 1588 for
Precise Time Protocol Client

MAC Table: 8192 MAC addresses Priority Queues: 4 Processing: Store-and-Forward Switching latency: 7 µs Switching bandwidth: 5.6 Gbps

Max. Number of Available VLANs: 256 Number of VLAN IDs: VID 1 to 4094 IGMP multicast groups: 256

Port rate limiting: User Define Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1g) to segregate and secure network traffic, Radius

cock. 14 ) to sepregate airu secure interwirk traine, Nadius centralized password management, SNMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Soliware Features: STP/RSTP (IEEE 802. ID/W), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port servicts.

security
Network Redundancy: STP, RSTP, O-Ring, Open-Ring,

O-RSTP LED Indicators

Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - Flashing to indicate system
operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring

mode
Fault indicator: Yellow - Indicate unexpected event occurred
10/100TX RJ45 port indicator: Green for port Link/Act, Yellow

for Duplex/Collision
Fiber port indicator: Green for port Link/Act, Yellow for Link

Fault contact Relay: Relay output to carry capacity of 1A at 24VDC

rower
Input power: Triple DC inputs. 12÷48VDC on 7-pin terminal
block, 12÷45VDC on power jack
Power consumption (typical): 9W
Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 52mm x 106mm x 144mm Weight: 735g Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+185°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty Warranty Warranty period: 5 years

34/88





Net Price: 622,00 EUR Unit: pcs

# Managed switch, 6x 10/100 RJ-45 + 2x100 SM SC, O/Open-Ring <10ms (ORing IES-3062FX-SS-SC)

IES-3080 / IES-3062 series are managed Redundant Ring Ethernet switches with 6x10/100Base-T(X) and 2x10/100Base-T(X), 100Base-FX, 1000Base-T, 1000Base-SX or 1000Base-LX ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology Another Open-Ring technology is also supported which can Anourier Open-King technology is also supported Which can applied for other vendor's proprietary ring. IES-3080 / IES-3080 / IES-3062 series can be managed centralized and convenient by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40°C to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for highly-managed Fiber Ethernet anglication. Ethernet application.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 6 100Base-FX Singlemode ports (30km, 1550nm, SC

connector): 2
RS-232 Serial Console Port: RS-232 in RJ45 connector with

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (9600bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1x for RSTP (Rapid Spanning Tree Protocol), IEEE 802.3x for Authentication, IEEE 802.3x for LACP (Link Aggregation Control Protocol), IEEE 1588 for Precise Time Protocol Client

Precise Time Protocol Client
MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching latency: 7 µs
Switching bandwidth: 5.6 Gbps
Max. Number of Available VLANs: 256
Number of VLAN IDs: VID 1 to 4094
IGMP multicast groups: 256
Port rate limiting: User Define

Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted
authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Soliware Features: STF/RSTP (IEEE 002.1D/W), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

security
Network Redundancy: STP, RSTP, O-Ring, Open-Ring,

LED Indicators

Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - Flashing to indicate system
operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring

mode
Fault indicator: Yellow - Indicate unexpected event occurred
10/100TX RJ45 port indicator: Green for port Link/Act, Yellow
for Duplex/Collision
Fiber port indicator: Green for port Link/Act, Yellow for Link

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Triple DC inputs. 12+48VDC on 7-pin terminal block, 12+45VDC on power jack Power consumption (typical): 9W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 52mm x 106mm x 144mm Weight: 735g

Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+185°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty

Warranty period: 5 years



#07636

Net Price: 1,00 EUR Unit: pcs

#### Managed switch, 7x 10/100 RJ-45 + 3 slide-in SFP slots / RJ-45, O/Open-Ring <10ms (ORing IES-3073GC)

IES-3073GC is managed Redundant Ring Ethernet switch with 7x10/100Base-T(X) ports and 3xGigabit combo ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. All function of IES-3073GC can be managed centralized and convenient by a powerful windows utility - Open-Vision. IES-3073GC support new DDM (Digital Diagnostic Monitoring) function, which can monitor instantly the status of electrical voltage, current and temperature. In addition, the wide operating temperature range from -40 to  $70^{\circ}\text{C}$  can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 7 1000 COMBO with SFP: 3 RS-232 Serial Console Port: RS-232 in RJ45 connector with

console cable (9600bps 8 N 1)

Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.3ad for LACP (Link Aggregation Control Protocol) MAC Table: 8192 MAC addresses Priority Queues: 4

MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 7.2 Gbps
Max. Number of Available VLANs: 4096
IGMP multicast groups: 1024
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted
authentication and access security

centralized password management, Shanir-Vs encrypted authentication and access security Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

Security

Network Redundancy: STP, RSTP, O-Ring, Open-Ring, O-RSTP

Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - indicates system operated in

O-Ring Master mode
Fault indicator: Amber - Indicates unexpected event occurred

10/100TX RJ45 port indicator: Green for port Link/Act, Amber for Duplex/Collision 10/100/1000TX RJ45 port indicator: Green for port Link/Act,

Amber for 100Mbps

Fiber port indicator: Green for port Link/Act Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Diock
Power consumption (typical): 12W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm

Weight: 1100g Environmental

Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-1 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950

Warranty period: 5 years



Net Price: 1 040,00 EUR Unit: pcs

#### Managed switch, 7x 10/100 RJ-45 + 3 slide-in SFP slots / RJ-45, O/Open-Ring <10ms (ORing IES-P3073GC-HV)

IES-P3073GC series are IEC 61850-3 managed Redundant Ring Ethernet switch with 7x10/100Base-T(X) and 3xGigabit combo ports. These switches are designed for power substation application and rolling stock application, fully compliant with the requirement of IEC 61850-3 and IEEE 1613. And these switches designed for the toughest and fully compliant with EN50155 requirement. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-Chain, MRP and MSTP/RSTP:2004/STP (IEEE 02.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. Another Open-Ring technology is also supported which can applied for other vendor's proprietary ring. O-Chain is the revolutionary network redundancy technology that provides the addon network redundancy topology for any backbone network, O-Chain allows multiple redundant network rings of different redundancy protocols to join and function together as a larger and more robust compound network topology. O-Chain provided ease-of-use while maximizing fault-recovery

flexibility, compatibility, and cost-effectiveness in one set of network redundancy topology. All function of IES-P3073GC series can be managed centralized and convenient by a powerful windows utility - Open-Vision. IES-P3073GC series support new DDM (Digital Diagnostic Monitoring) function, which can monitor instantly the status of electrical voltage, current and temperature. In addition, the wide operating temperature range from -40 to 85°C can satisfy most of operating environment. Therefore, these switches are one of the most reliable choices for highly-managed Fiber Ethernet

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 7 1000 COMBO with SFP: 3 RS-232 Serial Console Port: RS-232 in RJ45 connector with

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (9600bps 8 N 1) Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1V for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1X for Authentication, IEEE 802.3ad for LACP (Link Aggregation Control Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching latency: 7 µs
Switching bandwidth: 7.2 Gbps
Max. Number of Available VLANs: 4096
IGMP multicast groups: 1024

IGMP multicast groups: 1024
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted authentication and access security

authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 10ms over 250
units, TOS/Diffserv supported, Quality of Service (802.1p) for
real-time traffic, VLAN (802.1Q) with VLAN tagging and
GVRP supported, IGMP Snooping for multicast filtering, Port
configuration, Port status, Port statistics, Port monitoring, Port

security
Network Redundancy: STP, RSTP, O-Ring, Open-Ring,

O-RSTP

LED Indicators
Power / Ready indicator: Green - Ready LED x 3

Ring Master indicator: Green - indicates system operated in

Ring Master indicator: Green - indicates system operated in O-Ring Master mode
Fault indicator: Amber - Indicates unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Amber for Duplex/Collision
10/100/1000TX RJ45 port indicator: Green for port Link/Act, Amber for 100Mbps
Fiber port indicator: Green for port Link/Act
Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC
Power

Hower Input power: Dual power inputs. 85~264VAC/88~373VDC on dual 3-pin terminal block, IES-P3073GC-LV version with dual 12/48VDC power inputs on 2-pin terminal block Power consumption (typical): 12W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 96.4mm x 145.5mm x 154mm

Weight: 1935g Environmental

Storage Temperature: -40÷85°C(-40÷185°F) Operating Temperature: -40÷70°C (-40÷158°F)
Operating Humidity: 5%÷95% Non-condensing

Operating Huminus, 576-5976 Note Collections of Page 1861-1861 Note 1861-1861 Not

Power Automation: IEC 61850-3, IEEE 1613 Warranty period: 5 years



#06598 Net Price: 1,00 EUR

## Unit: pcs

Managed switch, 8x 10/100 RJ-45 + 2x1000 SFP, O/Open-Ring <10ms (ORing IES-3082GP) IES-3082GP is managed Redundant Ring Ethernet switch with 8x10/100Base-T(X) and 2x100/100Base-X SFP ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IES-3082GP can be managed centralized and convenient by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40°C to 70°C can satisfy most of operating environment. Therefore,

the switch is one of the most reliable choices for highly-managed and Fiber Ethernet application. Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8 1000 Mbps SFP Ports: 2 RS-232 Serial Console Port: RS-232 in RJ45 connector with

console cable (9600bps 8 N 1)

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10Base I, IEEE 802.3 to from 100Base T(X), IEEE 802.3 for Flow control, IEEE 802.1 for 100Base T(X), IEEE 802.3 for Flow control, IEEE 802.1 for STP (Spanning Tree Protocol), IEEE 802.1 for COS (Class of Service), IEEE 802.1 for VLAN Tagging, IEEE 802.1 for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1 for Authentication, IEEE 802.3 ad for LACP (Link Aggregation Control Protocol)
MAC Table: 8192 MAC addresses

MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 5.6 Gbps
Max. Number of Available VLANs: 256
Number of VLAN IDs: VID 1 to 4094
IGMP multicast groups: 256
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted contralized password management, SNMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Ring (O-Ring) with recovery time less than 10ms over 250 with (CVRI) units CVS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security

Network Redundancy: STP, RSTP, O-Ring, Open-Ring,

LED Indicators

Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - Flashing to indicate system operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Yellow - Indicate unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fiber port indicator: Green for port Link/Act, Yellow for Link Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Triple DC inputs. 12+48VDC on 7-pin terminal block, 12+45VDC on power jack Power consumption (typical): 9W

Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 52mm x 106mm x 144mm

Weight: 730g Environmental

Storage Temperature: -40÷85°C(-40÷185°F)

Operating Temperature: -40÷70°C (-40÷158°F)
Operating Humidity: 5%÷95% Non-condensing

Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11

EN61000-4-8, EN61000-4 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950

Warranty period: 5 years

#06593

Net Price: 460,00 EUR Unit: pcs

## Managed switch, 8x 10/100 RJ-45, O/Open-Ring <10ms (ORing IES-3080)

IES-3080 / IES-3062 series are managed Redundant Ring Ethernet switches with 6x10/100Base-T(X) and 2x10/100Base-T(X), 100Base-FX, 1000Base-T, 1000Base-SX or 1000Base-LX ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. Another Open-Ring technology is also supported which can applied for other vendor's proprietary ring. IES-3080 / IES-3062 series can be managed centralized and convenient by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40°C to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for highly-managed Fiber Ethernet application.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8 RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (9600bps 8 N 1)

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Enternet Standards: IEEE 002.3 for Flow control, IEEE 802.1D for 100Base (X), IEEE 802.3x for Flow control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1x for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1X for Authentication, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 1588 for Precise Time Protocol Client Protocol Client

Protocol Client
MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 5.6 Gbps
Max. Number of Available VLANs: 4096
Number of VLAN IDs: VID 1 to 4094
IGMP multicast groups: 256
Port rate limiting: User Define
Security Features: Fanble/disable ports.

Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Software Features: STF/RSTP (IEEE 802.1D/W), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping or multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

security Network Redundancy: STP, RSTP, O-Ring, Open-Ring,

LED Indicators

Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - Flashing to indicate system operated in O-Ring Master mode

O-Ring indicator: Green - Indicate system operated in O-Ring mode Fault indicator: Yellow - Indicate unexpected event occurred

10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision
Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Triple DC inputs. 12÷48VDC on 7-pin terminal block, 12÷45VDC on power jack

Power consumption (typical): 5W Overload current protection: preser

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 52mm x 106mm x 144mm

Weight: 710g Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950 Warranty period: 5 years





Net Price: 843,00 EUR Unit: pcs

#### Managed switch, 16x 10/100 RJ-45 + 2 slide-in SFP slots / RJ-45, O/Open-Ring <10ms (ORing IES-3162GC)

IES-3162GC is the managed Redundant Ring Ethernet switch with 16x10/100Base-T(X) ports and 2xgigabit combo ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-RSTP and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. All function of IES-3162GC can be managed centralized and convenient by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 16 1000 COMBO with SFP: 2 RS-232 Serial Console Port: RS-232 in RJ45 connector with

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (9600bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1V for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1X for Authentication, IEEE 802.3ad for LACP (Link Aggregation Control Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching Istency: 7 µs
Switching bandwidth: 7.2 Gbps
Max. Number of Available VLANs: 4096
IGMP multicast groups: 1024

IGMP multicast groups: 1024
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port

Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security. security
Network Redundancy: STP, RSTP, O-Ring, Open-Ring,

O-RSTP

LED Indicators
Power / Ready indicator: Green - Ready LED x 3

Power / Ready Indicator: Green - Ready LED x 3
Ring Master indicator: Green - indicates system operated in
O-Ring Master mode
Fault indicator: Amber - Indicates unexpected event occurred
10/100TX RJ45 port indicator: Green for port Link/Act, Amber
for Duplex/Collision
10/100/1000TX RJ45 port indicator: Green for port Link/Act,
Amber for 100Mbps
Fiber port indicator: Green for port Link/Act
Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

block
Power consumption (typical): 12W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm
Weight: 1100g
Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Temperature: -40+85°C(-40+158°F)
Operating Temperature: -40+85°C(-

EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty

Warranty period: 5 years



#07635

Net Price: 75,00 EUR Unit: pcs

### Managed switch, 16x 10/100 RJ-45, O/Open-Ring <10ms (ORing IES-3160)

IES-3160 is an managed Redundant Ring Ethernet switch with 16x10/100Base-T(X) ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. All function of IES-3160 can be managed centralized and convenient by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40 to  $70^{\circ}\text{C}$  can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for highly-managed Ethernet application.

Physical Ports

Tol/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 16 RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (9600bps 8 N 1)

Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.3ad for LACP (Link Aggregation Control Protocol) MAC Table: 8192 MAC addresses Priority Quages: 4

Aggregation Forestern Aggregates (Aggregates)
Aggregates
A GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

Network Redundancy: STP, RSTP, O-Ring, Open-Ring, O-RSTP

U-ROTF
LED Indicators
Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - indicates system operated in

O-Ring Master mode
Fault indicator: Amber - Indicates unexpected event occurred
10/100TX RJ45 port indicator: Green for port Link/Act, Amber

for Duplex/Collision 10/100/1000TX RJ45 port indicator: Green for port Link/Act,

Amber for 100Mbps
Fiber port indicator: Green for port Link/Act

Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 12W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30

Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm Weight: 1100g

Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+185°F)
Operating Temperature: -40+70°C (-40+188°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty
Warranty period: 5 years



#07634

Net Price: 900,00 EUR Unit: pcs

## Managed switch, 16x 10/100 RJ-45, O/Open-Ring <10ms (ORing IES-3240)

IES-3240 is an managed Redundant Ring Ethernet switch with 24x10/100Base-T(X) ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time 10ms over 250 units of connection), Open-Ring and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. All function of IES-3240 can be managed centralized and convenient by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40 to  $70^{\circ}\text{C}$  can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for highly-managed Ethernet application.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 24 RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (9600bps 8 N 1)

console cable (960Upps & N I)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D
for STP (Spanning Tree Protocol), IEEE 802.1p for COS
(Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE
802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE
802.1X for Authentication, IEEE 802.3ad for LACP (Link
Aggregation Control Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 4

Aggregation Control Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 7.2 Gbps
Max. Number of Available VLANs: 4096
IGMP multicast groups: 1024
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted
authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 10ms over 250
units, TOS/Diffserv supported, Quality of Service (802.1p) for
real-time traffic, VLAN (802.1q) with VLAN tagging and
GVRP supported, IGMP Snooping for multicast filtering, Port
configuration, Port status, Port statistics, Port monitoring, Port
security security

Network Redundancy: STP, RSTP, O-Ring, Open-Ring, O-RSTP

LED Indicators

Power / Ready indicator: Green - Ready LED x 3 Ring Master indicator: Green - indicates system operated in

O-Ring Master mode
Fault indicator: Amber - Indicates unexpected event occurred
10/100TX RJ45 port indicator: Green for port Link/Act, Amber

for Duplex/Collision 10/100/1000TX RJ45 port indicator: Green for port Link/Act,

Amber for 100Mbps
Fiber port indicator: Green for port Link/Act

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12+48VDC on 6-pin terminal block

Power consumption (typical): 12W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30

Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm Weight: 1100g

Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+185°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty





Net Price: 686,00 EUR Unit: pcs

### Managed switch, 24x 10/100Base-T(X) RJ45 Ports + 2x 10/100/1000 COMBO Ports with SFP, O/Open-Ring <10ms (ORing RES-9242GC-EU)

RES-9242GC is rack mount managed redundant ring Ethernet switch with 24x10/100Base-T(X) ports and 2xgigabit combo ports, SFP socket. RES-9242GC also support Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection) /Open-Ring/O-Chain/>\*noteMRP/Fast Recovery and MSTP (RSTP/STP compatible) can protect your mission-critical (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RES-9242GC supported wide operating temperature from -40°C to 75°C. RES-9242GC can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Fiber Ethernet application.

Physical Ports
10/100Base-T(X) RJ45 Ports: 24
10/100/1000 COMBO with SFP: 2
RS-232 Serial Console Port: RS-232 in DB-9 connector with console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX, IEEE 802.3ab for 1000Base-T, IEEE 802.3z
for 1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3d
for LACP (Link Aggregation Control Protocol), IEEE 802.1p
for COS (Class of Service), IEEE 802.1Q for VLAN Tagging,
IEEE 802.1v for RSTP (Rapid Spanning Tree Protocol), IEEE
802.1x for Authentication, IEEE 802.1AB for LLDP (Link
Layer Discovery Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward

Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 8.8 Gbps
Max. Number of Available VLANs: 4096
IGMP multicast groups: 256 for each VLAN
Port rate limiting: User Define
Security Features: Device Binding security feature,
Enable/disable ports, MAC based port security, Port based
network access control (802.1x), VLAN (802.1q) to segregate
and secure network traffic, Radius centralized password
management. SNMPV3 encryoted authentication and access

management, SNMPv3 encrypted authentication and access security

Software Features: IEEE 802.1D Bridge, auto MAC address learning/aging and MAC address (static), Multiple Registration Protocol (MRP), MSTP (RSTP/STP compatible), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units , TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging, IGMP v2/v3 Snooping, IP-based bandwidth management, Application-based QoS management, DOS/DDOS auto prevention, Port configuration, status, statistics, monitoring, security, DHCP Server/Client , DHCP Relay, Modbus TCP, SMTP Client, NTP server Network Redundancy: O-Ring, Open-Ring, O-ChainMRP, MSTP (RSTP/STP compatible) Software Features: IEEE 802.1D Bridge, auto MAC address

LED Indicators Power / Ready indicator: Green - Ready LED x 2
Ring Master indicator: Green - indicates system operated in

O-Ring Master mode
O-Ring Indicator (Ring): Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the

operating in O-Arity indee, Green binking - indicates that the Ring is broken.

10/100TX RJ45 port indicator: Green for port Link/Act, Green for speed indicator ~ On for 100Mbps / Off for 10Mbps 10/100/1000TX RJ45 port indicator: Green for port Link/Act, Green for speed indicator ~ On for 100/1000Mbps / Off for 10Mbps

Fiber port indicator: Green for port Link/Act

Power Input power: 100~240VAC with power cord Power consumption (typical): 15.2W Overload current protection: present Physical Characteristic

Dimension (W x D x H): 440 x 200 x 44 mm (17.32 x 7.87 x 1.73 inch) Weight: 2695g

Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+75°C (-40+167°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huminus: 5%-59% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class B EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1 (compliant, certification pending)

Warranty period: 5 years





Net Price: 1 370,00 EUR Unit: pcs

### Managed switch, 24x 10/100Base-T(X) RJ45 Ports + 2x 10/100/1000 COMBO Ports with SFP, O/Open-Ring <30ms (ORing RES-P9242GCL-HV)

RES-P9242GCL series are 26-port rack mount managed redundant ring Ethernet switch with 24x10/100Base-T(X) and 2xGigabit Combo ports, SFP socket. These switches are designed for power substation application, and it is fully compliant with the requirement of IEC 61850-3 and IEEE 1613. These switches support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms), O-Chain, MRP\*note, Fast Recovery and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RES-P9242GCL series can also be managed centralized and convenient by Open-Vision, as well as the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet

Physical Ports 10/100Base-T(X) RJ45 Ports: 24 10/100/1000 COMBO with SFP: 2 RS-232 Serial Console Port: RS-232 in DB-9 connector with

RS-232 Serial Console Port: RS-232 in DB-9 connector with console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX, IEEE 802.3ab for 1000Base-TX, IEEE 802.3x for 1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3a for LACP (Link Aggregation Control Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1y for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol), IEEE 802.1D for STP (Spanning Tree Protocol)

Layer Discovery Protocol), IEEE 802.1D for STP (Spanning Tree Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 8.8 Gbps
Max. Number of Available VLANs: 4096
IGMP multicast groups: 256 for each VLAN
Port rate limiting: User Define
Security Features: Device Binding security feature,
Enable/disable ports, MAC based port security, Port based
network access control (802.1x), VLAN (802.1q) to segregate
and secure network traffic, Radius centralized password
management, SNMPv3 encrypted authentication and access
security

Software Features: IEEE 802.1D Bridge, auto MAC address

(static), Multiple Software Features: IEEE 802.1D Bridge, auto MAC address learning/aging and MAC address (static), Multiple Registration Protocol (MRP), MSTP (RSTP/STP compatible), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging, IGMP v2/v3 Snooping, IP-based bandwidth management, Application-based QoS management, OS/DDOS auto revocation. Part configuration, etatus Management, Application-based Qos management, ODS/DDOS auto prevention, Port configuration, status, statistics, monitoring, security, DHCP Server/Client, DHCP Relay, Modbus TCP, SMTP Client, NTP server Network Redundancy: O-Ring, O-ChainMRP, MSTP (RSTP/STP compatible)

LED Indicators

LEU Indicators
Power / Ready indicator: Green - Ready LED x 2
Ring Master indicator: Green - indicates system operated in
O-Ring Master mode
O-Ring Indicator (Ring): Green - Indicates that the system
operating in O-Ring mode, Green Blinking - Indicates that the
Ring is broken.

10/100TX RJ45 port indicator: Green for port Link/Act, Green for speed indicator ~ On for 100Mbps / Off for 10Mbps 10/100/1000TX RJ45 port indicator: Green for port Link/Act, Green for speed indicator ~ On for 100/1000Mbps / Off for

Fiber port indicator: Green for port Link/Act Fault Contact

Relay: Relay output to carry capacity of 1A at 24VDC

Power Input power: Dual 125~370VDC / 100~240VAC power inputs Power consumption (typical): 19.8W Overload current protection: present Physical Characteristic Dimension (W x D x H): 443.7 x 262.7 x 44 mm Weight: 4050g Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+85°C (-40+185°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMC: CE EMC (EN 55024, EN 55032), FCC Part 15 B, IEC

EMC: CE EMC (EN 55024, EN 55032), FCC Part 15 B, IEC 61850/ IEEE1613

EMI: EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15B class A

EMS: EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS), IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8 (PFMF), IEC/EN 61000-4-11 (DIP))

Shock: IEC60068-2-27 Free Fall: IEC60068-2-31 Vibration: IEC60068-2-6 Safety: EN60950-1 Other: IEC 61850/ IEEE1613

MTBF: 262,968 hrs Warranty



#### #06879 Net Price: 204,00 EUR Unit: pcs

### Unmanaged switch, 4x 10/1000 RJ-45 + 1x 1000 SFP , slim housing (ORing IGS-1041GPA)

IGS-1050A/IGS-1041GPA series are unmanaged gigabit Ethernet switches with 5 x 10/100/1000Base-T(X) ports or 4 x 10/100/1000Base-T(X) and 1 x 1000Base-X SFP ports. IGS-1050A/IGS-1041GPA series support redundant power inputs, rigid IP-30 housing and have DIP switches for enabling or disabling relay output alarm. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment.

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 1000Base-X SFP Ports: 1

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u

for 100BaseT(X) and 100BaseFX,, IEEE 802.3z for 1000Base-X, IEEE 802.3x for Flow control MAC Table: 1024 MAC addresses Processing: Store-and-Forward

LED Indicators

Power indicator: Green - Power LED x 2
Fault indicator: Amber - Indicate PWR1 or PWR2 failure
10/100/1000TX RJ45 port Indicator: Green on only for 1000Mbit, Green and Amber on for 100Mbit, Amber on only

1000X SFP port Indicator: Green for port Link/Act

Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 5.5W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm

Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm
Weight: 403g
Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -10+60°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC600068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950

Safety: EN60950 Warranty Warranty period: 5 years



#### #07960

Net Price: 227,00 EUR Unit: pcs

### Unmanaged switch, 4x 10/1000 RJ-45 + 2x 1000 SFP, slim housing (ORing IGS-1042GPA)

IGS-1042GPA is an unmanaged Ethernet switch. IGS-1042GPA has 4x10/100/1000Base-T(X) and 2x100/1000Base-X SFP port. The SFP port optical network speed can be set by changing the settings of the DIP-Switch below. IGS-1042GPA supports wide range 12~48VDC power inputs. The wide operating temperature range from -40oC to 70oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for Ethernet application.

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100/1000Base-X SFP Ports: 2

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 10BaseT(X) and 100BaseFX,, IEEE 802.3z for
1000Base-X, IEEE 802.3x for Flow control
MAC Table: 1024 MAC addresses

Processing: Store-and-Forward LED Indicators

Power indicator: Green - Power LED x 2

Fault indicator: Amber - Indicate PWR1 or PWR2 failure 10/100/1000TX RJ45 port Indicator: Green on only for 1000Mbit, Green and Amber on for 100Mbit, Amber on only

for 10Mbit 1000X SFP port Indicator: Green for port Link/Act

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs, 12÷48VDC on 6-pin terminal

Power consumption (typical): 6.4W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm Weight: 410g

Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Humbolist: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950



#06613 Net Price: 104,00 EUR Unit: pcs

### Unmanaged switch, 5x 10/100/1000 RJ-45, slim housing (ORing IGS-C1050)

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 5

Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10Base1, IEEE 802.
for 10DBase1(X), IEEE 802.3x for Flow control
MAC Table: 2048 MAC addresses
Processing: Store-and-Forward
LED Indicators
Power indicator: Green - Power LED x 2
Fault indicator: Yellow - Indicate PWR1 or PWR2 failure

10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Dual DC inputs. 12÷48VDC on 4-pin terminal

Power consumption (typical): 3W

Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 26mm x 64mm x 103mm Environmental Storage Temperature: -10÷60°C

Operating Temperature: -10÷60°C Operating Humidity: 5%÷95% Non-condensing

Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty Warranty period: 5 years



#06878 Net Price: 182,00 EUR Unit: pcs

### Unmanaged switch, 5x 10/1000 RJ-45, slim housing (ORing IGS-1050A)

IGS-1050A/IGS-1041GPA series are unmanaged gigabit Ethernet switches with 5 x 10/100/1000Base-T(X) ports or 4 x 10/100/1000Base-T(X) and 1 x 1000Base-X SFP ports. IGS-1050A/IGS-1041GPA series support redundant power inputs, rigid IP-30 housing and have DIP switches for enabling or disabling relay output alarm. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 5

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3ab for 1000Base-T, IEEE 802.3x

for Flow control MAC Table: 1024 MAC addresses Processing: Store-and-Forward

LED Indicators

Power indicators

Power indicator: Green - Power LED x 2

Fault indicator: Amber - Indicate PWR1 or PWR2 failure
10/100/1000TX RJ45 port Indicator: Green on only for
1000Mbit, Green and Amber on for 100Mbit, Amber on only

for 10Mbit

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 5.5W

Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 26.1mm x 94.9mm x 144.3mm

Weight: 420g Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Humbinity: 5%-595% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-36

Vibration: IEC60068-2-6

Safety: EN60950

Warranty period: 5 years



#07959

Net Price: 130,00 EUR Unit: pcs

### Unmanaged switch, 5x 10/1000 RJ-45, slim housing (ORing IGS-150B)

IGS-150B is a mini type unmanaged full gigabit Ethernet switch with  $5 \times 10/100/1000$ Base-T(X) ports. IGS-150B supports redundant power input and rigid mini size IP-30 housing. In addition, the wide operating temperature range from -40oC to 70oC can satisfy most of operating environment.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 5

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.3ab
for 1000Base-T

MAC Table: 4096 MAC addresses Processing: Store-and-Forward LED Indicators

Power indicator: Green - Power I FD x 2

10/10071/000X RJ45 port indicator: Up Green LED for Link/Act indicator, Down dual color LED for speed indicator Green - 1000Mbps, Amber - 100Mbps, Off - 10Mbps

Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 4-pin terminal

Power consumption (typical): 3.2W Overload current protection: present Reverse polarity protection: present Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 26.1mm x 70mm x 95mm

Weight: 222g

Weight: 222g Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950

Safety: EN60950 Warranty Warranty period: 5 years





#06513 Net Price: Unit: pcs

### Unmanaged switch, 3x 10/100/1000 RJ-45, Gigabit Ethernet, 1x 100/1000Base-X SFP, PCle slot (ORing IGCS-E131GP)

IGCS-E131GP is a PCI-Express unmanaged Gigabit Ethernet switch card. IGCS-E131GP is a high performance LAN controller which provides 3x10/100/1000Base-T(X) auto MDI/MDIX Ethernet ports and 1x100/1000Base-X SFP ports. IGCS-E131GP could be installed on any IPC motherboard with PCIe socket to make the IPC/embedded system able to communicate with other Ethernet devices. The IGCS-E131GP's full bandwidth capability boasts a robust 1000Mbps capability through the PCI Express bus architecture. IGCS-E131GP no need to purchase a new switch or broadband router because the autonegotiation feature works with your existing switch, broadband router, or hub to provide the highest network speed available. The automatic full duplex

capability further increases bandwidth and eliminates packet collisions by allowing data to flow in both directions at the same time. Therefore, IGCS-E131GP is the best solution to IPC/embedded system to feature Ethernet network

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 3 100/1000Base-X SFP port: 1

Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX, IEEE 802.3ab for 1000Base-T, IEEE 802.3x
for Flow control, IEEE 802.z for 1000Base-X

MAC Table: 8192 MAC addresses Processing: Store-and-Forward

LED Indicators

Debt indicators

Power indicator: Green - Power LED x 1
10/100TX RJ45 port indicator: Green for port Link/Act.
100/1000Base-X SFP port indicator: Green for port Link/Act.

Input power: PCIe bus powered Power consumption (typical): 4,2W
Overload current protection: present
Physical Characteristic
Dimension (WxDxH): 21.3mm x 178mm x 121mm
Weight 120e

Weight: 120g Environmental Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -10+60°C (14+140°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huminity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-36

Vibration: IEC60068-2-6

Vibration: IELCoule8-2-6
Operating System Supports
Microsoft System: DOS / Win98 / WinMe / WinXP / Win2000 /
WinServer2003 / Vista / WinServer 2008 / Win7 / Win8
Unix (Linux): Linux for Kernel 3.x / 2.6.x / 2.4.x, FreeBSD for
7.x / 8.0, SCO OpenServer for 6 / UnixWare 7.1.x
Novell: Novell client for DOS (ODI driver) / Novell server

driver (Support OS 5.x and 6.x) Others: MacOS 10.4 / 10.5 / 10.6 / 10.7

Warranty

Warranty period: 5 years



Unit: pcs

### Unmanaged switch, 4x 10/100/1000 RJ-45, Gigabit Ethernet, PCle slot (ORing IGCS-E140)

IGCS-E140 is an PCI-Express unmanaged Gigabit Ethernet switch card. The Ethernet switch card is a high performance LAN controller. IGCS-E140 provided 4x10/100/1000Base-T(X) auto MDI/MDIX Ethernet ports. IGCS-E140 could be installed on any IPC motherboard with PCle socket to make the IPC/embedded system able to communication with other Ethernet devices. The IGCS-E140's full bandwidth capability boasts a robust 1000Mbps capability through the PCI-Express bus architecture. IGCS-E140 no need to purchase a new switch or broadband router because the auto-negotiation feature works with your existing switch, broadband router, or hub to provide the highest network speed available. The automatic full duplex capability further increases bandwidth and eliminates packet collisions by allowing data to flow in both directions at the same time. Therefore, IGCS-E140 is the best solution to IPC/embedded system to feature Ethernet network.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4

Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 10Base-TX, IEEE 802.3ab for 100Base-T, IEEE 802.3x

for Flow control
MAC Table: 8192 MAC addresses
Processing: Store-and-Forward

LED Indicators

Power indicator: Green - Power LED x 1 10/100TX RJ45 port indicator: Green for port Link/Act. Amber for Collision/Duplex indicator

Power
Input power: PCIe bus powered
Power consumption (typical): 4,2W
Overload current protection: present
Physical Characteristic
Dimension (WxDxH): 21.3mm x 136mm x 121mm

Weight: 98g Environmental

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -10+60°C (14+140°F) Operating Humidity: 5%+95% Non-condensing

Operating numinuty: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Operating System Supports
Microsoft System: DOS / Win98 / WinMe / WinXP / Win2000 /
WinServer2003 / Vista / WinServer 2008 / Win7 / Win8
Unix (Linux): Linux for Kernel 3.x / 2.6.x / 2.4.x, FreeBSD for 7.x / 8.0, SCO OpenServer for 6 / UnixWare 7.1.x
Novell: Novell client for DOS (ODI driver) / Novell server driver (Support OS 5.x and 6.x)
Others: MacOS 10.4 / 10.5 / 10.6 / 10.7
Warranty

Warranty

Warranty period: 5 years



#08431

Call

Net Price:

#07666

Net Price: 79,70 EUR Unit: pcs

### Unmanaged switch, 4x 10/1000 RJ-45 + 2x 1000 SFP (Wave Optics WO-IS-2GF4GC)

WO-IS-2GF4GC is an industrial Ethernet switch with extended temperature ranges developed by Wave Optics to fulfill needs in industries including

smart traffic, expressways, smart cities, safe cities, new energy, smart manufacturing, and so on. The two Gigabit fiber port and four Gigabit copper ports provide a high packet forwarding rate and an ample back plane bandwidth, making the transmission of images clear and smooth

Having an IP40 rated aluminum enclosure, a rail base designed to withstand severe vibration, and good EMC electromagnetic compatibility, this series of product is capable of working stably and reliably in extreme-temperature (-40°C to 85°C) and rugged industrial environments.

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 4 100/1000Base-X SFP Ports: 2

Technology

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3z for 1000Base-X MAC Table: 2048 MAC addresses

Input power: Dual DC inputs. 9÷48VDC on 5-pin terminal

Power consumption (typical): 6W

Physical Characteristic Enclosure: IP-40 Dimension (W x D x H): 37mm x 85m x 116mm

Weight: 430g Environmental

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+85°C (-40+185°F) Operating Humidity: 5%+95% Non-condensing

Regulatory approvals EMS: IEC61000-4-2(ESD) level 4, IEC 61000-4-4 (EFT) level 4, IEC61000-4-5(Surge) level 4 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 MTBF: 500000h

#### Communication for industry



#06614

Net Price: 136,00 EUR Unit: pcs

### Unmanaged switch, 8x 10/100/1000 RJ-45 (ORing IGS-C1080)

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X).IEEE 802.3ab for 1000Base-T, IEEE 802.3x
for Flow control
MAC Table: 4k MAC addresses

Processing: Store-and-Forward Power

Input power: 12÷48VDC on 2-pin terminal block

Overload current protection: present Reverse polarity protection: present Physical Characteristic

Enclosure: IP-40 Dimension (W x D x H): 43,5mm x 64mm x 103mm

Environmental

Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+75°C (-40+167°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMC: CE EMC (EN 55032, EN 55035), FCC Part 15 B
EMI: CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B

EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),

EN61000-4-8(PFMF) Safety: EN62368-1

Warranty

Warranty period: 5 years



#06615

Net Price: 370,00 EUR Unit: pcs

### Unmanaged switch, 8x 10/1000 RJ-45 + 2x 1000 SFP (ORing IGS-182GP)

IGS-182GP is unmanaged Ethernet switch with 8x10/100/1000Base-T(X) with 2x100/1000Base-X ports. With very compact size of housing, you can install IGS-182GP easily. In addition, IGS-182GP is with rigid IP-30 housing design and can operate under harsh environment. The extended operating temperature range from -40 °C to 75°C is ready and can satisfy most requirement of operation

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8 100/1000Base-X SFP Ports: 2

Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u

for 100BaseT(X) and 100BaseFX,, IEEE 802.3z for 1000Base-X, IEEE 802.3x for Flow control

MAC Table: 8k

Processing: Store-and-Forward
Switch Properties: Switching latency 7 us, Switching

bandwidth 20Gbps Jumbo frame: 9216 Bytes Packet buffer: 1.5Mbit

LED Indicators

LEU Indicators
Power indicator: Green - Power LED x 2
Fault indicator: Amber - Indicate power failed even warning
10/100/1000TX RJ45 port Indicator: Green on only for
1000Mbit, Amber on for 100Mbit, off for 10Mbit
1000X SFP port Indicator: Green for port Link/Act, Green for
1000Mbps, Amber for 100Mbps

Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Power

Input power: Dual DC inputs. 12÷48VDC on 4-pin terminal block

Diock
Power consumption (typical): <5W
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 41(W) x 89.8(D) x 127(H) mm
Weight: 400g
Environmental

Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+85°C (-40+167°F)
Operating Temperature: -40+75°C (-40+167°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMC: CE EMC (EN 55024, EN 55032), FCC Part 15 B
EMI: EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3,
FCC Part 15 B class A
EMS: EN 55024 (IEC/EN 61000-4-2 (ESD Contact 6KV, Air
8KV), IEC/EN 61000-4-3 (RS 3V), IEC/EN 61000-4-4 (EFT
Power 2KV, Signal 2KV), IEC/EN 61000-4-6 (Surge Power
1KV, RJ45 1KV), IEC/EN 61000-4-6 (CS 3V), IEC/EN
61000-4-8(PFMF), IEC/EN 61000-4-11 (DIP))
Shock: IEC60068-2-27
Free Fall: IEC60068-2-31
Vibration: IEC60068-2-6
Safety: UL61010-1, UL61010-2-201

Safety: UL61010-1, UL61010-2-201 MTBF: 1056,516 hours

Warrantv

Warranty period: 5 years



#08156

Net Price: 190,00 EUR Unit: pcs

### Unmanaged switch, 8x 10/1000 RJ-45, slim housing (ORing IGS-1080A)

IGS-1080A is the slim type unmanaged gigabit Ethernet switch with 8 x 10/100/1000Base-T(X) ports. IGS-1080A supports redundant power input, rigid IP-30 housing, plus DIP switches for enabling or disabling relay output alarm. In addition, the wide operating temperature range from -40°C to 70°C can satisfy most of operating environments.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3ab for 1000Base-T, IEEE 802.3x

for Flow control
MAC Table: 2048 MAC addresses
Processing: Store-and-Forward
LED Indicators

Power indicator: Green - Power I FD x 2

Fault indicator: Amber - Indicate PWR1 or PWR2 failure 10/100/1000TX RJ45 port Indicator: Green on only for 1000Mbit, Green and Amber on for 100Mbit, Amber on only

for 10Mbit Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 5.5W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 26.1mm x 94.9m x 144.3mm

Weight: 420g Environmental

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty

Warranty period: 5 years



Net Price: 2 600,00 EUR Unit: pcs

# Managed modular switch, 16x 10/1000 RJ-45 + 4 slide-in SFP+ slots 10G, (ORing RGS-P9160GC-M1-HV)

RGS-P9160M1 series have three different models, RGS-P9160GCM1, RGS-P9160GFM1 and RGS-P9160FXM1. They are IEC 61850-3 and up to 24-port modular rack mount Gigabit managed redundant ring Ethernet switch with 16xGigabit combo / Gigabit fiber 100Mbit fiber ports and provided 1 modular switch slot to extend switch function. The switch is designed for power substation application and rolling stock application, fully compliant with the requirement of IEC 61850-3 and IEEE 1613. RGS-P9160M1 series support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms), O-Chain, \*note MRP, Fast Recovery and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RGS-P9160M1 series can also be managed centralized and convenient by Open-Vision, as well as the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet power substation application.

Physical Ports

Physical Ports Gigabit Combo Port with 10/100/1000Base-T(X) and 100/1000Base-X SFP Port: 16 Slot Number: 1 slot for 4x10G port RS-232 Serial Console Port: RS-232 in DB-9 connector with console cable (115200bps 8 N 1)

console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX and 100Base-FX, IEEE 802.3ab for
1000Base-TX and 100Base-FX, IEEE 802.3ab for
1000Base-T, IEEE 802.2 for 1000Base-X, IEEE 802.3x for
Flow control, IEEE 802.3ad for LACP (Link Aggregation
Control Protocol ), IEEE 802.1p for COS (Class of Service),
IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP
(Rapid Spanning Tree Protocol), IEEE 802.1s for MSTP
(Multiple Spanning Tree Protocol), IEEE 802.1x for
Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery
Protocol)

Protocol)
MAC Table: 8192 MAC addresses

Packet Buffer: 32Mbits Flash Memory: 128Mbits DRAM Size: 1Gbits

DRAM Size: 1Gbits
Jumbo frame: Up to 10K Bytes
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 48 Gbps
Max. Number of Available VLANs: 4095
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define

IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security Features: Device Binding security feature,
Enable/disable ports, MAC based port security, Port based
network access control (802.1x), Single 802.1x and Multiple
802.1x, MAC-based authentication, QoS assignment, Guest
VLAN, MAC address limit, TACACS+, VLAN (802.1Q) to
segregate and secure network traffic, Radius centralized
password management, SNMPv3 encrypted authentication
and access security, Https / SSH enhance network security,
Web and CLI authentication and authorization, Authorization
(15 levels), IP source guard
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 30ms over 250

Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP, MSTP(RSTP/STP compatible)
LED Indicators

Power Indicator (PWR): Green Indicates that the system ready. The LED is blinking when the system is upgrading firmware
Ring Master indicator: Green - indicates system operated in

O-Ring Master mode
Fault indicator: Amber - Indicates unexpected event occurred
Supervisor Login Indicator (RMT): Green - System is

Supervisor Login Indicator (KMT): Green - System is accessed remotely Smart LED Display system: Link/Act(LK/ACT) / Speed(SPD) / Duplex(FDX) / Remote (RMT) green LED indicator x 4 Mode select Button (MODE): Link/Act(LK/ACT) / Speed(SPD) / Duplex(FDX) / Remote (RMT) mode select button, Port 1 ~ 28 Link/Act(LK/ACT) LED show - Green x 28 Fault Contact

Relay: Relay output to carry capacity of 1A at 24VDC

Flower: Dual 100~240VAC / 100~370VDC power inputs at terminal block
Overload current protection: present
Reverse Polarity Protection: Present

Physical Characteristic
Dimension (W x D x H): 440mm x 325mm x 44mm
Weight: 4823g

vveignt: 4823g Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: 10G SFP+ module absent -40 to 70°C (-40 to 158°F ), 10G SFP+ module used -20 to 60 °C (-4 to 140°F)

to 140°F)
Operating Humidity: 5%÷95% Non-condensing
Regulatory approvals
Power Automation: IEC 61850-3, IEEE 1613 (pending)
EMI: FCC Part 15, CISPR (EN55022) class A

Vibration: IEC60068-2-6 Warranty period: 5 years

#### #08899

Net Price: 1 680,00 EUR Unit: pcs



#08158

Net Price: 595,00 EUR Unit: pcs

#### Managed modular switch, 24x SFP + 4 slide-in SFP+ slots 10G, O/Open-Ring <30ms (ORing RGS-P9000-HV)

RGS-9000 is modular managed redundant ring Ethernet switch with 4 slots. With completely support of Ethernet
Redundancy protocol, O-Ring (recovery time < 30ms over
250 units of connection) and MSTP (RSTP/STP compatible)
can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And support wide operating temperature from -40 oC to 85 oC (If use 10G SFP module then operating temperature is -20 oC ~ 60 oC). RGS-9000 can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports

Slot Number: 4 (up to 3 slots for 8x1G port and 1 slot for

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

- -

console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX and 100Base-FX, IEEE 802.3ab for
1000Base-T, IEEE 802.2 for 1000Base-X, IEEE 802.3ae for
10Gigabit Ethernet, IEEE 802.3x for Flow control, IEEE
802.3ad for LACP (Link Aggregation Control Protocol ), IEEE
802.1p for COS (Class of Service), IEEE 802.1Q for VLAN
Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree
Protocol), IEEE 802.1x for MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses

Priority Queues: 8

Processing: Store-and-Forward Switching latency: 7 µs Switching bandwidth: 128 Gbps

Max. Number of Available VLANs: 256

IGMP multicast groups: 128 for each VLAN

Port rate limiting: User Define

Security Features: Device Binding security feature,

Enable/disable ports, MAC based port security, Port based

network access control (802.1x), Single 802.1x and Multiple 

Web and CLI authentication and authorization, Authorization (15 levels), IP source guard Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port contributions.

security
Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP,
MSTP(RSTP/STP compatible)

LED Indicators
Power Indicator (PWR): Green Indicates that the system ready. The LED is blinking when the system is upgrading

Ring Master indicator: Green - indicates system operated in O-Ring Master mode

O-king Master House Fault indicator: Amber - Indicates unexpected event occurred Supervisor Login Indicator (RMT): Green - System is accessed remotely

accessed remotely
Smart LED Display system: Link/Act(LK/ACT) / Speed(SPD) /
Duplex(FDX) / Remote (RMT) green LED indicator x 4
Mode select Button (MODE) : Link/Act(LK/ACT) /
Speed(SPD) / Duplex(FDX) / Remote (RMT) mode select
button, Port 1 ~ 28 Link/Act(LK/ACT) LED show - Green x 28

Fault Contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual 88~264VAC / 100~370VDC power inputs at terminal block

Power consumption (typical): 43.5W

Overload current protection: present Physical Characteristic Dimension (W x D x H): 440mm x 325mm x 44mm Weight: 6600g

Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: 10G SFP+ module absent -40 to 70°C (-40 to 158°F), 10G SFP+ module used -20 to 60 °C (-40 to 158°F), 10G SFP+ module used -20 to 60 °C (-40 to 158°F).

Operating Humidity: 5%÷95% Non-condensing

Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11

Warranty Warranty period: 5 years

### Managed switch, 3x 10/1000 RJ-45 + 2x1000 SFP w/DDM, O/Open-Ring <20ms (ORing IGS-3032GC)

IGS-3032GC is a full gigabit managed Redundant Ring Ethernet switch with 3x10/100/1000Base-T(X) and 2xGigabit combo ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 20ms over 250 units of connection), Open-Ring, O-RSTP and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IGS-3032GC can be managed centralized and convenient by a powerful windows utility - Open-Vision.

The redundant DC power inputs guarantee a non-stop operation. The backup power input will take over immediately when the primary DC power input fails.

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 3 1000 Mbps SFP Ports: 2 RS-232 Serial Console Port: RS-232 in RJ45 connector with

console cable (9600bps 8 N 1) Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u

Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT, AlEEE 802.3u for 1000BaseT, IEEE 802.3a for 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.1b for STP (Spanning Tree Protocol), IEEE 802.1b for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 4

Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 10 Gbps
Max. Number of Available VLANs: 256
Number of VLAN IDs: VID 1 to 4094

IGMP multicast groups: 256 Port rate limiting: User Define Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted

authentication and access security

Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 20ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

Network Redundancy: STP, RSTP, MSTP, O-Ring, Open-Ring, O-RSTP
DDM Function: Voltage, Current, Temperature
LED Indicators

Reserve / Ready indicators Cross - Ready / ED v. 2

Power / Ready indicator: Green - Ready LED x 3 Ring Master indicator: Green - Indicate system operated in O-Ring Master mode
O-Ring indicator: Green - Indicate system operated in O-Ring

mode

Fault indicator: Amber - Indicate unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision 1000X / Fiber port Indicator: Green for port Link/Act

Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC Power

Input power: Triple DC inputs +12 ~ +48VDC or -12 ~ -48VDC on 7-pin terminal block, 12 ~ 45VDC on power jack Power consumption (typical): 10W Overload current protection: present

Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 54.1mm x 106.1mm x 145.4mm

Weight: 1022g Environmental

Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+70°C (-14+140°F) Operating Humidity: 5%+95% Non-condensing

Operating Humbiny: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fail: IEC60068-2-32

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950





#07901 Net Price: 1 410,00 EUR Unit: pcs

### Managed switch, 8x 10/1000 RJ-45 + 12x100/1000 SFP w/DDM, O/Open-Ring <20ms (ORing IGS-P9812GP-HV)

IGS-P9812GP is IEC 61850-3 managed redundant ring Ethernet switch with 8x10/100/1000Base-T(X) ports and 12x100/1000Base-X SFP ports. The switch is designed for power substation application and rolling stock application, fully compliant with the requirement of IEC 61850-3 and IEEE 1613. And the switch designed for the toughest and fully compliant with EN50155 requirement. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And support wide operating temperature from -40°C to 75°C. IGS-P9812GP can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet power substation and rolling stock application.

Physical Ports

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8 100/1000Base-X SFP Port: 12 RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

Technology Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseTX, IEEE 802.3z for 100BaseTX, IEEE 802.3z for 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.1b for STP (Spanning Tree Protocol), IEEE 802.1b for COS (Class of Service), IEEE 802.1d for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 4

MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 40 Gbps
Max. Number of Available VLANs: 256
Number of VLAN IDs: VID 1 to 4094
IGMP multicast groups: 1024
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted
authentication and access security

centralized password management, SNMPv3 encrypted authentication and access security Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 20ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

configuration, Port status, Port statistics, Port monit security Network Redundancy: STP, RSTP, MSTP, O-Ring, Open-Ring, O-RSTP DDM Function: Voltage, Current, Temperature LED Indicators Power / Ready indicator: Green - Ready LED x 3

Ring Master indicator: Green - Indicate system operated in O-Ring Master mode

O-Ring indicator: Green - Indicate system operated in O-Ring mode, Green Blinking - Indicates that the Ring is broken. Fault indicator: Amber - Indicate unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision 1000X / Fiber port Indicator: Green for port Link/Act

Relay: Relay output to carry capacity of 1A at 24VDC

Relay Relay output to earry capacity of TA at 24VDC Power Redundant Input power: Dual power inputs. 85-264VAC/88~373VDC on 6-pin terminal block, IGS-P9812GP-LV - version with dual 12/48VDC power inputs on 6-pin terminal block

on 6-pin terminal block
Power consumption (typical): 24W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 115mm x 159mm x 154mm
Weight: 1870g
Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-14+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN610100-4-2 (ESD). EN61000-4-3 (RS). EN610

EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),

EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Power Automation: IEC 61850-3, IEEE 1613

Warranty period: 5 years



#07655 Net Price: 1 160,00 EUR Unit: pcs

### Managed switch, 8x 10/1000 RJ-45 + 12x100/1000 SFP w/DDM, O/Open-Ring <30ms (ORing IGS-9812GP)

IGS-9812GP is managed redundant ring Ethernet switch with 8x10/100/1000Base-T(X) ports and 12x100/1000Base-X SFP ports. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And temporary manunctions with its rast recovery technology. And support wide operating temperature from -40 oC to 70 oC. IGS-9812GP can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet power substation and rolling stock application

Physical Ports
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8
100/1000 Mbps SFP Ports: 12
RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3z for
1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for for 100Base I (X) and 100Base FX, IELE 802.3z for 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, IEEE 802.3d for LACP (Link Aggregation Control Protocol), IEEE 802.1b for STP (Spanning Tree Protocol), IEEE 802.1b for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 8 Processing: Store-and-Forward Switching bandwidth: 40 Gbps Max. Number of Available VLANs: 256 Number of VLAN IDs: VID 1 to 4094 IGMP multicast groups: 128 for each VLAN Port rate limiting: User Define Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted

centralized password management, SNMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Somware Features: STP/RSTP (IEEE 802. ID/M), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

security Network Redundancy: STP, RSTP, MSTP, O-Ring DDM Function: Voltage, Current, Temperature

Power / Ready indicator: Green - Ready LED x 2
Ring Master indicator: Green - Indicate system operated in
O-Ring Master mode

O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for port 1000Mbps Link/Act, Amber for 10/100Mbps Link/Act 100/1000Base-X SFP port Indicator: Green for port Link/Act

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 10W Overload current protection: present

Overhad Current protection: present Reverse polarity protection: present Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 96.4mm x 105.5mm x 154mm

Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-14+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huminus: 5%-59% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950 Warrántv

Warranty period: 5 years



#06511

Net Price: 659,00 EUR Unit: pcs

### Managed switch, 8x 10/1000 RJ-45 + 4 slide-in SFP slots, O/Open-Ring <20ms, slim housing (ORing IGS-9084GP-LA)

IGS-9084GP-LA is slim type managed Ethernet switch with 8x10/100/1000Base-T(X) ports and 4x100/1000Base-X SFP ports. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And support wide operating temperature from -40 °C to 75 °C. IGS-9084GP-LA can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8 100/1000 SFP: 4

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX and 100Base-FX, IEEE 802.3ab for
1000Base-T, IEEE 802.z for 1000Base-X, IEEE 802.3x for 1000Base-T, IEEE 802.z for 1000Base-X, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1x for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 8

Priority Queues: 8 Processing: Store-and-Forward Switching latency: 7 µs Switching bandwidth: 24 Gbps

Mind Dankull 24 Gbps
Throughput (packet per second): 17.856Mpps@64Bytes
Max. Number of Available VLANs: 256
IGMP multicast groups: 256 for each VLAN

Port rate limiting: User Define Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN

security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security. Modbus TCP

security, Modbus TCP
Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP, MSTP (RSTP/STP compatible)

LED Indicators

Ring Master indicator: Green - indicates system operated in O-Ring Master mode

Ring Indicator: Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the Ring is

Fault indicator: Amber - Indicates unexpected event occurred 100/1000Base-X SFP Port Indicator: Green for port Link/Act. 10/100/1000TX RJ45 port indicator: Dual color LED - Green for 1000Mbps Link/Act indicator. Amber for 10/100Mbps Link/Act indicator
Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Power Input power: Dual DC inputs. 12~48VDC on 6-pin terminal

block
Power consumption (typical): 13Watts (power device not included)
Hi-POT: 1.5KV AC
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 54.3 (W) x 108.3 (D) x 145.1 (H) mm
(2.13 x 4.26 x 5.71 inches)
Environmental

Environmental Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 MTBF: 516416hrs Warranty Warranty period: 5 years





#07909 Net Price: 1 100,00 EUR Unit: pcs

#### Managed switch, 8x 10/1000 RJ-45 + 4x100/1000 SFP w/DDM, O/Open-Ring <30ms (ORingIGS-9084GP)

IGS-9084GP is managed redundant ring Ethernet switch with 8x10/100/1000Base-T(X) ports and 4x100/1000Base-X SFP ports. The switch is designed for Railway application and fully compliant with the requirement of EN50155/EN50121-4 standard. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And temporary maintentions with its fast recovery technology. And support wide operating temperature from +40°C to 75°C. IGS-9084GP can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. In addition, with its rugged design for railway certification, i.e., EN50155/EN50121-4 standard, make IGS-9084GP to be

solid and reliable for railway traffic communication and transportation application. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8
100/1000 Mbps SFP Ports: 4
RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3z for
1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for
1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for
Flow control, IEEE 802.1b for STP (Spanning Tree
Protocol), IEEE 802.1D for COS (Class of Service), IEEE
802.1Q for VLAN Tagging, IEEE 802.1x for RSTP (Rapid
Spanning Tree Protocol), IEEE 802.1x for Authentication,
IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward

MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 24 Gbps
Max. Number of Available VLANs: 256
Number of VLAN IDs: VID 1 to 4094
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security, Port based network access control (802.1x), VLAN
(802.1q) to segregate and secure network traffic, Radius
centralized password management, SNMPv3 encrypted
authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 30ms over 250
units, TOS/Diffserv supported, Quality of Service (802.1p) for
real-time traffic, VLAN (802.1Q) with VLAN tagging and
GVRP supported, IGMP Snooping for multicast filtering, Port
security

Network Redundancy: STP, RSTP, MSTP, O-Ring DDM Function: Voltage, Current, Temperature

LED Indicators

Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - Indicate system operated in
O-Ring Master mode

O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for port 1000Mbps Link/Act, Amber for 10/100Mbps Link/Act 100/1000Base-X SFP port Indicator: Green for port Link/Act

Relay: Relay output to carry capacity of 1A at 24VDC

Fault contact

Input power: Dual DC inputs. 12+48VDC on 6-pin terminal block
Power consumption (typical): 12.5W

Overload current protection: present
Reverse polarity protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm
Weight: 1070g

Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-14+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A, EN50155
(EN50121-3-2, EN55011, EN50121-4)
EMS: IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT), IEC61000-4-5 (Surge), IEC61000-4-6
(CS), IEC61000-4-8, IEC61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty

Warranty Warranty period: 5 years



#07912 Net Price: 1 110,00 EUR Unit: pcs

#### Managed switch, 12x 10/1000 RJ-45 + 2x100/1000 SFP w/DDM, O/Open-Ring <30ms (ORing IGS-9042GP)

ORing's managed Ethernet switches are designed for industrial applications, such as rolling stock and vehicle applications. IGS-9122GP is managed redundant ring Ethernet switch with 12x10/100/1000Base-T(X) copper ports and 2x100/1000Base-X SFP ports. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection), Open-Ring ,O-Chain,MRP and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And support wide operating temperature from -40°C to 75°C. IGS-9122GP can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed Ethernet application

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 12 100/1000 Mbps SFP Ports: 2 RS-232 Serial Console Port: RS-232 in RJ45 connector with

console cable (115200bps 8 N 1)

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseTX) and 100BaseFX, IEEE 802.3z for 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1v for COS (Class of Service), IEEE 802.1v for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1v for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 8

Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 28 Gbps
Max. Number of Available VLANs: 256
Number of VLAN IDs: VID 1 to 4094

IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port

Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security

security
Network Redundancy: STP, RSTP, MSTP, O-Ring
DDM Function: Voltage, Current, Temperature

LED Indicators
Power / Ready indicator: Green - Ready LED x 3 Ring Master indicator: Green - Indicate system operated in O-Ring Master mode O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for port 1000Mbps Link/Act, Amber for 10/100Mbps Link/Act 100/1000Base-X SFP port Indicator: Green for port Link/Act

Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 12.67W
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm

Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm Weight: 765g Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+70°C (-14+158°F) Operating Temperature: -40+70°C (-14+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT), IEC61000-4-5 (Surge), IEC61000-4-6 (CS), IEC61000-4-8, IEC61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950

Safety: EN60950 Warranty

Warranty period: 5 years



#06515

Net Price: 2 030,00 EUR Unit: pcs

# Managed switch, 16x 10/100/1000 COMBO Ports with SFP + 8 slide-in SFP slots, O/Open-Ring <30ms (ORing RGS-9168GCP-E-EU)

RGS-9168GCP series are Gigabit managed redundant ring Ethernet switch with 16xGigabit combo ports and 8x100/1000Base-X, SFP socket. These switches support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP) compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And RGS-9168GCP series support wide operating temperature from -40 oC to 75 oC. RGS-9168GCP series can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports

Physical Ports Gigabit Combo port with 10/100/1000Base-T(X) and 100/1000Base-X SFP ports: 16 100/1000Base-X with SFP ports: 8 RS-232 Serial Console Port: RS-232 in DB-9 connector with console cable. 115200bps, 8, N, 1

console cable. 115200bps, 8, N, 1
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX and 100Base-FX, IEEE 802.3ab for
1000Base-T, IEEE 802.z for 1000Base-X, IEEE 802.3ae for
1000Base-T, IEEE 802.2x for Flow control, IEEE
802.3ad for LACP (Link Aggregation Control Protocol), IEEE
802.3ad for LACP (Link Aggregation Control Protocol), IEEE
802.1p for COS (Class of Service), IEEE 802.1Q for VLAN
Tagging, IEEE 802.1x for MSTP (Multiple Spanning Tree
Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for
LLDP (Link Layer Discovery Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward

Processing: Store-and-Forward Switching latency: 7 µs Switching bandwidth: 128 Gbps

Switching latency: 7 µs
Switching bandwidth: 128 Gbps
IGMP multicast groups: 256 for each VLAN
Port rate limiting: User Define
Security Features: Device Binding security feature,
Enable/disable ports, MAC based port security, Port based
network access control (802.1x), Single 802.1x and Multiple
802.1x, MAC-based authentication, Guest VLAN, MAC
address limit, VLAN (802.1Q) to segregate and secure
network traffic, Radius centralized password management,
SNMPv3 encrypted authentication and access security, Https
/ SSH enhance network security, Web and CLI authentication
and authorization, Authorization (15 levels), IP source guard
Software Features: IEEE 802.1D Bridge, auto MAC address
learning/aging and MAC address (static), Multiple
Registration Protocol (MRP), MSTP (RSTP/STP compatible),
Redundant Ring (O-Ring) with recovery time less than 30ms
over 250 units, TOS/Diffserv supported, Quality of Service
(802.1p) for real-time traffic, VLAN (802.1Q) with VLAN
tagging, IGMP v2/v3 Snooping, IP-based bandwidth
management, Application-based QoS management,
DOS/DDOS auto prevention, Port configuration, status,
statistics, monitoring, security, DHCP Server/Client, DHCP
Relay, Modbus TCP, SMTP Client, NTP server
Network Redundancy: O-Ring, O-Chain, MRP,
MSTP/RSTP/STP compastible)

Network Redundancy: O-Ring, O-Chain, MRP MSTP(RSTP/STP compatible)

Power Indicator: Green LED x 3 Power indicator for AC and DC Ring Master indicator: Green - indicates system operated in

Ring Master indicator: Green - indicates system operated in O-Ring Master mode
O-Ring Indicator (Ring): Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the Ring is broken.
Fault indicator: Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for Link/Act indicator, Dual color LED for speed indicator: Green for 1000Mbps / Amber for 100Mbps / Off-light for 10Mbps 100/1000Base-X SFP+ Port Indicator: Green for port Link/Act. Fault Contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: 100~240VAC with power cord, and dual Input power: 100-240VAC with power cord, and dual 48VDC(36-72VDC) power inputs at 6-pin terminal block Power consumption (typical): 28.2W Overload current protection: Present with terminal block Reverse Polarity Protection: Present Physical Characteristic

Dimension (W x D x H): 431mm x 342mm x 44mm

Weight: 4437g Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40 to 75 °C
Operating Humidity: 5%+95% Non-condensing

Operating Hullings, 3/8-95/8, Notification and Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11





Net Price: 1 660,00 EUR Unit: pcs

### Managed switch, 16x 10/100/1000 COMBO Ports with SFP + 8 slide-in SFP slots, O/Open-Ring <30ms (ORing RGS-9168GCP-EU)

RGS-9168GCP series are Gigabit managed redundant ring Ethernet switch with 16xGigabit combo ports and 8x100/1000Base-X, SFP socket. These switches support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP) compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And RGS-9168GCP series support wide operating temperature from -40 oC to 75 oC. RGS-9168GCP series can also be managed centralized and convenient by Open-Vision. Except the Web-based interface. Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports Gigabit Combo port with 10/100/1000Base-T(X) and 100/1000Base-X SFP ports: 16 100/1000Base-X with SFP ports: 8

100/1000Base-X with SFP ports: 8
RS-232 Serial Console Port: RS-232 in DB-9 connector with console cable. 115200bps, 8, N, 1
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX and 100Base-FX, IEEE 802.3ab for 1000Base-TX Ethernet, IEEE 802.3x for Flow control, IEEE 802.3ae for 100Gigabit Ethernet, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.1x for Flow control, IEEE 802.1x for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
MAC Table: 8192 MAC addresses Priority Queues: 8
Processing: Store-and-Forward

Processing: Store-and-Forward Switching latency: 7 µs Switching bandwidth: 128 Gbps

Switching latericy. 7 µs Switching bandwidth: 128 Gbps IGMP multicast groups: 256 for each VLAN Port rate limiting: User Define Security Features: Device Binding security feature, Enable/disable ports, MAC based port security, Port based network access control (802.1x), Single 802.1x and Multiple 802.1x, MAC-based authentication, Guest VLAN, MAC address limit, VLAN (802.1Q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security, Https / SSH enhance network security, Web and CLI authentication and authorization, Authorization (15 levels), IP source guard Software Features: IEEE 802.1D Bridge, auto MAC address learning/aging and MAC address (static), Multiple Registration Protocol (MRP), MSTP (RSTP/STP compatible), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging, IGMP v2/v3 Snooping, IP-based bandwidth management, Application-based QoS management, DOS/DDOS auto prevention, Port configuration, status, DOS/DDOS auto prevention, Port configuration, status, statistics, monitoring, security, DHCP Server/Client, DHCP Relay, Modbus TCP, SMTP Client, NTP server Network Redundancy: O-Ring, O-Chain, MRP, MSTP(RSTP/STP compatible)

Power Indicator: Green LED x 3 Power indicator for AC and DC Ring Master indicator: Green - indicates system operated in

Ring Master indicator: Green - indicates system operated in O-Ring Master mode O-Ring Indicator (Ring): Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the Ring is broken.

Fault indicator: Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for Link/Act indicator. Dual color LED for speed indicator: Green for 1000Mbps / Amber for 100Mbps / Off-light for 10Mbps 100/1000Base-X SFP+ Port Indicator: Green for port Link/Act. Fault Contact

Fault Contact

Relay: Relay output to carry capacity of 1A at 24VDC Power Input power: 100~240VAC with power socket

Input power: 100-240VAC with power socket
Power consumption (typical): 28.2W
Overload current protection: not present
Reverse Polarity Protection: Present
Physical Characteristic
Dimension (W x D x H): 431mm x 342mm x 44mm
Weight: 4117g
Environmental

Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40 to 75 °C Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11

LED Indicators





Net Price: 1 320,00 EUR Unit: pcs

# Managed switch, 16x 10/1000 RJ-45 + 4x100/1000 SFP w/DDM, O/Open-Ring <20ms (ORing IGS-P9164GC-HV)

IGS-P9164 series are IEC 61850-3 managed redundant ring Ethernet switches. These switches are designed for power substation application and rolling stock application, fully compliant with the requirement of IEC 61850-3 and IEEE 1613. IGS-P9164GF series are IEC 61850-3 managed

redundant ring Ethernet switch with 16x10/100/1000Base-T(X) ports and 4x1000Base-X optical 16x10/100/1000Base-T(X) ports and 4x1000Base-X optical fiber port with SC connector. IGS-P9164GFX series are IEC 61850-3 managed redundant ring Ethernet switch with 16x10/100/1000Base-T(X) ports and 4x100Base-FX optical fiber port with SC connector. IGS-P9164GC series are IEC 61850-3 managed redundant ring Ethernet switch with 16x10/100/1000Base-T(X) ports and 4xGigabit combo ports with SFP socket. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And support wide operating temperature from -40°C to 75°C. IGS-P9164GF(X) series can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 16 Gigabit Combo Port with 10/100/1000Base-T(X) and 100/1000Base-X SFP Port: 4 RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT, XI and 100BaseFX, IEEE 802.3z for 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.1v for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 4
Processing: Store-and-Forward Switching latency: 7 µs
Max. Number of Available VLANs: 256
Number of VLAN IDs: VID 1 to 4094
IGMP multicast groups: 1024
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 20ms over 250 units. TOS/Diffsery supported. Quality of Service (802.1o) for

Soliware Features: STF/RSTP (IEEE 802.1D/W), Redundant Ring (Q-Ring) with recovery time less than 20ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

Network Redundancy: STP, RSTP, MSTP, O-Ring, Open-Ring, O-RSTP DDM Function: Voltage, Current, Temperature

LED Indicators

Power / Ready indicator: Green - Ready LED x 3 Ring Master indicator: Green - Indicate system operated in

Ring Master indicator: Green - Indicate system operated in O-Ring Master mode O-Ring indicator: Green - Indicate system operated in O-Ring mode, Green Blinking - Indicates that the Ring is broken. Fault indicator: Amber - Indicate unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for Duplex/Collision 1000X / Fiber port Indicator: Green for port Link/Act Fault contact

Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Redundant Input power: Dual power inputs. 85~264VAC/88~373VDC on 3-pin terminal block, IGS-P9164GC-LV version with dual 12/48VDC power inputs no 2-pin terminal block
Power consumption (typical): 18W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30

Dimension (W x D x H): 115mm x 159mm x 154mm Weight: 2186g Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-14+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6



Net Price: 1 610,00 EUR Unit: pcs

#### Managed switch, 16x 10/1000 RJ-45 + 4x1000 MM SC, O/Open-Ring <30ms (ORing IGS-9164GF-MM-SC)

IGS-9164GF/FX series are managed redundant ring Ethernet switch with 16x10/100/1000Base-T(X) ports and 4-port fixed optical fiber port. IGS-9164GF provided 4x1000Base-X fiber ports and IGS-9164FX provided 4x100Base-FX fiber ports. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) /Open-Ring/O-Chain/MRP/Fast Recovery and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary applications from network interruptions or temporary malfunctions with its fast recovery technology. And support wide operating temperature from -40 oC to 75°C. IGS-9164GF/FX series can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 16 1000Base-SX Multimode ports (550m, 850nm, SC

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3z for
1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.10 for STP (Spanning Tree Protocol), IEEE 802.10 for STP (Spanning Tree Protocol), IEEE 802.10 for VLAN Tagging, IEEE 802.1v for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 8 Processing: Store-and-Forward Switching latency: 7 µs Switching bandwidth: 40 Gbps Max. Number of Available VLANs: 256 Number of VLAN IDs: VID 1 to 4094 IGMP multicast groups: 128 for each VLAN Port rate limiting: User Define Security Features: Enable/disable ports, MAC based port

Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius contralized password management, SNMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

security
Network Redundancy: STP, RSTP, MSTP, O-Ring DDM Function: Voltage, Current, Temperature LED Indicators

Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - Indicate system operated in
O-Ring Master mode

O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for port 1000Mbps Link/Act, Amber for 10/100Mbps Link/Act 100/1000Base-X SFP port Indicator: Green for port Link/Act Fault contact

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 16.32W Overload current protection: present

Reverse polarity protection: present Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 96.4mm x 105.5mm x 154mm

Weight: 1243g

Environmental Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-14+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huminuty: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950

Warranty

Warranty period: 5 years



#### #07906

Net Price: 1 710,00 EUR Unit: pcs

# Managed switch, 16x 10/1000 RJ-45 + 4x1000 SS SC, O/Open-Ring <30ms (ORing IGS-9164GF-SS-SC)

IGS-9164GF/FX series are managed redundant ring Ethernet switch with 16x10/100/1000Base-T(X) ports and 4-port fixed optical fiber port. IGS-9164GF provided 4x1000Base-X fiber ports and IGS-9164FX provided 4x100Base-FX fiber ports. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) /Open-Ring/O-Chain/MRP/Fast Recovery and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary applications from network interruptions or temporary malfunctions with its fast recovery technology. And support wide operating temperature from -40 oC to 75°C. IGS-9164GF/FX series can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 16 1000Base-SX Singlemode ports (10km, 1310nm, SC

RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3z for
1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3xt Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.10 for STP (Spanning Tree Protocol), IEEE 802.10 for STP (Spanning Tree Protocol), IEEE 802.1v for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 8 Processing: Store-and-Forward Switching latency: 7 µs Switching latency: 7 µs Switching bandwidth: 40 Gbps Max. Number of Available VLANs: 256 Number of VLAN IDs: VID 1 to 4094 IGMP multicast groups: 128 for each VLAN Port rate limiting: User Define Security Features: Enable/disable ports, MAC based port

Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius contralized password management, SNMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

security
Network Redundancy: STP, RSTP, MSTP, O-Ring DDM Function: Voltage, Current, Temperature LED Indicators

Power / Ready indicator: Green - Ready LED x 3 Ring Master indicator: Green - Indicate system operated in O-Ring Master mode

O-Ring indicator: Green - Indicate system operated in O-Ring

mode
Fault indicator: Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for port 1000Mbps Link/Act, Amber for 10/100Mbps Link/Act 100/1000Base-X SFP port Indicator: Green for port Link/Act Fault contest

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 16.32W Overload current protection: present Reverse polarity protection: present Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 96.4mm x 105.5mm x 154mm

Weight: 1243g Environmental

Storage Temperature: -40÷85°C(-40÷185°F) Operating Temperature: -40÷70°C (-14÷158°F)
Operating Humidity: 5%÷95% Non-condensing

Operating Humidity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty Warranty period: 5 years





Net Price: 1 280,00 EUR Unit: pcs

#06627

Net Price: 1 200,00 EUR Unit: pcs

#07919

Net Price: 1 580,00 EUR Unit: pcs

#### Managed switch, 16x 10/1000 RJ-45 + 8x100/1000 SFP w/DDM, O/Open-Ring <30ms (ORing IGS-9168GP)

IGS-9168GP is managed redundant ring Ethernet switch with 16x10/100/1000Base-T(X) ports and 8x100/1000Base-X SFP ports. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And temporary mallunctions with its fast recovery technology. And support wide operating temperature from -40 to 75°C. IGS-9168GP can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 16
100/1001 Mbps SFP Ports: 8
RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3z for 1000Base-X, IEEE 802.3x for 1000Base-T, IEEE 802.3x for Flow control IFFF 802.3x for 1000Base-T, IEEE 802.3x for Flow control IFFF 802.3x for Flow cont 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x Flow control, IEEE 802.3a for LACP (Link Aggregation Control Protocol), IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.11 for STP (Rapid Spanning Tree Protocol), IEEE 802.14 for ASTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 8

Processing: Store-and-Forward

Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 48 Gbps
Max. Number of Available VLANs: 256
Number of VLAN IDs: VID 1 to 4094
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security Enable/disable ports.

Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius

(802.1q) to segregate and secure network traffic, Radius centralized password management, SMMPv3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security

Network Redundancy: STP, RSTP, MSTP, O-Ring DDM Function: Voltage, Current, Temperature

Power / Ready indicator: Green - Ready LED x 2
Ring Master indicator: Green - Indicate system operated in
O-Ring Master mode

O-Ring indicator: Green - Indicate system operated in O-Ring

O-Ring Indicator: Arber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for port 1000Mbps Link/Act, Amber for 10/100Mbps Link/Act 100/1000Base-X SFP port Indicator: Green for port Link/Act

Fault contact Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 20W Overload current protection: present

Overhood Current protection: present Reverse polarity protection: present Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 96.4mm x 105.5mm x 154mm

Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-14+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huminay: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950 Warranty period: 5 years

Managed switch, 22x 10/1000 RJ-45 + 2x 10/100/1000 COMBO Ports with SFP + 2 slide-in SFP slots, O/Open-Ring <30ms (ORing RGS-92222GCP-NP)

RGS-92222GCP-NP series are Gigabit managed redundant ring Ethernet switch with 22x10/100/1000Base-T(X) copper ports and 2xGigabit combo ports and 2x100/1000Base-X SFP ports. These switches support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection), Open-Ring, O-Chain, MRP, Fast Recovery and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RGS-92222GCP-NP series can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 22

Gigabit Combo port with 10/100/1000Base-T(X) and 100/1000Base-X SFP ports: 2 100/1000Base-X with SFP ports: 2 100/1000Base-X with SFP ports: 2 RS-232 Serial Console Port: RS-232 in DB-9 connector with console cable. 115200bps, 8, N, 1

Technology Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u teriente (standards, lette obz.s for 1008ase-1, lette ob for 1008ase-TX and 1008ase-FX, lette 802.3ab for 10008ase-T, lette 802.z for 10008ase-X, lette 802.3a 10Gigabit Ethernet, lette 802.3x for Flow control, lette 10Gigabit Ethernet, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol ), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 8

Processing: Store-and-Forward

Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 μs
Switching bandwidth: 52 Gbps
IGMP multicast groups: 256 for each VLAN
Port rate limiting: User Define
Security Features: Device Binding security feature,
Enable/disable ports, MAC based port security, Port based
network access control (802.1x), Single 802.1x and Multiple
802.1x, MAC-based authentication, QoS assignment, Guest
VLAN, MAC address limit, TACACS+, VLAN (802.1Q) to
segregate and secure network traffic, Radius centralized
password management, SNMPv3 encrypted authentication
and access security, Https / SSH enhance network security,
Web and CLI authentication and authorization, Authorization
(15 levels), IP source guard
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 30ms over 250

Software Features: STF/RSTP (IEEE 802. ID/W), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping or multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP, MSTP(RSTP/STP compatible), Fast Recovery LED Indicators

Power Indicator: Green LED Power indicator Ring Master indicator: Green - indicates system operated in O-Ring Master mode

O-Ring Master mode
O-Ring Indicator (Ring): Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the Ring is broken.
10/100/1000Base-T(X) RJ45 port indicator: Green for Link/Act indicator, Dual color LED for speed indicator ~ Green for 1000Mbps / Amber for 100Mbps / Off-light for 10Mbps 100/1000Base-X SFP+ Port Indicator: Green for port Link/Act.

100/100/base-A 57 F F F R Indicate: 1.2.

Power Input power: 100~240VAC with power cord Power consumption (typical): 22W

Overload current protection: present Reverse Polarity Protection: not present Physical Characteristic Dimension (W x D x H): 443.7mm x 200mm x 44mm

Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40 to 75 °C Operating Humidity: 5%+95% Non-condensing

Operating Huminus: 5%-59% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty Warranty period: 5 years

Environmental

Managed switch, 22x 10/1000 RJ-45 + 2x 10/100/1000 COMBO Ports with SFP + 2 slide-in SFP slots, O/Open-Ring <30ms (ORing RGS-92222GCP-NP-E)

RGS-92222GCP-NP series are Gigabit managed redundant ring Ethernet switch with 22x10/100/1000Base-T(X) copper ports and 2xGigabit combo ports and 2x100/1000Base-X SFP ports. These switches support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection), Open-Ring, O-Chain, MRP, Fast Recovery and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RGS-92222GCP-NP series can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 22 Gigabit Combo port with 10/100/1000Base-T(X) and 100/1000Base-X SFP ports: 2 100/1000Base-X with SFP ports: 2 RS-232 Serial Console Port: RS-232 in DB-9 connector with console cable. 115200bps, 8, N, 1

Technology Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-EX and 100Base-FX, IEEE 802.3ab for 1000Base-T, IEEE 802.3ab for 1000Base-T, IEEE 802.2 for 1000Base-X, IEEE 802.3ae for 1000gabit Ethernet, IEEE 802.3x for Flow control, IEEE 802.3ab for ICEE 802.3bb for ICEE 802.3bb for ICEE 802.1bb for ICEE

LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 8

Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 μs
Switching bandwidth: 52 Gbps
IGMP multicast groups: 256 for each VLAN
Port rate limiting: User Define
Security Features: Device Binding security feature,
Enable/disable ports, MAC based port security, Port based
network access control (802.1x), Single 802.1x and Multiple
802.1x, MAC-based authentication, QoS assignment, Guest
VLAN, MAC address limit, TACACS+, VLAN (802.1Q) to
segregate and secure network traffic, Radius centralized
password management, SNMPv3 encrypted authentication
and access security, Https / SSH enhance network security,
Web and CLI authentication and authorization, Authorization
(15 levels), IP source guard
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant
Ring (O-Ring) with recovery time less than 30ms over 250

Software Features: STF/RSTP (IEEE 802.1D/M), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP, MSTP(RSTP/STP compatible), Fast Recovery LED Indicators

Power Indicator: Green LED x 3. Power indicator for AC and

Ring Master indicator: Green - indicates system operated in

O-Ring Master mode
O-Ring Indicator (Ring): Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the

operating in C+ring mode, Green Billiking - Indicates that the Ring is broken.

Fault indicator: Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for Link/Act indicator, Daul color LED for speed indicator ~ Green for 1000Mbps / Amber for 100Mbps / Off-light for 10Mbps 100/1000Base-X SFP+ Port Indicator: Green for port Link/Act.

Relay: Relay output to carry capacity of 1A at 24VDC

Hower Hower 100~240VAC with power cord, and dual 48VDC(36~72VDC) power inputs at 6-pin terminal block Power consumption (typical): 23W

Overload current protection: present Reverse Polarity Protection: Present on DC only Physical Characteristic Dimension (W x D x H): 431mm x 342mm x 44mm

Weight: 4360g Environmental

Storage Temperature: -40÷85°C(-40÷185°F)

Storage Temperature: -40+86°C(-40+186°F)
Operating Temperature: -40 to 75 °C
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Warranty





Net Price: 1 460,00 EUR Unit: pcs

# - HH-HH-HH

#### #07631

Net Price: 180,00 EUR Unit: pcs

RES-3242GC series is 26-port rack-mount managed Redundant Ring Ethernet switch with 24x10/100Base-T(X) and 2xGigabit Combo ports, SFP socket. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology RES-3242GC series can be managed centralized and convenient by a powerful windows utility - Open-Vision. RES-3242GC series also supports functions of network management, such as SNMP, RMON, Port Trunking, and Port/Tag-based VLAN security. RES-3242GC-E model support one full-range AC and dual DC power inputs from +12~48 VDC or -12~-48 VDC, and support extend operating temperature from -40 to 70°C. One additional relay output is provided for system alarm warning, Therefore, REŚ-3242GC series is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports
10/100Base-T(X) RJ45 Ports: 24
10/100/1000 COMBO with SFP: 2
RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (9600bps 8 N 1)

for IU0Base (A), IEEE 802.3x for Flow control, IEEE 802. for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1X for Authentication, IEEE 802.3xd for LACP (Link Aggregation Control Protocol)
MAC Table: 8192 MAC addresses

MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 7.2 Gbps
Max. Number of Available VLANs: 4096
IGMP multicast groups: 1024
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1a) 1b segregate and secure network traffic. Radius

security, Port based network access control (802.1a), VLAN (802.1a) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security

LED Indicators

Power / Ready indicator: Green - Ready LED x 3 Ring Master indicator: Green - indicates system operated in

Enclosure: IP-30 Dimension (W x D x H): 431mm x 342mm x 44mm

Warranty period: 5 years

#06616

Net Price: 1 160,00 EUR Unit: pcs

# Managed switch, 24x 10/100Base-T(X) RJ45 Ports + 2x 10/100/1000 COMBO Ports with SFP, O/Open-Ring <10ms (ORing RES-3242GC-EU)

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D

Network Redundancy: STP, RSTP, O-Ring, Open-Ring, O-RSTP

O-Ring Master mode 10/100TX RJ45 port indicator: Green for port Link/Act, Amber for Duplex/Collision 10/100/1000TX RJ45 port indicator: Green for port Link/Act,

Amber for 100Mbps
Fiber port indicator: Green for port Link/Act

Input power: 100~240VAC with power cord Power consumption (typical): 33W Overload current protection: present

Physical Characteristic

Weight: 4350g Environmental

Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -10+60°C (14+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (FT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty

IGS-9822DGP+ is managed Gigabit Ethernet switch with 8x10/100/100/1000Base-T(X) ports and 2x 100/1G/2.5GBase-X + 2x 1G/10GBase-X SFP ports. The switch support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And support wide operating temperature from -40 °C to 75 °C. IGS-9822DGP+ can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Managed switch, 8x 10/1000 RJ-45 + 2x100/2,5G SFP + 2x1G/10G SFP, O/Open-Ring <30ms (ORing IGS-9822DGP+)

Physical Ports
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8
100/10G/2.5G SFP Ports: 2
RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3z for
1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for
Flow control, IEEE 802.3ad for LACP (Link Aggregation
Control Protocol), IEEE 802.1D for STP (Spanning Tree
Protocol), IEEE 802.1p for COS (Class of Service), IEEE
802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid
Spanning Tree Protocol), IEEE 802.1x for Authentication,
IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
MAC Table: 32k MAC addresses
Priority Queues: 8

MAC Table: 32k MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 66 Gbps
Max. Number of Available VLANs: 4096
Number of VLAN IDs: VID 0 to 4095
IGMP multicast groups: 64 for each VLAN
Port stol inviting Lless Define.

Port rate limiting: User Define Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN

securitý, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security
Software Features: Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security
Qos: TOS/Diffserv supported, CoS, Application based QoS, IP based bandwidth management
LED Indicators
Power / Ready indicator: Green - Ready LED x 3

Power / Ready indicator: Green - Ready LED x 3

Ring Master indicator: Green - Indicate system operated in O-Ring Master mode O-Ring indicator: Green - Indicate system operated in O-Ring

O-King indicator: Green - Indicate system operated in O-King mode
Fault indicator: Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for port 1000Mbps Link/Act, Amber for 10/100Mbps Link/Act 16/2.5GBase-X SFP port Indicator: Green for port Link/Act 16/105base-X SFP Port Indicator: Green LED for Link/Act Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Reset Function Reset Button: < 5 sec System reboot, > 5 sec Factory default

Input power: Dual DC inputs, 12÷48VDC on 6-pin terminal

block Power consumption (typical): 19W

Overload current protection: present
Reverse polarity protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 74.3mm x 125mm x 153.6mm

Weight: 1078g Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+75°C (-14+167°F)
Operating Humidity: 5%+95% Non-condensing

Regulatory approvals

EMC: CE EMC (EN 55024, EN 55032), FCC Part 15 B

EMI: EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3,

EMI: EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A
EMS: EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS),IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8 (PFMF), IEC/EN 61000-4-1 (DIP))
Shock: IEC60068-2-27
Free Fall: IEC60068-2-31
Vibration: IEC60068-2-6
Safety: EN60950-1
MTBF: 585191 hrs

Warranty Warranty period: 5 years

## Managed switch, 24x 10/1000 RJ-45 + 4 slide-in SFP slots, O-Ring <30ms (ORing RGS-9244GP)

RGS-9244GP series are Gigabit managed redundant ring Ethernet switch with 24x10/100/1000Base-T(X) ports and 4x100/1000Base-X SFP ports. These switches support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And RGS-9244GP series support wide operating temperature from -40 oC to 75 oC. RGS-9244GP series can also be managed centralized and convenient by Open-Vision, as well as the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

application.

Physical Ports
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 24
10/100/1000 Base-X with SFP ports: 4
RS-232 Serial Console Port: RS-232 in DB-9 connector with console cable. 115200bps, 8, N, 1
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX and 100Base-FX, IEEE 802.3ab for 100Base-TX and 100Base-FX, IEEE 802.3ab for 100Gase-T, IEEE 802.2 for 1000Base-X, IEEE 802.3a for 100Gase-X, IEEE 802.3a for 10Gigabit Ethernet, IEEE 802.3x for Flow control, IEEE 802.3a for LACP (Link Aggregation Control Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 8

MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 56 Gbps
IGMP multicast groups: 256 for each VLAN
Port rate limiting: User Define
Security Features: Device Binding security feature,

Security Features: Device Binding security feature, Enable/disable ports, MAC based port security, Port based network access control (802.1x), Single 802.1x and Multiple 802.1x, MAC-based authentication, QoS assignment, Guest VLAN, MAC address limit, TACACS+, VLAN (802.1Q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security, Https / SSH enhance network security, Web and CLI authentication and authorization, Authorization (15 levels), IP source guard Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security

Network Redundancy: O-Ring, O-Chain, MRP, MSTP(RSTP/STP compatible), Fast Recovery

LED Indicators

Power Indicator: Green LED Power indicator Ring Master indicator: Green - indicates system operated in O-Ring Master mode

O-Ring Indicator (Ring): Green - Indicates that the system operating in O-Ring mode, Green Blinking - Indicates that the operating in O-Aritig mode, Green Biniking - indicates that the Ring is broken.

10/100/1000Base-T(X) RJ45 port indicator: Green for Link/Act indicator, Dual color LED for speed indicator ~ Green for 1000Mbps / Amber for 100Mbps / Off-light for 10Mbps 100/1000Base-X SFP+ Port Indicator: Green for port Link/Act.

Input power: 100~240VAC with power cord Input power: 100-240VAd. With power cord
Power consumption (typical): 30W
Overload current protection: present
Reverse Polarity Protection: not present
Physical Characteristic
Dimension (W x D x H): 431mm x 342mm x 44mm
Weight: 4210 g

Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40 to 75 °C
Operating Temperature: -40 to 75 °C
Operating Humidity: 5%-95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950-1

Safety: EN60950-1 MTBF: 395,736 hrs Warranty Warranty period: 5 years





Net Price: 1 680,00 EUR Unit: pcs

### Managed switch, L3, 8x 10/1000 RJ-45 + 12x100/1000 SFP w/DDM, O/Open-Ring <30ms (ORing IGS-R9812GP)

IGS-R9812GP is Layer-3 managed redundant ring Ethernet switch with 8x10/100/1000Base-T(X) ports and 12x100/1000Base-X SFP ports. The IGPSR9812GP supports Layer-3 routing for better network performance on large-scale LANs into multiple subnets to support long-haul and EMI immunity communications. The hardware Layer-3 switch is optimized to transmit data as fast as Layer-2 switches. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And support wide operating temperature from -40 to 75°C. IGSR9812GP can also be managed centralized and convenient by Open-Vision, as well as the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet power substation and rolling stock application.

Physical Ports
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 8
10/100/1000 Mbps SFP Ports: 12
RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-T(X) and 100Base-TX, IEEE 802.3z for 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3u for 1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, IEEE 802.1b for STP (Spanning Tree Protocol), IEEE 802.1b for STP (Spanning Tree Protocol), IEEE 802.1v for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 40 Gbps
Max. Number of Available VLANs: 256
Number of VLAN IDs: VID 1 to 4094
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security Features: Device Binding security feature

Number of VLAN IDs: VID 1 to 4094
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security Features: Device Binding security feature,
Enable/disable ports, MAC based port security, Port based
network access control (802.1x), Single 802.1x and Multiple
802.1x, MAC-based authentication, QoS assignment, Guest
VLAN, MAC address limit, TACACS+, VLAN (802.1Q) to
segregate and secure network traffic, Radius centralized
password management, SNMPv3 encrypted authentication
and access security, Web and CLI authentication and
authorization, Authorization (15 levels), IP source guard,
Https / SSH enhance network security
Software Features: Hardware routing, RIP and static routing,
IEEE 1588v2 clock synchronization, IEEE 802.1D Bridge,
auto MAC address learning/aging and MAC address (static),
Multiple Registration Protocol (MRP), RSTP/MSTP (IEEE
802.1w/s), Redundant Ring (O-Ring) with recovery time less
than 30ms over 250 units, TOS/Diffserv supported, Quality of
Service (802.1p) for real-time traffic, VLAN (802.1Q) with
VLAN tagging, Voice VLAN, IGMP v2/v3 Snooping, IP-based
bandwidth management, Application-based QoS
management, DOS/DOS auto prevention, Port
configuration, status, statistics, monitoring, security, DHCP
Server/Client/snooping, DHCP Relay, Modbus TCP, ARP
inspection, SMTP Client
Network Redundancy: STP, RSTP, MSTP, O-Ring
DDM Function: Voltage, Current, Temperature
LED Indicators
Power / Ready indicator: Green - Ready LED x 2
Ring Master mode

Ring Master indicator: Green - Indicate system operated in O-Ring Master mode O-Ring indicator: Green - Indicate system operated in O-Ring

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal

Power consumption (typical): 23W Overload current protection: present

Reverse polarity protection: present Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 96.4mm x 145.5mm x 154mm

Weight: 1520g Environmental

Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-14+158°F)
Operating Humidity: 5%+95% Non-condensing

Departing Hullindy, 37,7937, Notification Regulatory approvals

EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4

(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),

EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32



Net Price: 2 340,00 EUR Unit: pcs

#### Managed switch, L3, 16x 10/1000 RJ-45 + 4x1G/2.5G/10G SFP+, O/Open-Ring <30ms (ORing IGS-RX164GP+)

IGS-RX164GP+ advanced Layer 3 managed redundant ring Ethernet switch with 16x10/100/1000Base-T(X) ports and 4x10GBase-X SFP ports. The IGS-RX164GP+ supports routing protocols such as static routing, RIP v1/v2, OSPF and PIM which are suitable for large scale network environment. The hardware Layer 3 switch is optimized to transmit data as fast as Layer-2 switches. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology.

And support wide operating temperature from -40°C to 60°C.

IGS-RX164GP+ can also be managed centralized and convenient by Open-Vision, as well as the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 16

1G/2.5G/10 SFP+ Ports: 4
RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable (115200bps 8 N 1)

console cable (115200bps 8 N 1)
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3z for
1000Base-X, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for
1000Base-X, IEEE 802.3ab for LACP (Link Aggregation
Control Protocol), IEEE 802.1p for COS (Class of Service),
IEEE 802.10 for VLAN Tagging, IEEE 802.1w for RSTP
(Rapid Spanning Tree Protocol), IEEE 802.1x for
Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery
Protocol)
MAC Table: 16k MAC addresses

MAC Table: 16k MAC addresses Priority Queues: 8 Packet Buffer: 2MB Flash Memory: 512Mbits DRAM Size: 8Gbits

DRAM Size: 8Gbits
Jumbo frame: Up to 10K Bytes
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 112 Gbps
Max. Number of Available VLANs: 4096
Number of VLAN IDs: VID 0 to 4095
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
securitym Port based network access control (802.1x)m
MAC-based authentication(802.1x)m VLAN (802.1Q) to
segregate and secure network traffic, Radius centralized
password management, SNMPv3 encrypted authentication
and access security, Web and CLI authentication and

and access security, Web and CLI authentication and authorization, IP source guard, Https / SSH enhance network security

security
Software Features: Routing protocols - static routing, RIP
v1/v2, OSPF, PIM-SM, PIM-DM, VRRP, TSN protocols 802.1AS, Qav, Qat, STP/RSTP/MSTP (IEEE 802.1D/w/s)
Redundant Ring (O-Ring) with recovery time less than 30ms
over 250 units, TOS/Diffserv supported, Quality of Service
(802.1p) for real-time traffic, VLAN (802.1Q) with VLAN
tagging and GVRP supported, IGMP Snooping for multicast
filtering, Port configuration, Port status, Port statistics, Port
monitoring, Port security
LED Indicators

Power / Ready indicator: Green - Ready I ED x 3

Power / Ready indicator: Green - Ready LED x 3 Ring Master indicator: Green - Indicate system operated in

O-Ring Master mode O-Ring indicator: Green - Indicate system operated in O-Ring

Fault indicator: Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) RJ45 port indicator: Green for port 1000Mbps Link/Act, Amber for 10/100Mbps Link/Act 1G/10Gbase-X SFP+ Port Indicator: Green LED for Link/Act Fault contact
Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal block

Power consumption (typical): 23W Power consumption (typical): 23W
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 116.4mm x 170mm x 180mm

Weight: 1530 g

Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+60°C (-14+140°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMC: CE EMC (EN 55024, EN 55032), FCC Part 15 B

EMC: CE EMC (EN 55024, EN 55032), FCC Part 15 B EMI: EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A EMS: EN 55024 (IEC/EN 61000-4-2 (ESD Contact 8KV, Air 10KV), IEC/EN 61000-4-3 (RS), IEC/EN 61000-4-4 (EFT Power 2KV, Single 2KV), IEC/EN 61000-4-5 (Surge Power 4KV, RJ45 4KV), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8 (PFMF), IEC/EN 61000-4-11 (DIP)) Shock: IEC60068-2-27 Free Fall: IEC60068-2-31 Vibration: IEC60068-2-6 Safety: EN60950-1

Safety: EN60950-1

Net Price: 1 950,00 EUR Unit: pcs



#### #07950

Net Price: 739,00 EUR Unit: pcs

#### Managed switch, L3, 24x 10/1000 RJ-45 + 4 1G/10G SFP+ slots, O/Open-Ring <30ms (ORing RGS-R9244GP+)

RGS-R9244GP+ series are Layer-3 Gigabit managed redundant ring Ethernet switch with 24x10/100/1000Base-T(X) ports and 4x1G/10GBase-X SFP+ ports. These switches support Layer-3 function like RIP and static routing. Also RGS-R9244GP+ series support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms over 250 units of connection) /Open-Ring/O-Chain/MRP/Fast Recovery and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RGS-R9244GP+ series support wide operating temperature from -20°C to 60°C. RGS-R9244GP+ series can also be managed centralized and convenient by Open-Vision as well as the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports

Marie A State A

10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 24 1G/10GBase-X with SFP+ port: 4 RS-232 Serial Console Port: RS-232 in RJ45 connector with

console cable (115200bps 8 N 1)

Technology Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX and 100Base-TX, IEEE 802.3ab for 1000Base-T, IEEE 802.3ab for 1000Base-T, IEEE 802.2 for 1000Base-X, IEEE 802.3ae for 10Cigabit Ethernet, IEEE 802.3x for Flow control, IEEE 802.3ab for LACP (Link Aggregation Control Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for ILDP (I just Layer Discovery Protocol)

Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 8
Processing: Store-and-Forward
Switching latency: 7 µs
Switching bandwidth: 128 Gbps
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security Features: Device Binding security feature,
Enable/disable ports, MAC based port security, Port based
network access control (802.1x), Single 802.1x and Multiple
802.1x, MAC-based authentication, QoS assignment, Guest
VLAN, MAC address limit, TACACS+, VLAN (802.1Q) to
segregate and secure network traffic, Radius centralized
password management, SNMPv3 encrypted authentication
and access security, Https / SSH enhance network security,
Web and CLI authentication and authorization, Authorization Web and CLI authentication and authorization, Authorization (15 levels), IP source guard Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Ring (O-Ring) with recovery time less than 30ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port

Network Redundancy: O-Ring, Open-Ring, O-Chain, MRP, MSTP(RSTP/STP compatible), Fast Recovery

Power Indicator: Green - power indicator

Ring Master indicator: Green - indicates system operated in O-Ring Master mode O-Ring Indicator (Ring): Green - Indicates that the system

operating in O-Ring mode, Green Blinking - Indicates that the Ring is broken.

Fault indicator: Green - System is operating continuously

10/100/1000Base-T(X) RJ45 port indicator: Green for Link/Act indicator, Dual color LED for speed indicator ~ Green for 1000Mbps / Amber for 100Mbps / Off-light for 10Mbps 1G/10GBase-X SFP+ Port Indicator: Green for port Link/Act.

Relay: Relay output to carry capacity of 1A at 24VDC

Relay Output to Carry capacity of TA at 24VDC Power Input power: 100 ~ 240VAC with power cord Power consumption (typical): 37.4W Overload current protection: present Physical Characteristic Dimension (W x D x H): 431mm x 342mm x 44mm Weight: 6597g Environmental Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -20 to 60 °C (-4 to 140°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-5 (EST), EN61000-4-8, EN61000-4-5 (CS), EN61000-4-8 (CS), EN61000-4-8, EN61000-4-11 Warranty

Warranty period: 5 years

#### 4x10G module, SFP+ (ORing SWM-04GP+\_4)

Industrial 4-port Gigabit fiber module with 4x10G, SFP+



Physical Ports

8x1G module, RJ-45 (ORing SWM-80GT)

Industrial 8-port Gigabit Ethernet switch module with 8x10/100/1000Base-T(X) ports

#08898

Net Price: 409,00 EUR Unit: pcs



#08897

Net Price: 359,00 EUR Unit: pcs

#### 8x1G module, SFP (ORing SWM-08GP)

Industrial 8-port Gigabit fiber module with 8x100/1000Base-X, SFP socket



#07965

Net Price: 680,00 EUR Unit: pcs

### Bypass Switch, 4x LC Duplex (ORing IBS-102FX-MM-LC)

IBS-102FX series are the external Bypass switches for 100M/1G/10G fiber optical networks. These fiber optical bypass switches protect the network from failures and subsequent maintenance by ensuring network integrity during power loss. Each of these fiber optical bypass switches includes Network ports and Monitor ports. The Network ports are used for connection to main-network connections and provide protection mechanism, and the Monitor ports are used for down-link local networking device. When the power is on, the operation mode of the Bypass switch is set to Normal, and the local networking device is connected with main-network. When power failure occurs, the Bypass switch is swiftly set to bypass mode to isolate the main-network from the local networking device.

Physical Ports LC connector: 4 Duplex Multi-mode LC connector

LC connector: 4 Duplex Multi-mode LC connector
Fiber Ethernet
Optical Fiber: Multi-mode - 50/125µm or 62,5/125µm
Operating Wavelength: 780÷1350 nm
Insert loss: <1.0 dB
Switch time: <10ms
DIP Switch Settings: DIP Swicth No.1 - Power-1 failed
warning detection - (On) relay enable (Off) relay disable
DIP Switch No.2 - Power-2 failed warning detection - (On)
relay enable (Off) relay disable
LED Indicators
Power indicator: Green - Ready LED x 2

Power indicator: Green - Ready LED x 2 Normal indicator: Green On - Operated in normal mode Fault indicator: Amber - Indicates power failure occurred

Relay: Relay output for power failure warning

Power

Input power: Dual 12~48 VDC power inputs at DC-Jack and 4-pin terminal block

4-pin terminal block
Power consumption (typical): 2.7W
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 26.1mm x 94.9mm x 144.3mm
Weight: 405g
Environmental

Weight: 405g
Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -20+70°C (-4+158°F)
Operating Humidity: 10%+90% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C): 1,246,758
Warranty

#### Communication for industry



#08445

Net Price: 770,00 EUR Únit: pcs

### Bypass Switch, 4x LC Duplex (ORing IBS-102FX-SS-LC)

IBS-102FX series are the external Bypass switches for 100M/16/10G fiber optical networks. These fiber optical bypass switches protect the network from failures and subsequent maintenance by ensuring network integrity during power loss. Each of these fiber optical bypass switches includes Network ports and Monitor ports. The Network ports are used for connection to main-network connections and provide protection mechanism, and the Monitor ports are used for down-link local networking device. When the power is on, the operation mode of the Bypass switch is set to Normal, and the local networking device is connected with main-network. When power failure occurs, the Bypass switch is swiftly set to bypass mode to isolate the main-network from the local networking device.

the local networking device.

Physical Ports
LC connector: 4 Duplex Single-mode LC connector
Fiber Ethernet
Optical Fiber: Single-mode - 9/125µm
Operating Wavelength: 1260+1570 nm
Insert loss: 1.6 dB
Switch time: < 10ms
DIP Switch Settings: DIP Swicth No.1 - Power-1 failed
warning detection - (On) relay enable (Off) relay disable
DIP Switch No.2 - Power-2 failed warning detection - (On)
relay enable (Off) relay disable
LED Indicators

LED Indicators

Power indicator: Green - Ready LED x 2 Normal indicator: Green On - Operated in normal mode Fault indicator: Amber - Indicates power failure occurred Fault contact Relay: Relay output for power failure warning

Power
Input power: Dual 12~48 VDC power inputs at DC-Jack and
4-pin terminal block
Power consumption (typical): 2.7W
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic

Enclosure: IP-30
Dimension (W x D x H): 26.1mm x 94.9mm x 144.3mm
Weight: 405g

Weight: 405g
Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -20-70°C (-4+158°F)
Operating Humidity: 10%+90% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C): 1,246,758
Warranty

#### Industrial Media Converters



#06648

Net Price: 150.00 EUR Unit: pcs

### Media converter 2x 10/100TX (RJ-45) + 1x 100FX (MM SC) (ORing IMC-121FB-MM-SC)

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 2 100Base-FX Multimode ports (2KM, 1310nm, SC connector):

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X) and 100BaseFX

LED Indicators

Power / Ready indicator: Green Ready LED x 1 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for duplex

Power Input power: 12÷48 VDC voltage power input Power consumption (typical): 4.5W Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x H x D): 26.1mm x 95mm x 70mm Weight: 210a

Weight: 210g Environmental

Storage Temperature: -40÷85°C
Operating Temperature: -40÷70°C

Operating Temperature: -40+70°C
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty
Warranty period: 5 years



#08164

Net Price: 164 00 FUR Unit: pcs

### Media converter 2x 10/100TX (RJ-45) + 1x 100FX (SM SC) (ORing IMC-121FB-SS-SC)

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 2 100Base-FX Singlemode ports (30KM, 1310nm, SC connector): 1

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X) and 100BaseFX

LED Indicators

Power / Ready indicator: Green Ready LED x 1 10/100TX RJ45 port indicator: Green for port Link/Act, Yellow for duplex

Power
Input power: 12\*48 VDC voltage power input
Power consumption (typical): 4.5W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30

Dimension (W x H x D): 26.1mm x 95mm x 70mm

Weight: 210g Environmental

Storage Temperature: -40÷85°C
Operating Temperature: -40÷70°C

Operating Temperature: -40-70°C
Operating Humidity: 5%-95°% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-7
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty
Warranty period: 5 years



#07964

Net Price: 262.00 EUR Unit: pcs

### Industrial mini type Ethernet to fiber PoE media converter LFP with 1x10/1000Base-T(X) P.S.E. and 1x1000Base-FX, SFP socket (ORing IGPMC-111GP)

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX with

PoE (PSE): 1 1000Base-FX (SFP): 1

Processing: Store-and-Forward

Processing: Store-anu-Forward Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 10BaseT(X) and 100BaseFX, IEEE 802.3x for Flow control, IEEE 802.3at PoE specification (up to 30 Watts per action 10 Po

port for P.S.E.)
DIP-Switch setting: DIP-Switch 1 for LFP mode selection -(ON) enable / (OFF) disable, DIP-Switch 2 for Ethernet speed selection - (ON)10Mbps / (OFF) 10/100Mbps Auto-negotiate, DIP-Switch 3 for Ethernet full/half duplex selection - (ON)

Half-duplex / (OFF) Full/Half-Duplex Auto-negotiate, DIP-Switch 4 for fiber full/half duplex selection - (ON) Half-Duplex / (OFF) Full-Duplex

LED Indicators

LED Indicators
Power indicator: Green - Power LED x 2 ( (ON) power input on-line / (OFF) power input off-line)
10/100TX RJ45 port indicator: Green for port Link/Act - (ON) Link up / (Blinking) Acting / (OFF) Link down, Amber for 100Mbps/10Mbps indicator - (ON) Working at 100Mbps / (OFF) Working at 10Mbps, Green for port duplex indicator - (ON) Full-Duplex / (OFF) Half-Duplex
100Base-FX fiber port indicator: Green for fiber port Link/Act - (ON) Link up / (Flash) Acting / (OFF) Link down, Green for fiber port duplex indicator - (ON) Full-Duplex / (OFF) Half-Duplex
LFP statue indicator: Amber LED - (ON) LFP function fail /

LEP statue indicator: Amber LED - (ON) LFP function fail / (OFF) LFP function disable PoE indicator: Amber for P.S.E. indicator

Input power: Dual 50~57 VDC voltage power inputs at 4-pin terminal block terminal block
Power consumption (typical): 4 Watts (P.S.E. output included)
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic

Enclosure: IP-30
Dimension: 40mm x 70mm x 95mm
Weight: 291g

Environmental Storage Temperature: -40÷85°C

Storage Temperature: -40-85°C
Operating Temperature: -40-75°C
Operating Humidity: 5%-95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A, EN50155
(EN50121-3-2, EN55011, EN50121-4)
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6

Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty

Warranty period: 5 years





#06631 Net Price: 332,00 EUR Unit: pcs

# Industrial mini type Ethernet to fiber PoE media converter LFP with 1x10/1000Base-T(X) P.S.E. and 1x1000Base-FX, SFP socket (ORing IGPMC-111GP-BT-24V)

The IGPMC-111GP-BT-24V is a cost-effective solution for the conversion interface between 10/100/1000Base-T(X) and 100/1000Base-X SFP socket; it allows you to extend communication distance by optical fiber.

IGPMC-111GP-BT-24V supports MDI/MDIX auto detection, so you don't need to use crossover wires.

so you don't need to use crossover wires.

IGPMC-111GP-BT-24V also support Power over Ethernet, a
system to transmit electrical power up to 90 watts, along with
data, to remote devices over standard twisted-pair cable in an
Ethernet network. Each IGPMC-111GP-BT-24V has 1x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) port to provide power in a PoE setup.

The IGPMC-111GP-BT-24V also supports the LFP (Link Fault Pass-through) feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from the disconnected side. Use the DIP-Switch to enable the LFP function, then IGPMC-111GP-BT-24V will force the link to shut down as soon as noticed that the other link has failed, giving the application software a chance to react to the situation.

The IGPMC-111GP-BT-24V with wide operating temperature range from -40 ~ 75oC and accepts a wide voltage range from dual 12~57 VDC power inputs, so it is suitable for harsh operating environments. Therefore, the IGPMC-111GP-BT-24V is reliable media converter with PoE

capability and can satisfy most demand of operating environment.

Physical Ports 10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX with PoE (PSE): 1 1000Base-FX (SFP): 1 Processing: Store-and-Forward

Processing: Store-and-Forward
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow
control, IEEE 802.3at PoE specification
DIP-Switch setting: DIP-Switch 1 for LFP mode selection (ON) enable / (OFF) disable, DIP-Switch 2 for Ethernet speed
selection - (ON)10Mbps / (OFF) 10/10Mbps Auto-negotiate,
DIP-Switch 3 for Ethernet full/half duplex selection - (ON)
Half-duplex / (OFF) Full/Half-Duplex Auto-negotiate,
DIP-Switch 4 for fiber full/half duplex selection - (ON)
Half-Duplex / (OFF) Full-Duplex
LED Indicators
Power indicator: Green - Power LED x 2 ( (ON) power input
on-line / (OFF) power input off-line)

Power indicator: Green - Power LED x 2 ( (ON) power input on-line / (OFF) power input off-line) 10/100/1000TX RJ45 port indicator: Green for Link/Act, Speed LED- Green for 1000Mbps,Off-light for 100/10Mbps 100/1000Base-FX fiber port indicator: Green for port Link/Act LFP statue indicator: Amber LED - (ON) LFP function fail / (OFF) LFP function disable PoE indicator: Amber for P.S.E. indicator

Input power: Dual 12~57 VDC voltage power inputs at 4-pin terminal block

Power consumption (typical): IEEE 802.3at(30W) mode - 12VDC, IEEE 802.3bt( 60/90W) mode - 24VDC

Overload current protection: present Reverse polarity protection: present Physical Characteristic

Enclosure: IP-30
Dimension: 41mm x 70mm x 95mm
Weight: 300g

Environmental

Environmental
Storage Temperature: -40+85°C
Operating Temperature: -40+75°C
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMC: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11

EN61000-4-8, EN61000-4-11
EMI: FEN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A
EMS: EN 55024 (IEC/EN 61000-4-2 (ESD Contact 4KV, Air 8KV), IEC/EN 61000-4-3 (RS 3V), IEC/EN 61000-4-4 (EFT Power 0.5KV, Signal 0.5KV), IEC/EN 61000-4-5 (Surge Power 0.5KV, RJ45 1KV), IEC/EN 61000-4-6 (CS 3V), IEC/EN 61000-4-8 (PFMF) Shock: IEC60068-2-27
Free Fall: IEC60068-2-31
Vibration: IEC60068-2-6
Safety: EN 62368-1
MTBF: 1,183,306hrs
Warranty

Warranty Warranty period: 5 years



#07952 Net Price: 677,00 EUR Unit: pcs

### Industrial mini type Ethernet to fiber PoE media converter LFP with 1x1G/10GBase-T(X) and 1x1G/10GBase-X, SFP+ socket (ORing ITGMC-111GP+)

Physical Ports

1G/10GBase-T(X) Ports in RJ45 Auto MDI/MDIX: 1 1G/10GBase-X SFP+ ports: 1 Processing: Store-and-Forward

Processing: Store-and-Forward Technology Ethernet Standards: IEEE 802.3ae for 10Gigabit Ethernet, IEEE 802.3an for 10GBase-T, IEEE 802.3ab for 1000Base-T, IEEE 802.3z for 1000Base-X Jumbo Frame: 10k

LED Indicators

Power indicators: Green - Power LED x 2
16/10GBase-X SFP+ port indicator: Green for port Link/Act
16/10GBase-T RJ45 port indicator: Green for Link/Act, Dual
color LED for speed - Green for 10Gbps, Amber for 1Gbps

Input power: Dual 12~48 VDC voltage power inputs at 4-pin

terminal block
Power consumption (typical): 8.6 Watts Overload current protection: present Reverse polarity protection: present Physical Characteristic Enclosure: IP-30 Dimension: 40mm x 108mm x 154mm

Weight: 437g Environmental

Storage Temperature: -40+85°C
Operating Temperature: -20+60°C
Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6 Warranty

Warranty period: 5 years



#06888

Net Price: 191,00 EUR Unit: pcs

### Media converter 1x 10/1000TX (RJ-45) + 1x 1000FX (MM SC) (ORing IGMC-1011GF-MM-SC)

Physical Ports

10/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 1 1000Base-FX Multimode ports (550m, 850nm, SC

connector): 1

connector): 1
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for
1000Base-T, IEEE802.3z for 1000Base-X
LED Indicators

LED Indicators

LED Indicators

LED Indicators

Power / Ready indicator: Green Ready LED x 2 Fault indicator: Amber - Indicate power failure
10/1000TX RJ45 port indicator: Green for port Link/Act,

Amber for duplex 1000X Port Indicator: Green for port Link/Act Fault contact

Relay: Relay output to carry capacity of 1A at 24 VDC Dip Switch: Relay output function enable / disable by dip switch

Power

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal block

Power consumption (typical): 3.5W

Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic

Enclosure: IP-30 Dimension (W x H x D): 26.1mm x 144.3mm x 94.9mm

Dimension (W x H x D): 26.1mm x 144.3mm x 94.9mm Weight: 400g
Environmental
Storage Temperature: -40+85°C
Operating Temperature: -40+70°C
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950 Warranty Warranty period: 5 years



Net Price: 298,00 EUR Unit: pcs

### Media converter 1x 10/1000TX (RJ-45) + 1x 1000FX (SM SC) (ORing IGMC-1011GF-SS-SC)

Physical Ports

10/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 1 1000Base-FX Singlemode ports (10km, 1310nm, SC connector): 1

connector): 1
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for
1000Base-T, IEEE802.3z for 1000Base-X
LED Indicators

Power / Ready indicator: Green Ready LED x 2 Fault indicator: Amber - Indicate power failure 10/1000TX RJ45 port indicator: Green for port Link/Act, Amber for duplex

1000X Port Indicator: Green for port Link/Act Fault contact

Relay: Relay output to carry capacity of 1A at 24 VDC Dip Switch: Relay output function enable / disable by dip

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal block
Power consumption (typical): 3.5W

Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic

Physical Characteristic
Enclosure: IP-30
Dimension (W x H x D): 26.1mm x 144.3mm x 94.9mm
Weight: 400g
Environmental
Storage Temperature: -40+85°C
Operating Temperature: -40+70°C
Operating Temperature: -40+70°C
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Safety: EN60950

Warranty Warranty period: 5 years



#06890

Net Price: 198,00 EUR Unit: pcs

### Media converter 1x 100/1000TX (RJ-45) + 1x 1000FX (SFP) (ORing IGMC-1011GP)

Physical Ports

100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 1 1000Base-FX SFP ports: 1

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for
1000Base-T, IEEE802.3z for 1000Base-X

1000Base-1, IEEE802.32 for 1000Base-X LED Indicators Power / Ready indicator: Green Ready LED x 2 Fault indicator: Amber - Indicate power failure 100/1000TX RJ45 port indicator: Green for port Link/Act, Amber for duplex

100/1000X Port Indicator: Green for port Link/Act

Relay: Relay output to carry capacity of 1A at 24 VDC Dip Switch: Relay output function enable / disable by dip

Power

Input power: Dual DC inputs, 12÷48VDC on 6-pin terminal block

Power consumption (typical): 3.5W
Overload current protection: present
Reverse polarity protection: present on terminal block
Physical Characteristic
Enclosure: IP-30

Dimension (W x H x D): 26.1mm x 144.3mm x 94.9mm Weight: 380g

Environmental

Storage Temperature: -40+85°C
Operating Temperature: -40+70°C
Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration; IEC60068-2-36

Vibration: IEC60068-2-6 Safety: EN60950 MTBF: 650,069

Warranty Warranty period: 5 years



#07647

Net Price: 198,00 EUR Unit: pcs

### Media converter 1x 100/1000TX (RJ-45) + 1x 100/1000FX (SFP) (ORing IGMC-111GPB)

Physical Ports 100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 1 100/1000Base-FX SFP ports: 1

Technology
Ethernet Standards: IEEE 802.3u for 100Base-TX and 100Base-FX, IEEE 802.3ab for 1000Base-T, IEEE 802.3z for 1000Base-X

1000Base-X LED Indicators Power / Ready indicator: Green LED x 2 (ON) power input on-line / (OFF) power input off-line 100/1000Tx RJ45 port indicator: LED for Link/Act and Speed indicator, Green on only - 1000Mbps Link/Act - (ON) Link up / (Flash) Acting / (OFF) Link down, Green and Amber on - 100Mbps Link/Act - (ON) Link up / (Flash) Acting / (OFF) Link down, If amber on only - 10Mbps (This is not working mode) 100/(1000X port Indicator Green For port Link/Act 100/1000X Port Indicator: Green for port Link/Act

Power Input power: Dual DC inputs. 12÷48VDC on 4-pin terminal

block
Power consumption (typical): 3.6W
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x H x D): 26.1mm x 70mm x 95mm

Weight: 190g Environmental

Storage Temperature: -40+85°C
Operating Temperature: -40+70°C
Operating Humidity: 5%+95% Non-condensing

Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A. EN50155

EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950-1





#08427 Net Price: Unit: pcs

# Industrial IEC 61850-3 Ethernet to fiber media converter with 1x10/100Base-T(X) to 1x100Base-FX fiber socket (ORing IMC-P111FX-MM-SC-LV)

IMC-P111 series is a cost-effective solution for the conversion between 10/100Base-T(X) and 100Base-FX interface, it allows you to extend communication distance by optical fiber. IMC-P111 series are designed for power substation application and rolling stock application, fully compliant with the requirement of IEC 61850-3 and IEEE 1613. IMC-P111 series supports MDI/MDIX auto detection, so you don't need to use crossover wires. IMC-P111 series with wide operating temperature range from -40 ~ 85OC and accepts a wide voltage range power inputs, so it is suitable for harsh operating environments.
Therefore, the IMC-P111 series is reliable media converter

and can satisfy most demand of power substation and rolling stock application.

Physical Ports
Port RJ-45 10/100 Base-TX Auto MDI/MDIX: 1
Fiber port 100Base-FX Multi-mode SC: 1
Processing: Store-and-Forward

Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-T(X) and 100Base-FX, IEEE 802.3x for Flow control LED Indicators

Power / Ready indicator: Green Ready LED x 3 10/100TX RJ45 port indicator: Green for port Link/Act, Amber

for duplex

100Base-FX fiber port indicator: Green for fiber port Link/Act, Amber for duplex LFP statue indicator: Amber LED - (ON) LFP function fail /

(OFF) LFP function disable Fault indicator: Amber - Indicate unexpected event occurred

Power Input power: Triple DC inputs. 12~48VDC on 7-pin terminal block, 12~45VDC on power jack Power consumption (typical): 10.56W Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x H x D): 52mm x 106.1mm x 144.3mm Weight: 680a

Weight: 660g

Weight: 660g
Environmental
Storage Temperature: -40+85°C
Operating Temperature: -40+85°C
Operating Temperature: -40+85°C
Operating Temperature: -40+85°C
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
Power Automation: IEC 61850-3, IEEE 1613
EMI: FCC Part 15, CISPR (EN55022) class A, EN50155
(EN50121-3-2, EN55011, EN50121-4)
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty

Warranty Warranty period: 5 years



#08428 Net Price: Call Unit: pcs

# Industrial IEC 61850-3 Ethernet to fiber media converter with 1x10/100Base-T(X) to 1x100Base-FX fiber socket (ORing IMC-P111FX-SS-SC-LV)

IMC-P111 series is a cost-effective solution for the conversion between 10/100Base-T(X) and 100Base-FX interface, it allows you to extend communication distance by optical fiber IMC-P111 series are designed for power substation application and rolling stock application, fully compliant with the requirement of IEC 61850-3 and IEEE 1613. IMC-P111 series supports MDI/MDIX auto detection, so you don't need to use crossover wires. IMC-P111 series with wide operating temperature range from -40 ~ 85OC and accepts a wide voltage range power inputs, so it is suitable for harsh operating environments.
Therefore, the IMC-P111 series is reliable media converter

and can satisfy most demand of power substation and rolling stock application.

Physical Ports Port RJ-45 10/100 Base-TX Auto MDI/MDIX: 1

Fiber port 100Base-FX Single-mode SC: 1 Processing: Store-and-Forward

Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-T(X) and 100Base-FX, IEEE 802.3x for Flow

LED Indicators

LED Indicators
Power / Ready indicator: Green Ready LED x 3
10/100TX RJ45 port indicator: Green for port Link/Act, Amber for duplex (ON) Full-Duplex / (OFF) Half-Duplex
100Base-FX fiber port indicator: Green for fiber port Link/Act, Amber for duplex (ON) Full-Duplex / (OFF) Half-Duplex
LFP statue indicator: Amber LED - (ON) LFP function fail / (OFF) LFP function disable
Fault indicator: Amber- Indicate unexpected event occurred

Power Input power: Triple DC inputs. 12~48VDC on 7-pin terminal block, 12~45VDC on power jack Power consumption (typical): 10.08W Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x H x D): 52mm x 106.1mm x 144.3mm Weight: R600

Weight: 660g

Environmental Storage Temperature: -40+85°C Operating Temperature: -40+85°C

Operating Humidity: 5%+95% Non-condensing Regulatory approvals
Power Automation: IEC 61850-3, IEEE 1613

Power Automation: IEC 61850-3, IEEE 1613
EMI: FCC Part 15, CISPR (EN55022) class A, EN50155
(EN50121-3-2, EN55011, EN50121-4)
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty

Warranty Warranty period: 5 years



#08429 Net Price: Call Unit: pcs

#### Industrial IEC 61850-3 Ethernet to fiber media converter with 1x10/100Base-T(X) to 1x100Base-FX SFP socket (ORing IMC-P111FP-LV)

IMC-P111 series is a cost-effective solution for the conversion between 10/100Base-T(X) and 100Base-FX interface, it allows you to extend communication distance by optical fiber. IMC-P111 series are designed for power substation application and rolling stock application, fully compliant with the requirement of IEC 61850-3 and IEEE 1613. IMC-P111 the requirement of IEC 61830-3 and IEEE 1613. IMC-P111 series supports MDI/MDIX auto detection, so you don't need to use crossover wires. IMC-P111 series with wide operating temperature range from -40 ~ 85 ° C and accepts a wide voltage range power inputs, so it is suitable for harsh operating environments.
Therefore, the IMC-P111 series is reliable media converter

and can satisfy most demand of power substation and rolling stock application.

Physical Ports
Port RJ-45 10/100 Base-TX Auto MDI/MDIX: 1
100Base-FX SFP port: 1
Processing: Store-and-Forward

Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-T(X) and 100Base-FX, IEEE 802.3x for Flow

LED Indicators

Deby Lept indicators: Green Ready LED x 3

10/100TX RJ45 port indicator: Green for port Link/Act, Amber for duplex (ON) Full-Duplex / (OFF) Half-Duplex
100Base-FX fiber port indicator: Green for fiber port Link/Act, Amber for duplex (ON) Full-Duplex / (OFF) Half-Duplex
LFP statue indicator: Amber LED - (ON) LFP function fail / (OFF) LEP function display.

(OFF) LFP function disable Fault indicator: Amber- Indicate unexpected event occurred

Power Input power: Triple DC inputs. 12~48VDC on 7-pin terminal block, 12~45VDC on power jack Power consumption (typical): 10.56W Overload current protection: present Reverse polarity protection: present on terminal block Physical Characteristic Enclosure: IP-30 Dimension (W x H x D): 52mm x 106.1mm x 144.3mm Weight: R500 Weight: 650g

Weight: 650g
Environmental
Storage Temperature: -40+85°C
Operating Temperature: -40+85°C
Operating Temperature: -40+85°C
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
Power Automation: IEC 61850-3, IEEE 1613
EMI: FCC Part 15, C19PR (EN55022) class A, EN50155
(EN50121-3-2, EN55011, EN50121-4)
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950
Warranty





#08440 Net Price: 170,00 EUR Unit: pcs

#### Media converter 1x 10/100Base-TX + 1x 100Base-FX fiber (MM SC), card type (ORing RMC-111FB-MM)

RMC-111 series is industrial rack mount card type Ethernet to fiber media converter for rack-mounted chassis box of RMC-1000 (#08437), that supports hot-swappable and easy installation to RMC-1000. RMC-111 series is a cost-effective solution for the conversion between 10/100Base-T(X) and 100Base-FX interface, it allows you to extend communication distance by optical fiber. RMC-111 series supports MDI/MDIX auto detection, so you don't need to use crossover wires.

Physical Ports

R.I-45 10/100 Base-TX Auto MDI/MDIX: 1

100 Base-FX Multi-mode (2KM, 1310nm, SC connector): 1 Processing: Store-and-Forward

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow

control
LED Indicators
Power indicator: Green Power LED x 2
10/100TX RJ45 port indicator: Green for port Link/Act - (ON)
Link up / (Blinking) Acting / (OFF) Link down, Amber for
100Mbps/10Mbps indicator - (ON) Link at 100Mbps / (OFF)

100Mbps/10Mbps indicator - (ON) Link at 100Mbps / (OFF) Link at 10Mbps, Green for port duplex indicator - (ON) Full-Duplex / (OFF) Half-Duplex 100Base-FX Fiber Port Indicator: Green for fiber port Link/Act - (ON) Link up / (Flash) Acting / (OFF) Link down, Green for fiber port duplex indicator - (ON) Full-Duplex / (OFF) Half-Duplex LFP status indicator: Amber LED - (ON) LFP function fail / (OFEN) LEP function dicable

(OFF) LFP function disable Power

Power consumption (typical): 2.2W

Reverse polarity protection: present Physical Characteristic Dimension (W x H x D): 21.8mm x 73.1mm x 126mm

Weight: 145g Environmental

Storage Temperature: -40+85°C
Operating Temperature: -10+60°C
Operating Humidity: 5%+95% Non-condensing

Operating Hullindy, 3/8-93/8 Notificationship
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-7
Free Fall: IEC60068-2-32
Vibration; IEC60068-2-32
Vibration; IEC60068-2-32

Vibration: IEC60068-2-6 Warranty Warranty period: 2 years



#08442 Net Price: 132,00 EUR Unit: pcs

### Media converter 1x 10/100Base-TX + 1x 100Base-FX fiber (SFP), card type (ORing RMC-111PB) LFP

RMC-111 series is industrial rack mount card type Ethernet to fiber media converter for rack-mounted chassis box of RMC-1000, that supports hot-swappable and easy installation to RMC-1000 (#08437). RMC-111 series is a cost-effective solution for the conversion between 10/100Base-T(X) and 100Base-FX interface, it allows you to extend communication distance by optical fiber. RMC-111 series supports MDI/MDIX auto detection, so you don't need to use crossover wires.

Physical Ports

RJ-45 10/100 Base-TX Auto MDI/MDIX: 1

100Base-FX (SFP): 1 Processing: Store-and-Forward

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow

LED Indicators

Power indicator: Green Power LED x 2

Power indicator: Green Power LED x 2
10/100TX RJ45 port indicator: Green for port Link/Act - (ON)
Link up / (Blinking) Acting / (OFF) Link down, Amber for
100Mbps/10Mbps indicator - (ON) Link at 100Mbps / (OFF)
Link at 10Mbps, Green for port duplex indicator - (ON)
Full-Duplex / (OFF) Half-Duplex
100Base-FX Fiber Port Indicator: Green for fiber port Link/Act
- (ON) Link up / (Flash) Acting / (OFF) Link down, Green for
fiber port duplex indicator - (ON) Full-Duplex / (OFF)
Half-Duplex
LFP status indicator: Amber LED - (ON) LFP function fail /
(OFF) LEP function disable

(OFF) LFP function disable

Power consumption (typical): 2.2W

Reverse polarity protection: present Physical Characteristic Dimension (W x H x D): 21.8mm x 73.1mm x 126mm

Weight: 140g Environmental

Storage Temperature: -40+85°C Operating Temperature: -10+60°C Operating Humidity: 5%+95% Non-condensing

Operating Huminity: 5%+59% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-32 Vibration; IEC60068-2-32

Vibration: IEC60068-2-6

Warranty
Warranty period: 2 years



#08441

Net Price: 180,00 EUR Unit: pcs

#### Media converter 1x 10/100Base-TX + 1x 100Base-FX fiber (SM SC), card type (ORing RMC-111FB-SS)

RMC-111 series is industrial rack mount card type Ethernet to fiber media converter for rack-mounted chassis box of RMC-1000 (#08437), that supports hot-swappable and easy installation to RMC-1000. RMC-111 series is a cost-effective solution for the conversion between 10/100Base-T(X) and 100Base-FX interface, it allows you to extend communication distance by optical fiber. RMC-111 series supports MDI/MDIX auto detection, so you don't need to use crossover wires.

Physical Ports

RJ-45 10/100 Base-TX Auto MDI/MDIX: 1 100 Base-FX Single-mode (30KM, 1310nm, SC connector): 1 Processing: Store-and-Forward

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for Flow

LED Indicators
Power indicator: Green Power LED x 2
10/100TX RJ45 port indicator: Green for port Link/Act - (ON)
Link up / (Blinking) Acting / (OFF) Link down, Amber for
100Mbps/10Mbps indicator - (ON) Link at 100Mbps / (OFF)
Link at 10Mbps, Green for port duplex indicator - (ON)
Full-Duplex / (OFF) Half-Duplex
100Base-FX Fiber Port Indicator: Green for fiber port Link/Act
- (ON) Link up / (Flash) Acting / (OFF) Link down, Green for
fiber port duplex indicator - (ON) Full-Duplex / (OFF)
Half-Duplex
LFP status indicator: Amber LED / (ON) LED 1

LFP status indicator: Amber LED - (ON) LFP function fail /

(OFF) LFP function disable

Power consumption (typical): 2.2W

Reverse polarity protection: present
Physical Characteristic
Dimension (W x H x D): 21.8mm x 73.1mm x 126mm

Weight: 145g Environmental

Storage Temperature: -40+85°C Operating Temperature: -10+60°C Operating Humidity: 5%+95% Non-condensing

Operating Hullindy, 3/8-93/8 Notifications (Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (RS), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-7 Free Fall: IEC60068-2-32 (Vibration; IEC60068-2-32)

Vibration: IEC60068-2-6





198,00 EUR

#### Media converter 1x 100/1000TX (RJ-45) + 1x 100/1000FX (SFP) card type (ORing RGMC-111GPB)

RGMC-111GPB is industrial rack mount card type Ethernet to fiber media converter for rack-mounted chassis box of RMC-1000, that supports hot-swappable and easy installation to RMC-1000 (#08437). RGMC-111GPB is a cost-effective solution for the conversion between 100/1000Base-T(X) and 100/1000Base-X SFP interface, it allows you to extend communication distance by optical fiber. RGMC-111GPB supports MDI/MDIX auto detection, so you don't need to use crossover wires. Therefore, the RGMC-111GPB to collocate RMC-1000 is reliable media converter and can satisfy most demand of operating environment.

Physical Ports 100/1000Base-T(X) Ports in RJ45 Auto MDI/MDIX 1 100/1000Base-FX SFP port: 1

Technology
Ethernet Standards: IEEE 802.3u for 100Base-TX and 100Base-FX, IEEE 802.3ab for 1000Base-T, IEEE 802.3z for

1000Base-X
Processing: Store-and-Forward
DIP-Switch 1/2: DIP-Switch 1 (ON) and DIP-Switch 2 (ON) SFP speed setting to 100Mbps, DIP-Switch 1 (OFF) and
DIP-Switch 2 (OFF) - SFP speed setting to 1000Mbps LED Indicators

LED Indicators
Power indicator: Green Power LED x 1
10/100Base-T(X) RJ45 port indicator: Green only - 1000Mbps
Link/Act - (ON) Link up / (Flash) Acting / (OFF) Link down,
Green and Amber - 100Mbps Link/Act - (ON) Link up / (Flash)
Acting / (OFF) Link down
Note - If amber on only - 10Mbps (This is not avail mode)
100/1000Base-(F)X fiber port indicator: Green for fiber port
Link/Act - (ON) Link up / (Flash) Acting / (OFF) Link down

Power consumption (typical): 3.6W Overload current protection: present Physical Characteristic

Dimension (W x H x D): 21.8mm x 66.5mm x 126mm

Weight: 125g Environmental

Storage Temperature: -40+85°C
Operating Temperature: -10+60°C
Operating Humidity: 5%+95% Non-condensing

Operating Huministy: 596-9596 Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Warranty Warranty period: 2 years

Net Price: Unit: pcs



#08438

Net Price: 170,00 EUR Unit: pcs

### Media converter 2x 10/100TX (RJ-45) + 1x 100FX (MM SC) card type (ORing RMC-121FB-MM)

RMC-121FB series is industrial rack mount card type Ethernet to fiber media converter for rack-mounted chassis box of RMC-1000, that supports hot-swappable and easy installation to RMC-1000 (#08437).

RMC-121FB series provide media conversion between 2x10/100Base-T(X) and 1x100Base-FX. RMC-121 series allows you to extend communication distance by optical fiber RMC-121FB series supports MDI/MDIX auto detection, so you don't need to use crossover wires. Therefore, the RMC-121FB series to collocate RMC-1000 is reliable media converter and can satisfy most demand of operating environment.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 2 100Base-FX Multimode ports (2KM, 1310nm, SC connector):

Technology Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX and 100Base-FX, IEEE 802.3xfor flow

Control
Processing: Store-and-Foward
LED Indicators
Power Indicator: Green Power LED x 1
10/100TX RJ45 port indicator: Green for port Link/Act., Amber
for Duplex/Collision
100Base-FX Fiber Port Indicator: Green for fiber port Link/Act

Power consumption (typical): 4.5W
Overload current protection: present
Physical Characteristic

Dimension (W x H x D): 21.8mm x 73.1mm x 126mm

Weight: 137g Environmental

Storage Temperature: -40+85°C
Operating Temperature: -10+60°C
Operating Humidity: 5%+95% Non-condensing

Operating Huminus: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6

Warranty period: 2 years

#08439

Net Price: 180,00 EUR Unit: pcs

### Media converter 2x 10/100TX (RJ-45) + 1x 100FX (SM SC) card type (ORing RMC-121FB-SS)

RMC-121FB series is industrial rack mount card type Ethernet to fiber media converter for rack-mounted chassis box of RMC-1000, that supports hot-swappable and easy installation to RMC-1000. RMC-121FB series provide media conversion between 2x10/100Base-T(X) and 1x100Base-FX. RMC-121 series allows you to extend communication distance by optical fiber. RMC-121FB series supports MDI/MDIX auto detection, so you don't need to use crossover wires. Therefore, the RMC-121FB series to collocate RMC-1000 is reliable media converter and can satisfy most demand of operating environment.

Physical Ports

10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 2 100Base-FX Singlemode ports (30KM, 1310nm, SC

connector): 1

Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX and 100Base-FX, IEEE 802.3xfor flow

Conition
Processing: Store-and-Foward
LED Indicators
Power Indicator: Green Power LED x 1

10/100TX RJ45 port indicator: Green for port Link/Act., Amber for Duplex/Collision

100Base-FX Fiber Port Indicator: Green for fiber port Link/Act

Power Power consumption (typical): 4.5W

Overload current protection: present
Physical Characteristic
Dimension (W x H x D): 21.8mm x 73.1mm x 126mm

Dimension (W X H X D): 21.8mm X 73.1mm X 12. Weight: 137g
Environmental
Storage Temperature: -40+85°C
Operating Temperature: -10+60°C
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
MEL: FLAGOR 4. (FED): EN4506 (4.9.8)

EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Warranty Warranty period: 2 years



## Media converter chassis, 18 slots, RACK-MOUNT (ORing RMC-1000)

Physical Ports

Slot number: 18

Input power: Two optional 100~240VAC power inputs

Overload current protection: present Physical Characteristic Dimension (W x H x D): 430mm x 243mm x 132mm

Weight: 4955g Environmental Storage Temperature: -40÷85°C

Operating Temperature: -10÷60°C Operating Humidity: 5%÷95% Non-condensing

Operating Humbinst 35%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-32

MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C ): 870520

Warranty period: 5 years

#### #08437

Net Price: 770,00 EUR Unit: pcs





#06892 Net Price: 116,00 EUR Unit: pcs

### Media converter 1x RS232 (DB9) + 1x RS-422/485 (TB, 3kV isolated) (ORing ISC-1112-I)

Physical Ports

RS-232 Connector: DB9 (Female) RS-422/485 Connector: 10-pin terminal block opto-isolated to

3kV
RS-232 Signals: TxD, RxD, GND
RS-422/485 Signals (RS422): TxD+, TxD-, RxD+, RxD-RS-422/485 Signals (RS485): Data+, Data-, GND
Baud Rate: 300bps to 115.2Kbps
Data bit: 5, 6, 7, 8
Stop bit: 1, 1.5, 2
Parity: None, Even, Odd, Space, Mark
Flow Control: XON/XOFF (software), Auto Hardware
Direction Control for RS-485

LED Indicators
Power Indicator: Green x1 TxD Indicator: Green x1 RxD Indicator: Green x1

Input power: 10÷30VDC on 10-pin terminal block

Power consumption (typical): 2.2W Physical Characteristic Enclosure: ABS

Dimension (W x D x H): 71.2mm x 25.3mm x 100.6mm

Weight: 130g Environmental

Storage Temperature: -25+85°C
Operating Temperature: -10+70°C
Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%-495% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950

Warranty

Warranty period: 2 years



Net Price: Call Unit: pcs

#08459

## Media converter 1x USB (B) + 4x RS-232 slim (ORing ISC-4110U)

ISC-4110U and ISC-8110U are intelligent and compact-size media converters that provide conversion between one Universal Serial Bus (USB) port and 4 or 8 High-Speed RS-232 serial ports. The ISC-4110U and ISC-8110U feature easy connectivity for traditional serial devices. The RS-232 standard supports full-duplex communication and handshaking signals (such as RTS, CTS, DSR, DTR) Internal high-speed transient suppressors on each data line protect the modules from dangerous voltages levels or spikes. ISC-4110U/8110U can derive the power from USB port or redundant power inputs. Therefore, ISC-4110U and ISC-8110U are among the most reliable choices for USB to RS-232 media converter applications.

Physical Ports

USB Connector: 1xB-type (Female), USB v2.0 Serial ports: 4xRS-232 RS-232 Signals: TxD, RxD, RTS, CTS, DTR, DSR, DCD,

GND

Baud Rate: 300 to 921.6Kbps

LED Indicators

Power Indicator: Green x1
Data Transmission Indicator: Green x4

Power

Input power: USB bus power (self power) or Dual DC inputs by 12-48VDC on 2-pin terminal block and power jack Power consumption (typical): 1.6W (320mA@5V USB Bus

Serial Port Protection: Build-in 15KV ESD protection

Serial Port Protection: Build-in 15KV ESD protection Driver Support
Operation System: Windows 2000 (32bit), Windows 20003/XP/Vista/2008/7 (32/64bit), Windows Mobile 5/6, PocketPC 2003, WinCE 4.2~5.2/6.0, Linux x86 (32/64bit) Physical Characteristic Enclosure: IP-30
Dimension (W x D x H): 26.1mm x 94.9mm x 144.3mm Weight: 348n

Weight: 348g Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Humbinsy: 5%-595% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-36 Vibration: IEC60068-2-6 Safety: EN60950-1

Warrantv

Warranty period: 5 years



#08460

Net Price: Call Unit: pcs

### Media converter 1x USB (B) + 8x RS-232 slim (ORing ISC-8110U)

ISC-4110U and ISC-8110U are intelligent and compact-size media converters that provide conversion between one Universal Serial Bus (USB) port and 4 or 8 High-Speed RS-232 serial ports. The ISC-4110U and ISC-8110U feature easy connectivity for traditional serial devices. The RS-232 standard supports full-duplex communication and handshaking signals (such as RTS, CTS, DSR, DTR). Internal high-speed transient suppressors on each data line Internal nign-speed transient suppressors on each data line protect the modules from dangerous voltages levels or spikes. ISC-4110U/8110U can derive the power from USB port or redundant power inputs. Therefore, ISC-4110U and ISC-8110U are among the most reliable choices for USB to RS-232 media converter applications.

Physical Ports

USB Connector: 1xB-type (Female), USB v2.0 Serial ports: 8xRS-232 RS-232 Signals: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

Baud Rate: 300 to 921.6Kbps

LED Indicators

Power Indicators
Power Indicator: Green x1
Data Transmission Indicator: Green x8

Power

Input power: USB bus power (self power) or Dual DC inputs by 12-48VDC on 2-pin terminal block and power jack Power consumption (typical): 2W (400mA@5V USB Bus Power)

Protection
Serial Port Protection: Build-in 15KV ESD protection

Serial Port Protection: Build-In 18kV ESD protection Driver Support Operation System: Windows 2000 (32bit), Windows 20003/XP/Vista/2008/7 (32/64bit), Windows Mobile 5/6, PocketPC 2003, WinCE 4.2~5.2/6.0, Linux x86 (32/64bit) Physical Characteristic Enclosure: IP-30

Dimension (W x D x H): 26.1mm x 94.9mm x 144.3mm Weight: 350g Environmental

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing

Operating Humbolist: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty Warranty period: 5 years





#06523 Net Price: 226,00 EUR Unit: pcs

#### Industrial Gigabit High Power Injector, 1x10/1000 RJ-45 PoE + 1x10/1000 RJ-45 (ORing INJ-101GT++-60W)

The INJ-101GT++ PoE Injector series is not only an IEEE802.3at compliant device but also an advanced high power PoE injector. It is intelligent detection that provided 1-ports 10/100/1000Base-T (X) PoE outputs. The device does not turn on power until it detects a valid PoE signature from the PoE devices attached downstream on the Ethernet cable. This protection against damage to non-PoE compliant equipment which may be connected to the Ethernet cable. Therefore, only an IEEE 802.3at/802.3af compliant device can be powered with the INJ-101GT++ PoE Injector. Typically in Gigabit networks the maximum allowable CAT5 cable length is about 100 meters, due to the limitation of the Ethernet standards. The INJ-101GT++ PoE Injector can function with any PoE P.D. equipment which is fully compliant with the IEEE 802.3af/at PoE standards, and provide the DIP switch configurator for High power PoE management

Physical Ports

10/100/1000Base-T(X) in RJ-45 Ethernet Port Input: 1 10/100/1000Base-T(X) in RJ-45 Ethernet Port with P.S.E.

Operating Voltage
Input Voltage: 50 ~ 57 VDC / 4-pin terminal block
Power Consumption: 1 Watts (Not include PD's device)

PoE Power Budget: 60 Watts max LED Indicators Power indicator: PWR / Ready 1 x LED, Green On - Power is

on and functioning Normally
PoE Indicators: 1 x LED, Blue On - PoE Device Link, Blue Off
- None PoE Device Detected, Blink (Blue) - Overload present

Protection Short Circuit Protection: present Over Load Protection: present

Physical Characteristic

Enclosure: IP-30
Dimension (W x D x H): 26.1(W)x70(D)x95(H)mm (1.03 x 2.76 x 3.74 inch) Weight: 188g Environmental

Storage Temperature: -40+85°C(-40+185°F) Operating Temperature: -40+75°C (-40+165°F) Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMC: EN55032, EN55024(CE EMC), FCC Part 15B, EN61000-3-2, EN61000-3-3 EMI: CISPR 32, EN55032, FCC Part 15B class A EMS: EN61000-4-2 ((ESD), EN61000-4-3 ((RS)), EN61000-4-4 ((EFT), EN61000-4-5 ((Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1

Safety: EN60950-1 Warranty

Warranty period: 5 years



#08446 Net Price: 112,00 EUR Unit: pcs

### Industrial Gigabit High Power Injector, 2x10/1000 RJ-45 PoE + 2x10/1000 RJ-45 (ORing INJ-102GT)

The INJ-102GT PoE Injector is an advanced IEEE802.3at compliant device with Intelligent Detection, that provided 2-ports 10/100/1000Base-T(X) PoE outputs. The device does not turn on power until it detects a valid PoE signature from the PoE devices attached downstream on the Ethernet cable. This protection against damage to non-PoE compliant equipment which may be connected to the Ethernet cable Because of this intelligent detection, only an IEEE Because of this intelligent detection, only an IEEE 802.3at/802.3af compliant device can be powered with the INJ-102GT PoE Injector. Typically in gigabit networks the maximum allowable CAT5 cable length is about 100 meters, due to the limitation of the Ethernet standards. Because of its 50~57V insertion, the installer doesn't need to worry about voltage drops caused by cable length. The INJ-102GT PoE Injector can function with any PoE P.D. equipment which is fully compliant with the IEEE 802.3at/802.3af PoE standards.

Physical Ports 10/100/1000Base-T(X) in RJ-45 Ethernet Port Input: 2 10/100/1000Base-T(X) in RJ-45 Ethernet Port with P.S.E.

Operating Voltage
Input Voltage: 50 ~ 57 VDC / 4-pin terminal block
Output Power: 50V / 600mA, 30 Watts max. Per port
LED Indicators

Power indicator: PWR / Ready 1 x LED, Green On - Power is

on and functioning Normally
PoE Indicators: 2 x LED, Blue On - PoE Device Link, Blue
Blinking - Detecting PoE Device, Blue Off - None PoE Device

Detected Protection Short Circuit Protection: present Short Circuit Protection: present
Over Load Protection: present
High Voltage Protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 26.1mm x 70mm x 95mm

Weight: 250g Environmental

Environmental Storage Temperature: -40+80°C(-40+176°F) Operating Temperature: -20+70°C (-4+158°F) Operating Humidity: 5%+90% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11

Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty

Warranty period: 2 years

#08447

Net Price: 206,00 EUR Unit: pcs

#### Industrial Gigabit High Power Injector, 2x10/1000 RJ-45 PoE + 2x10/1000 RJ-45 (ORing INJ-102GT-24V)

The INJ-102GT PoE Injector is an advanced IEEE802.3at compliant device with Intelligent Detection, that provided 2-ports 10/100/1000Base-T(X) PoE outputs. The device does not turn on power until it detects a valid PoE signature from the PoE devices attached downstream on the Ethernet cable. This protection against damage to non-PoE compliant equipment which may be connected to the Ethernet cable. Because of this intelligent detection, only an IEEE 802.3at/802.3af compliant device can be powered with the INJ-102GT PoE Injector. Typically in gigabit networks the maximum allowable CAT5 cable length is about 100 meters, due to the limitation of the Ethernet standards. Because of its 50~57V insertion, the installer doesn't need to worry about solony in the instance doesn't need to worth about voltage drops caused by cable length. The INJ-102GT PoE Injector can function with any PoE P.D. equipment which is fully compliant with the IEEE 802.3at/802.3af PoE standards.

Physical Ports

10/100/1000Base-T(X) in RJ-45 Ethernet Port Input: 2 10/100/1000Base-T(X) in RJ-45 Ethernet Port with P.S.E.

Output: 2 Operating Voltage Input Voltage: 24 ~ 57 VDC / 4-pin terminal block Output Power: 50V / 600mA, 30 Watts max. Per port

LED Indicators
Power indicator: PWR / Ready 1 x LED, Green On - Power is

on and functioning Normally
PoE Indicators: 2 x LED, Blue On - PoE Device Link, Blue
Blinking - Detecting PoE Device, Blue Off - None PoE Device
Detected

Protection

Short Circuit Protection: present Over Load Protection: present High Voltage Protection: present Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 41mm x 70mm x 95mm

Weight: 370g Environmental

Storage Temperature: -40+80°C(-40+176°F) Operating Temperature: -20+70°C (-4+158°F) Operating Humidity: 5%+90% Non-condensing

Operating Hullmoly, 5%-90% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1

Warranty period: 2 years

#### Transporter EN50155 Devices



#06506

Net Price: 370.00 EUR Unit: pcs

#07649

Net Price: Call Unit: pcs

#06630

Net Price: 630 00 FUR Unit: pcs

### Industrial Gigabit High Power Injector, 2x10/1000 M12 PoE (ORing TINJ-101GT-M12-24V)

ORing's Transporter series PoE Injectors are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TINJ-101GT-M12-24V PoE Injector is an advanced IEEE802.3at compliant device with Intelligent Detection that provided 1-port 10/100/1000 Base-T(X) PoE output which is compliant with EN50155 requirement. It is specifically designed for the toughest industrial environments. TINJ-101GT-M12-24V EN50155 PoE Injector use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. The device does not turn on power until it detects a valid PoE signature from the PoE devices attached downstream on the Ethernet cable.

This protection against damage to non-PoE compliant equipment which may be connected to the Ethernet cable Because of this intelligent detection, only an IEEE 802.3at/802.3af compliant device can be powered with the TINJ-101GT-M12-24V PoE Injector. Typically, in Ethernet networks the maximum allowable CAT5 cable length is about 100 meters, due to the limitation of the Ethernet standards. Because of its 50V insertion, the installer doesn't need to worry about voltage drops caused by cable length. The TINJ-101GT-M12-24V PoE Injector can function with any PoE P.D. equipment which is fully compliant with the IEEE 802.3at/802.3af PoE standards.

Physical Ports 10/100/1000 Base-T(X) with P.S.E. Ports in M12 Auto MDI/MDIX: 1 (8-pin M12 female A-coding connector) 10/100/1000 Base-T(X) Port in M12 Auto MDI/MDIX: 1 (8-pin M12 female A-coding connector)

Operating Voltage Input Voltage: Railway 24VDC (12 ~ 57 VDC) on 5-pin M12 female A-coding
Output Power: 50V / 600mA, 30 Watts max. Per port
LED Indicators

Power indicator: PWR / Ready 1 x LED, Green On - Power is

on and functioning Normally
PoE Indicators: 1 x LED, Blue On - PoE Device Link, Blue
Blinking - Detecting PoE Device, Blue Off - None PoE Device
Detected

Protection

Short Circuit Protection: present Over Load Protection: present Physical Characteristic Enclosure: IP-40

Dimension (W x D x H): 88.9 x 40 x 178.2 mm Weight: 446g Environmental

Storage Temperature: -40+80°C(-40+176°F) Operating Temperature: -25+75°C (-13+167°F) Operating Humidity: 5%+90% Non-condensing

EMI: EN 50032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A EMS: IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS), IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8 (PFMF), IEC/EN 61000-4-11 (DIP))
Shock: IEC600068-2-27

Free Fall: IEC60068-2-31 Vibration: IEC60068-2-6 Safety: EN60950-1 Other: EN 50155 MTBF: 2,761,341 hrs.

Warranty

Warranty period: 5 years



# Unmanaged switch, 5x 10/100 M12 (ORing TES-150-M12)

ORing's TransporterTM series Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. TES-150-M12 is an unmanaged Ethernet switch with 5x10/100Base-T(X) ports which is compliant with EN50155 request. It is specifically designed for the toughest industrial environments.
TES-150-M12 EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. In addition, the wide operating temperature range from -40oC to 70oC can satisfy most of operating environment. The TES-150-M12 can be easily adopted in almost all kinds of applications and provides the most rugged solutions for your network. Therefore, the switch is one of the most reliable choices for rolling stock Ethernet application.

Physical Ports 10/100 Base-T(X) Ports w/Auto MDI/MDIX: 5 Connector Type: Waterproof M12

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control Processing: Store-and-Forward LED Indicators Power Indicator: Green - Power LED x 1 10/100TX Port Indicator: Green for port Link/Act, Amber for

Duplex/Collision

Input power: 12~48 VDC Connector Type: Waterproof M12 Power consumption (typical): 3W Overload current protection: present Reverse polarity protection: present Physical Characteristic

Dimension (W x D x H): 88.9 (W) x 40 (D) x 178.2 (H)mm

Weight: 375g Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4

(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27, EN61373 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6, EN61373 Safety: EN60950-1

Warranty period: 5 years

### Unmanaged switch, 5x 10/100/500 M12 PoE (ORing TXPS-141XT-M12-24V)

ORing's TransporterTM series Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. TXPS-141XT-M12 series are unmanaged PoE Ethernet switch with 4x10/100/500Base-T(X) P.S.E. ports and 4x10/100/500Base-T(X) P.S.E. ports and 1x10/100/500Base-T(X) port which is compliant with EN50155 requirement. It is specifically designed for the toughest industrial environments. TXPS-141XT-M12 series EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. TXPS-141XT-M12 series also support Power over Ethernet, a system to transmit electrical power up to 30 watts, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. TXPS-141XT-M12 series switch has 4x10/100/500Base-T(X) P.S.E. (Power Sourcing Equipment) port to provide power in a PoE setup. The very wide operating temperature range from -40 oC to 75oC can satisfy most operating environment.

10/100/500Base-T(X) with P.S.E. Ports in M12 Auto MDI/MDIX: 4

10/100/500Base-T(X) Port in M12 Auto MDI/MDIX: 1 Connector Type: M12

Connector Type: M12
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.3at
compliant PoE specification (Maximum 30Watts per port)
Processing: Store-and-Forward

LED Indicators LED Indicators
Power / Ready indicator: Green Power LED x 1
10/100/500Base-T(X) M12 port indicator and PoE indicator:
Top for port Link/Act indicator. Green for 10/100Mbps link,
Middle Green for 500Mbps port Link/Act indicator, Bottom
blue for PoE Injected indicator
10/100/500Base-T(X) M12 port indicator: Top Green for port
Link/Act at 10/100Mbps, Bottom Green for port Link/Act at
500Mbps

500Mbps

Power

Redundant Input Power: 12~57VDC power input on M12 female connector (5-pin M12 A-coding) Power consumption (typical): 2W PoE Output Power: 60W (12~24VDC) / 120W (24~57VDC)

Overload current protection: present Reverse polarity protection: Present Physical Characteristic

Dimension (W x D x H): 88.9 x 55 x 178.2 mm Weight: 643 g

Environmental

Environmental
Enclosure: IP-30
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+75°C (-40+167°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A, EN50155
(EN50121-3-2, EN55011, EN50121-4)
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27, EN61373
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6

Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty

Warranty period: 5 years





#08415 Net Price: Unit: pcs

### Unmanaged switch, 8x 10/100 M12 (ORing TES-1080-M12)

ORing's TransporterTM series Ethernet switches are designed for industrial applications, such as rolling stock,

vehicle, and railway applications.
The TES-1080-M12 is an unmanaged Ethernet switch with 8x10/100Base-T(X) ports with EN50155 certification.TES-1080-M12 rugged IP-40 aluminum

All Ethernet ports on TES-1080-M12 are implemented with

M12 connectors to ensure dust-tight connection, and to guarantee reliable operation against environmental disturbances, such as vibration and shock.

In addition, the wide operating temperature range from -40°C to 70°C can satisfy most of tough operating environments. Therefore, the switch is one of the most reliable choices for rolling stock Ethernet application.

Physical Ports

10/100 Base-T(X) Ports w/Auto MDI/MDIX: 8 Connector Type: Waterproof M12

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control
MAC Table: 8192 MAC addresses

Processing: Store-and-Forward LED Indicators

Power Indicator: Green - Power LED x 2, Indicates power

input Ready / Ring Master Indicator: Green - Indicate system ready

and Ring master mode O-Ring Indicator: Green- Indicates port operating in O-Ring

10/100TX Port Indicator: Green for port Link/Act. Amber for Collision/Duplex indicator

Input power: Dual 12~ 48 VDC Connector Type: Waterproof M12 Power consumption (typical): 5W Overload current protection: present

Reverse polarity protection: present
Physical Characteristic
Dimension (W x D x H): 125mm x 65mm x 196mm

Dimension (W x D x H): 125mm x 65mm x 196mm Weight: 896 g
Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A, EN50155
(EN50121-3-2, EN55011, EN50121-4)
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
FN61000-4-8. EN61000-4-11

EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty

Warranty period: 5 years



Net Price: Call Unit: pcs

#07898

## Unmanaged switch, 8x 10/100 M12 (ORing TES-180-M12)

ORing's TransporterTM series Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. TES-180-M12 is an unmanaged Ethernet switch with 8x10/100Base-T(X) ports which is compliant with EN50155 request. It is specifically designed for the toughest industrial environments. TES-180-M12 EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. In addition, the wide operating temperature range from -40oC to 70oC can satisfy most of operating environment. The TES-180-M12 can be easily

adopted in almost all kinds of applications and provides the most rugged solutions for your network. Therefore, the switch is one of the most reliable choices for rolling stock Ethernet application.

Physical Ports 10/100 Base-T(X) Ports w/Auto MDI/MDIX: 8

Connector Type: Waterproof M12

Connector Type: vvalorproc...
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control
Processing: Store-and-Forward

Power Indicator: Green - Power I FD x 1

10/100TX Port Indicator: Green for port Link/Act, Amber for Duplex/Collision

Power Input power: 12~48 VDC Connector Type: Waterproof M12 Power consumption (typical): 4.32W Overload current protection: present Reverse polarity protection: present Physical Characteristic Dimension (W x D x H): 88.9 (W) x 40 (D) x 178.2 (H)mm Weight: 5100

Environmental

Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+185°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-7. EN61373

Shock: IEC60068-2-27, EN61373 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6, EN61373

Safety: EN60950-1 Warranty

Warranty period: 5 years



#08416 Net Price:

Call Unit: pcs

### Unmanaged switch, 8x 10/100 M12 Bypass, (ORing TES-1080-M12-BP2)

ORing's TransporterTM series Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway. The TES-1080-M12-BP2, which is compliant with the EN50155 standard, is an unmanaged Ethernet switch with 8x10/100Base-T(X) ports (4 of these ports also double as 2 sets of bypass ports).

TES-1080-M12-BP2 is constructed of a rugged aluminum case and designed with Ethernet ports (M12 type connector), which provide a dust-tight connection. TES-1080-M12-BP2 EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and

TES-1080-M12-BP2 includes 2 sets of bypass ports that protect the network from failures and Network maintenance by ensuring network integrity during power loss. Each set of these bypass ports includes Network ports and Monitor ports.

The Network ports are used for connection to main-network connections and provide protection mechanism, and the Monitor ports are used for down-linking local networking device. When the power is on, the operating mode of the Bypass ports is set to Normal, and the local networking device is connected with main-network. When power failure occurs, the Bypass ports are swiftly set to bypass mode to isolate the main-network from the local networking device. In addition, the wide operating temperature range from -40°C to 70°C can satisfy most of operating environment.
Therefore, the switch is one of the most reliable choices for rolling stock Ethernet application

Physical Ports Info: Info:

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control MAC Table: 8192 MAC addresses

Processing: Store-and-Forward LED Indicators

Power Indicator: Green - Power LED x 2. Indicates power

Ready / Ring Master Indicator: Amber LED - Light on for system ready / Blinking for system ready and Ring master mode - Light off for system failed O-Ring Indicator: Amber - Indicates port operating in O-Ring

mode (per port) 10/100TX Port Indicator: Green for port Link/Act. (per port) Input power: Dual 12~48VDC

Input power: Dual 12-48VDC
Connector Type: Waterproof M12
Power consumption (typical): 5W
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic
Dimension (W x D x H): 125mm x 65mm x 196mm

Weight: 896 g Environmental

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty Warranty Warranty period: 5 years





#07864 Net Price: Unit: pcs

### Unmanaged switch, 8x 10/100/1000 M12 (ORing TGS-1080-M12)

ORing's TransporterTM series un-managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TGS-1080-M12 is an un-managed Ethernet switch with 8x10/100/1000Base-T(X) which is specifically designed for the toughest and fully compliant with EN50155 requirement. Each TGS-1080-M12 switch has 8X10/100/1000Base-T(X) ports. TGS-1080-M12 EN50155 Ethernet switch uses M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. In addition, the wide operating temperature range from -40 oC to 70oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for rolling stock application.

Physical Ports 10/100/1000 Base-T(X) Auto MDI/MDIX ports: 8

10/100/1000 Base-T(X) Auto MDI/MDIX ports: 8
Connector Type: Waterproof M12
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.3ab
for 1000Base-T
MAC Table: 8192 MAC addresses
Processing: Store-and-Forward
LED Indicators
Power / Ready indicator: Green Power LED x 3
Fault Indicator: Amber Indicate PWR1 or PWR2 failure
10/100/1000Base-T(X) M12 port indicator: Top for port
Link/Act indicator. Green for 1000Mbps link, Amber for 10/100
Mbps link, Bottom Amber for Duplex / Collision indicator Mbps link, Bottom Amber for Duplex / Collision indicator

Relay: Relay output to carry capacity of 3A at 24VDC on M12 connector (5-pin A-coding)

Power
Redundant Input Power: Dual 12~48VDC on 5-pin M23 connector, 72~110VDC for TGS-1080-M12-MV
Power consumption (typical): 2.88W
Overload current protection: present
Physical Characteristic

Dimension (W x D x H): 125 x 65 x 196 mm Weight: 967 g Environmental

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty

Warranty Warranty period: 5 years

#07850 Net Price: 825,00 EUR Unit: pcs

### Unmanaged switch, 8x 10/100/1000 M12 PoE (ORing TGXPS-1080-M12-24V)

ORing's TransporterTM series un-managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TGXPS-1080-M12-24V is an un-managed PoE Ethernet switch with 8x10/100/500/1000Base-T(X) P.S.E. which is specifically designed for the toughest and fully compliant with EN50155 requirement. TGXPS-1080-M12-24V also supports Power over Ethernet, a system to transmit electrical power. along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each TGXPS-1080-M12-24V switch has \$X10/100/500/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. TGXPS-1080-M12-24V EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. In addition, the wide operating temperature range from -40oC to 75oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed PoE Ethernet application. While installing in the train, TGXPS-1080-M12-24V is mainly used for in-train monitoring and Entertainment service due to its high speed Gigabit Ethernet connection and PoE capability. Devices connected will be IP

camera or CCTV for the use of train surveillance. As an unmanaged Ethernet Switch, TGXPS-1080-M12-24V is not able and will not be used for any control related application Its main function is simply forwarding the Ethernet packet from one Ethernet based device to another Ethernet device which are all connected to the Switch.

Physical Ports 10/100/1000 Base-T(X) Auto MDI/MDIX ports: 8 Connector Type: M12

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.3ab for 1000Base-T, IEEE 802.3at compliant PoE specification (Maximum 30Watts per port)

MAC Table: 4k

MAC Table: 4k
Processing: Store-and-Forward
LED Indicators
Power / Ready indicator: Green Power LED x 3
Fault Indicator: Amber Indicate PWR1 or PWR2 failure
10/100/1000Base-T(X) M12 port indicator and PoE indicator:
Top for port Link/Act indicator. Green for 1000Mbps link,
Amber for 10/100 Mbps link, Middle Amber for 500Mbps port
Link/Act indicator, Bottom blue for PoE Injected indicator
Fault contact

Relay: Relay output to carry capacity of 3A at 24VDC on M12 connector (5-pin A-coding)

Redundant Input Power: Dual 24 (12~57VDC)VDC on 5-pin

M23 connector
Power consumption (typical): 8W
PoE Output Power: 60W (12-24VDC) / 120W (24~57VDC)
Overload current protection: present
Reverse polarity protection: Present
Physical Characteristic

Dimension (W x D x H): 125 x 65 x 196 mm Weight: 979 g Environmental

Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+75°C (-40+167°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMC: CE EMC (EN 55024, EN 55032), FCC Part 15B, EN

EMC: CE EMC (EN 55024, EN 55032), FCC Part 15B, EN 50121-3-2 (EN 50155)
EMI: EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15B class A
EMS: EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS),IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8 (PFMF), IEC/EN 61000-4-1 (DIP))
Shock: IEC60068-2-27

Free Fall: IEC60068-2-31 Vibration: IEC60068-2-6 Safety: EN60950-1 Other: EN 50155 MTBF: 442602 hrs

Fault contact

Warranty Warranty period: 5 years



#07851 Net Price: 1 440,00 EUR Unit: pcs

### Unmanaged switch, 8x 10/100/1000 M12 PoE (ORing TGXPS-1080-M12-MV)

ORing's TransporterTM series un-managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TGXPS-1080-M12-MV is an un-managed PoE Ethernet switch with 8x10/100/500/1000Base-T(X) P.S.E. which is specifically designed for the toughest and fully compliant with EN50155 requirement. TGXPS-1080-M12-MV also supports Power over Ethernet, a system to transmit electrical power. along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each TGXPS-1080-M12-MV switch has 8X10/100/500/1000Base-T(X) IEEE 802.3af/at P.S.E. (Power Sourcing Equipment) ports, but the PoE total power budget is 60Watts Max. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. TGXPS-1080-M12-MV EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. In addition, the wide operating temperature range from -40oC to 75oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed PoE Ethernet application.
While installing in the train, TGXPS-1080-M12-MV is mainly used for in-train monitoring and Entertainment service due to its high-speed Gigabit Ethernet connection and PoE capability. Devices connected will be IP camera or CCTV for the use of train surveillance. As an unmanaged Ethernet Switch, TGXPS-1080-M12-MV is not able and will not be used for any control related application. Its main function is simply forwarding the Ethernet packet from one Ethernet based device to another Ethernet device which are all connected to the Switch.

Physical Ports 10/100/1000 Base-T(X) Auto MDI/MDIX ports: 8 Connector Type: Waterproof M12

Collinetor Type: Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.3ab for 1000Base-T, IEEE 802.3at compliant PoE specification (Maximum 30Watts per port)

MAC Table: 4k
Processing: Store-and-Forward LED Indicators

LEU Indicators
Power / Ready indicator: Green Power LED x 1
Fault Indicator: Amber Indicate PWR1 or PWR2 failure
10/100/1000Base-T(X) M12 port indicator and PoE indicator:
Top for port Link/Act indicator. Green for 1000Mbps link,
Amber for 10/100 Mbps link, Middle Amber for 500Mbps port Link/Act indicator, Bottom blue for PoE Injected indicato

Entity Children (1997) 2 Tault contact
Relay: Relay output to carry capacity of 3A at 24VDC on M12 connector (5-pin A-coding)

Redundant Input Power: 72/110 (50.4-137.5) VDC on 5-pin 7/8-inch male connector
Power consumption (typical): 8W
PoE Output Power: 60W (12~24VDC) / 120W (24~57VDC) Overload current protection: present

Reverse polarity protection: Present Physical Characteristic Dimension (W x D x H): 150 x 65 x 196 mm

Weight: 1320 g Environmental

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+75°C (-40+167°F) Operating Humidity: 5%+95% Non-condensing

Operating Humidity: 5%+95% Non-condensing'
Regulatory approvals
EMC: CE EMC (EN 55024, EN 55032), FCC Part 15B, EN
50121-3-2 (EN 50155)
EMI: EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3,
FCC Part 15B class A
EMS: EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN
61000-4-3 (RS), IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-11 (DIP))
Shock: IEC600068-2-27
Free Fall: IEC60068-2-31
Vibration: IEC60068-2-6
Safety: EN60950-1
Other: EN 50155
MTBF: 229943 hrs
Warranty





#07865 Net Price: Unit: pcs

### Unmanaged switch, 8x 10/100/1000 M12, Bypass (ORing TGS-1080-M12-BP2)

ORing's TransporterTM series un-managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TGS-1080-M12-BP2 is an un-managed Ethernet switch with 8x10/100/1000Base-T(X) which is specifically designed for the toughest and fully compliant with EN50155 requirement. Each TGS-1080-M12-BP2 switch has 8X10/100/1000Base-T(X) ports. TGS-1080-M12-BP2 EN50155 Ethernet switch uses M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. TGS-1080-M12-BP2 includes 2 sets of bypass ports that protect the network from failures and Network maintenance by ensuring network integrity during power loss. In addition, the wide operating temperature range from -40  $\,$ oC to 70oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for rolling stock application.

Physical Ports 10/100/1000 Base-T(X) Auto MDI/MDIX ports: 8 (bypass function included by last 4 ports)
Connector Type: Waterproof M12

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.3ab
for 100Base-T
MAC Table: 8192 MAC addresses

Processing: Store-and-Forward

LED Indicators

LEU Indicators
Power / Ready indicator: Green Power LED x 3
Fault Indicator: Amber Indicate PWR1 or PWR2 failure
10/100/1000Base-T(X) M12 port indicator: Top for port
Link/Act indicator. Green for 1000Mbps link, Amber for 10/100 Mbps link, Bottom Amber for Duplex / Collision indicator Fault contact

Relay: Relay output to carry capacity of 3A at 24VDC on M12

connector (5-pin A-coding) Power

Redundant Input Power: Dual 12~48VDC on 5-pin M23 connector, 72~110VDC for TGS-1080-M12-BP2-MV Power consumption (typical): 6.24W

Overload current protection: present Physical Characteristic Dimension (W x D x H): 125 x 65 x 196 mm Weight: 1007 g

Environmental

Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A, EN50155
(EN50121-3-2, EN55011, EN50121-4)
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-17
Shock: IEC60068-2-7
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950-1

Safety: EN60950-1

Warranty period: 5 years

#06629

Net Price: 684,00 EUR Unit: pcs

### Unmanaged switch, 8x 10/100/500/1000 M12 (ORing TGXS-1080-M12)

ORing's Transporter series un-managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TGXS-1080-M12 is an un-managed Ethernet switch with

8x10/100/500/1000Base-T(X) which is specifically designed for the toughest and fully compliant with EN50155 requirement. TGXS-1080-M12 EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. In addition, the disturbances, such as vioration and shock. In addition, the wide operating temperature range from -40 oC to 75oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed Ethernet application. While installing in the train, TGXS-1080-M12 is mainly used for in-train monitoring and Entertainment service due to its high speed Gigabit Ethernet connection. Devices connected will be IP camera CCTV for the use of train surveillance. As an unmanaged Ethernet Switch, TGXS-1080-M12 is not able and will not be used for any control related application. Its main function is simply forwarding the Ethernet packet from one Ethernet based device to another Ethernet device which are all connected to the Switch.

Physical Ports

10/100/1000 Base-T(X) Auto MDI/MDIX ports: 8 Connector Type: Waterproof M12

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.3ab

for 1000Base-T MAC Table: 4k MAC addresses Processing: Store-and-Forward

LED Indicators

LEU Indicators
Power / Ready indicator: Green Power LED x 3
Fault Indicator: Amber Indicate PWR1 or PWR2 failure
10/10/500/1000Base-T(X) M12 port indicator: Top for
10/100/1000Mbps port Link/Act indicator. Green for 1Gbps
link, Amber for 10/100 Mbps link, Bottom Amber for 500Mbps

port Link/Act indicator Fault contact Relay: Relay output to carry capacity of 3A at 24VDC on M12 connector (5-pin A-coding)

Power
Redundant Input Power: Dual 12~48VDC on 5-pin M23
connector, 72~110VDC for TGS-1080-M12-MV
Power consumption (typical): 7W
Overload current protection: present
Reverse Polarity Protection: present

Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 125 x 65 x 196 mm

Weight: 812 g Environmental

Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+75°C (-40+167°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMC: CE EMC (EN 55024, EN 55032), FCC Part 15B, EN
50121-3-2 (EN 50155)
EMI: EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3,

EMI: EN 95032, CISFR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15B class A EMS: EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS),IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8(PFMF), IEC/EN 61000-4-1 (DIP))
Shock: IEC60068-2-27

Sinox: IECoouto-2-21 Free Fal: IEC60068-2-31 Vibration: IEC60068-2-6 Safety: EN60950-1 Other: EN50155 MTBF: 409156 hrs Warranty

Warranty period: 5 years

#07648

Net Price: Call Unit: pcs

### Smart switch, 5x 10/100 M12, O-Ring <10ms (ORing TES-250-M12)

ORing's Transporter series Ethernet switches are designed Orning's Transporter Series Enterflet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. TES-250-M12 is a lite-managed redundant ring Ethernet switch with 10/100Base-T(X) ports which is compliant with EN50155 request. With complete support of Ethernet redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring and STP/RSTP (IEEE802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technologies. It is specifically designed for the toughest industrial environments. TES-250-M12 EN50155 Ethernet switch uses M12 connectors to ensure tight, robust connections and guarantees reliable operation against environmental disturbances, such as vibration and shock. TES-250-M12 can be managed centralized by a powerful windows utility - Open-Vision. In addition, the wide operating temperature range from -40~70°C can satisfy most of operating environment. The TES-250-M12 can be easily adopted in almost all kinds of applications and provides the most rugged solutions for managing your network. Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed Ethernet applications.

Physical Ports

10/100 Base-T(X) Ports w/Auto MDI/MDIX: 5 Connector Type: Waterproof M12

Connector Type: Waterproof M12
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D
for STP (Spanning Tree Protocol), IEEE 802.1w for RSTP
(Rapid Spanning Tree Protocol), IEEE 802.1AB for LLDP
(Link Layer Discovery Protocol)
MAC Table: 2048 MAC addresses

MAC Table: 2048 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching bandwidth: 1.0 Gbps
VLAN: Port Based
Security Features: Enable/disable ports, VLAN to segregate
and secure network traffic, SNMP v3 encrypted authentication and access security
Software Features: STP/RSTP (IEEE 802.1D/w), Redundant

Software reatures: STP/RSTP (IEEE 002.1D/m), required Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics, Port monitoring, Port security

Network Redundancy: O-Ring, Open-Ring, Fast recovery,

STP RSTP

Power Indicator: Green - Power LED x 1, Indicates power

Ready / Ring Master Indicator: Amber LED - Light on for system ready / Blinking for system ready and Ring master mode - Light off for system failed O-Ring Indicator: Amber - Indicates port operating in O-Ring

mode (per port)

10/100TX Port Indicator: Green for port Link/Act. (per port)

Power Input power: 12~ 48 VDC Connector Type: Waterproof M12 Power consumption (typical): 3W Overload current protection: present

Reverse polarity protection: present Physical Characteristic Dimension (W x D x H): 88.9 (W) x 40 (D) x 178.2 (H)mm

Dimension (W x D x H): 88.9 (W) x 40 (D) x 178.2 (H)mm Weight: 375g Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-15 (Surge), EN61000-4-6 (CS), EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6

Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty

Warranty period: 5 years





#07897 Net Price: Unit: pcs

### Managed switch, 8x 10/100 M12 + 2x 10/100/1000 M12 Bypass (ORing TES-3082GT-M12-BP1)

ORing's TransporterTM series managed Ethernet switches Orning's transported in section and age to enter the success are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TES-3082GT-M12-BP1 is a managed Redundant Ring Ethernet switch with 8x10/100Base-T(X) and 2x10/100/1000Base-T(X) ports which is specifically designed for the toughest and fully compliant with EN50155 requirement. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-Chain and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology Another Open-Ring technology is also supported which can applied for other vendor's proprietary ring.
TES-3082GT-M12-BP1 EN50155 Ethernet switch use M12

connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. TES-3082GT-M12-BP1 can be managed centralized and

convenient by a powerful windows utility  $\sim$  Open-Vision. In addition, the wide operating temperature range from -40 oC to 70oC can satisfy most of operating environment.
Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed Ethernet application.

10/100 Base-T(X) Bypass Ethernet Auto MDI/MDIX: 8 10/100/1000 Base-T(X) Bypass Ethernet Auto MDI/MDIX: 2 Connector Type: Waterproof M12

Connector Type: Waterproof M12
Technology
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u
for 100Base-TX, IEEE 802.3ab for 1000Base-T, IEEE 802.3x
for Flow control, IEEE 802.3ad for LACP (Link Aggregation
Control Protocol), IEEE 802.10 for STP (Spanning Tree
Protocol), IEEE 802.1p for COS (Class of Service), IEEE
802.10 for VLAN Tagging, IEEE 802.1w for RSTP (Rapid
Spanning Tree Protocol), IEEE 802.1x for MSTP (Multiple
Spanning Tree Protocol), IEEE 802.1x for Authentication,
IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward

Priority Queues: 4
Processing: Store-and-Forward
Switching bandwidth: 5.6Gbps
Max. Number of Available VLANs: 4096
IGMP multicast groups: 1024
Port rate limiting: User Define
Security Features: Enable/disable ports, MAC based port
security, Port based network access control (802.1x), VLAN
(802.1Q) to segregate and secure network traffic, Supports
Q-in-Q VLAN for performance & security to expand the VLAN
space, Radius centralized password management, SNMP
v1N2c/v3 encryoted authentication and access security space, Radius centralized password management, SNMP v1/v2c/v3 encrypted authentication and access security Software Features: STP/RSTP/MSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics, Port monitoring, Port security Network Redundancy: O-Ring, Open-Ring, Fast recovery, STP, RSTP, MSTP

LED Indicators
Power Indicator: Green - Power LED x 2
Ready / Ring Master Indicator: Green - Indicate system
operated in O-Ring Master mode
O-Ring Indicator: Amber - Indicates port operating in O-Ring

mode (per port)
10/100TX Port Indicator: Green for port Link/Act. (per port)
10/100/1000TX Port Indicator: Green for Link/Act. Amber for 100Mbps indicator

Relay: Relay output to carry capacity of 3A at 24VDC on M12 connector (5-pin A-coding)

Power
Input power: Dual 12–48VDC
Connector Type: Waterproof M23
Power consumption (typical): 11W
Overload current protection: present
Reverse polarity protection: present
Physical Characteristic Dimension (W x D x H): 170mm x 75mm x 196mm

Weight: 1338 g Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Huminity: 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60062-2-27

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1

Warranty Warranty period: 5 years



#07852

Net Price: Unit: pcs

#### Managed switch, 8x 10/100 RJ-45 + 2 slide-in SFP slots / RJ-45, O/Open-Ring <10ms (ORing IES-3082GC)

IES-3082GC is managed redundant ring Ethernet switch with 8x10/100Base-T(X) ports and 2xGigabit combo ports which is compliant with EN50155 request. The Ethernet switch is designed for industrial applications, such as rolling stock, vehicle, and railway applications. With completely support of Ethernet redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 7 1000 COMBO with SFP: 3 RS-232 Serial Console Port: RS-232 in RJ45 connector with

console cable (9600bps 8 N 1) Technology

Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X) and 100Base-FX, IEEE 802.3x for Flow
control, IEEE 802.1D for STP (Spanning Tree Protocol), IEEE
802.1p for COS (Class of Service), IEEE 802.1Q for VLAN
Tagging, IEEE 802.1w for RSTP (Rapid Spanning Tree
Protocol), IEEE 802.1X for Authentication, IEEE 802.3ad for
LACP (Link Aggregation Control Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching latency: 7 us

Processing: Store-and-Forward Switching latency: 7 μs Switching bandwidth: 5.6 Gbps Max. Number of Available VLANs: 4096 IGMP multicast groups: 1024 Port rate limiting: User Define Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security authentication and access security

Software Features: STP/RSTP (IEEE 802.1D/w), Redundant Ring (0-Ring) with recovery time less than 10ms over 250 units, TOS/Diffserv supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging and GVRP supported, IGMP Snooping for multicast filtering, Port configuration, Port status, Port statistics, Port monitoring, Port security, Modbus/TCP
Network Redundancy: STP, RSTP, O-Ring, Open-Ring,
O-RSTP, O-Chain, MRP

LED Indicators

Power / Ready indicator: Green - Ready LED x 3
Ring Master indicator: Green - indicates system operated in

O-Ring Master mode
Fault indicator: Amber - Indicates unexpected event occurred 10/100TX RJ45 port indicator: Green for port Link/Act, Amber for Duplex/Collision 10/100/1000TX RJ45 port indicator: Green for port Link/Act, Amber for 100Mbps

Fiber port indicator: Green for port Link/Act

Relay: Relay output to carry capacity of 1A at 24VDC

Input power: Dual DC inputs. 12÷48VDC on 6-pin terminal Power consumption (typical): 8.5W

Overload current protection: present Reverse polarity protection: present Physical Characteristic

Enclosure: IP-30
Dimension (W x D x H): 74.3mm x 109.2mm x 153.6mm
Weight: 1140g
Environmental

Environmental
Storage Temperature: -40+85°C(-40+185°F)
Operating Temperature: -40+70°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A, EN50155
(EN50121-3-2, EN50121-4, EN55011)
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6

Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty

Warranty period: 5 years



Net Price: 2 610,00 EUR Unit: pcs

# Managed switch, 8x 10/100/1000 M12 PoE + 4x 10/100/1000 M12, Bypass (ORing TRGPS-9084GT-M12X-BP2-MV)

TRGPS-9084GT-M12X-BP2-MV is a Gigabit managed redundant ring Ethernet switch with 8x10/100/1000Base-T(X) P.S.E. and 4x10/100/1000Base-T(X), M12 connector and 2xbypass included. These switches support Ethernet Redundancy protocol, O-Ring (recovery time < 30ms) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology.

And TRGPS-9084GT-M12X-BP2-MV supports wide operating temperature from -40°C to 75°C.
TRGPS-9084GT-M12X-BP2-MV can also be managed

centralized and convenient by Open-Vision, as well as the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

Physical Ports 10/100/1000 Base-T(X) Auto MDI/MDIX ports: 8 (bypass

function included by last 4 ports)
RS-232 Serial Console Port: RS-232 in 5-pin M12 connector with console cable. 115200bps, 8, N, 1

with console cable. 115200bps, 8, N, 1
Technology
Ethernet Standards: IEEE 802.3i for 10Base-T, IEEE 802.3u
for 100Base-TX, IEEE 802.3ab for 1000Base-T, IEEE 802.3x
for Flow control, IEEE 802.3ab for LACP (Link Aggregation
Control Protocol), IEEE 802.1p for COS (Class of Service),
IEEE 802.1Q for VLAN Tagging, IEEE 802.1w for RSTP
(Rapid Spanning Tree Protocol), IEEE 802.1x for
MSTP
(Multiple Spanning Tree Protocol), IEEE 802.1x for
Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery
Protocol) Protocol)

Protocol)
MAC Table: 8192 MAC addresses
Flash Memory: 128Mbits
DRAM Size: 1Gbits
Jumbo frame: Up to 9.6K Bytes
Priority Queues: 8

Priority Queues: 8
Processing: Store-and-Forward
Switch Properties
Switching latency: 7 us
Switching bandwidth: 24 Gbps
Max. Number of Available VLANs: 4094
VLAN ID range: VID 1 to 4094
IGMP multicast groups: 128 for each VLAN

VLAN ID range: VID 1 to 4094
IGMP multicast groups: 128 for each VLAN
Port rate limiting: User Define
Security Featues: Device Binding security feature,
Enable/disable ports, MAC based port security, Port based
network access control (802.1x), MAC-based authentication
(802.1x), VLAN (802.1Q) to segregate and secure network
traffic, Radius centralized password management, SNMPv3
encrypted authentication and access security, Https / SSH
enhance network security, Web and CLI authentication and
authorization, IP source guard
Software Features: IEEE 802.1D Bridge, auto MAC address
learning/aging and MAC address (static), MSTP (RSTP/STP
compatible), Redundant Ring (O-Ring) with recovery time
less than 30ms, TOS/Diffserv supported, Quality of Service
(802.1p) for real-time traffic, VLAN (802.1Q) with VLAN
tagging, Guest VLAN, IGMP v2/v3 Snooping,
Application-based QoS management, DOS/DDOS auto
prevention, Port configuration, status, statistics, monitoring,
security, DHCP Server/Client/Relay
SMTP Client, NTP server
Network Redundancy: O-Ring, O-Chain, MSTP (RSTP/STP

Network Redundancy: O-Ring, O-Chain, MSTP (RSTP/STP compatible)
LED Indicators

LEU Indicators
Power Indicator (PWR): Green - Power LED x 1
Ring Master Indicator (R.M.): Green - Indicates that the
system is operating in O-Ring Master mode
O-Ring Indicator (Ring): Green - Indicates that the system
operating in O-Ring mode, Green Blinking - Indicates that the
Ring is broken.

Fault Indicator (Fault): Amber - Indicate unexpected event occurred 10/100/1000Base-T(X) M12 P.S.E. Port Indicator:Top Green

10/100/100/base-1(X) M12 P-S.E. Port Indicator: lop Green LED for Ethernet speed indicator- Green LED for 1000Mbps, Amber for 100Mbps, Middle Green LED for PoE enable indicator, Bottom dual color LED for port Link/Act indicator 10/100/1000Base-T(X) M12 Port Indicator: Top dual color LED for Ethernet speed indicator- Green LED for 1000Mbps, Amber for 100Mbps, Bottom Green LED for Link/Act indicator Fault contact

Relay: Relay output to carry capacity of 3A at 30VDC on M12 connector (5-pin A-coding)
Power

Power
Redundant Input Power: 72/110 (50.4-137.5) VDC on 4-pin
S-coded M12 connector
PoE Output Power: 60W
Power consumption (typical): 20W (not include PoE output)
Overload current protection: present
Reverse Polarity Protection: present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 438 x 250 x 44 mm
Weight: 4550 g
Environmental

Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+75°C (-40+167°F) Operating Humidity: 5%+95% Non-condensing

Regulatory approvals EMC: CE EMC (EN 55024, EN 55032), FCC Part 15 B, EN50155 (EN50121-3-2, EN55011) EMI: EN 55032, CISPR32, EN 6100-3-2, EN 6100-3-3,FCC

Free Fall: IEC60068-2-31 Safety: EN60950-1 Other: EN50155 MTBF: 298,128 hours Warranty Warranty period: 5 years



#08414 Net Price: Unit: pcs

# Smart switch, 8x 10/100 M12 Bypass, O-Ring <10ms (ORing TES-3080-M12-BP2)

The TES-3080-M12-BP2 is a managed Redundant Ring Ethernet switch with 8x10/100Base-T(X) ports which is compliant with EN50155 request. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-RSTP and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. It is specifically designed for the toughest industrial environments. TES-3080-M12-BP2 EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. Another Open-Ring technology is also supported which can applied for other vendor's proprietary ring. TES-1080-M12-BP2 included dual bypass ports, These bypass ports protect the network from failures and Network

maintenance by ensuring network integrity during power loss. Each of these bypass ports includes Network ports and Monitor ports. The Network ports are used for connection to main-network connections and provide protection mechanism, and the Monitor ports are used for down-link local networking device. When the power is on, the operating mode of the Bypass ports is set to Normal, and the local networking device is connected with main-network. When power failure occurs, the Bypass ports is swiftly set to bypass mode to isolate the main-network from the local networking

Physical Ports (Built-in 2 sets of bypass Ethernet Auto MDI/MDIX: 8 (Built-in 2 sets of bypass ports) Connector Type: Waterproof M12

Connector Type: Waterproof M12
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D
for STP (Spanning Tree Protocol), IEEE 802.1w for RSTP
(Rapid Spanning Tree Protocol), IEEE 802.1AB for LLDP
(Link Layer Discovery Protocol)
MAC Table: 8192 MAC addresses

MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching bandwidth: 1.6 Gbps
VLAN: Port Based
Security Features: Enable/disable ports, VLAN to segregate
and secure network traffic, SNMP v3 encrypted authentication

and secure network traffic, SNMP vs encrypted authentication and access security
Software Features: STP/RSTP/MSTP (IEEE 802.1D/w),
Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics,
Port monitoring, Port security
Network Redundancy: O-Ring, Open-Ring, Fast recovery,
STP RSTP MSTP

STP, RSTP, MSTP

Power Indicator: Green - Power LED x 2. Indicates power

Ready / Ring Master Indicator: Green - Indicate system ready and Ring master mode

O-Ring Indicator: Green- Indicates port operating in O-Ring

10/100TX Port Indicator: Green for port Link/Act. Amber for

Collision/Duplex indicator

Input power: Dual 12~48VDC on 5-pin M23 connector

Connector Type: Waterproof M12 Power consumption (typical): 5W Overload current protection: present

Reverse polarity protection: present Physical Characteristic Dimension (W x D x H): 125mm x 65mm x 196mm

Weight: 896 g Environmental

Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+158°F)
Operating Humidity: 5%+95% Non-condensing

Operating Hullmoly, 5%-95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32

Free Fall: IEC60068-2-32

Vibration: IEC60068-2-6 Safety: EN60950-1

Warranty

Warranty period: 5 years

#08422 Net Price: Call Unit: pcs

### Smart switch, 8x 10/100 M12, O-Ring <10ms (ORing TES-3080-M12)

ORing's TransporterTM series managed Ethernet switches are designed for industrial applications, such as rolling stock,

vehicle, and railway applications. The TES-3080-M12 is a managed Redundant Ring Ethernet switch with 8x10/100Base-T(X) ports which is compliant with EN50155 request. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms ove 250 units of connection), Open-Ring, O-RSTP and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. It is specifically designed for the toughest industrial environments

TES-3080-M12 EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. Another Open-Ring technology is also supported which can applied for other vendor's proprietary ring.

TES-3080-M12 can be managed centralized and convenient by a powerful windows utility ~ Open-Vision. In addition, the wide operating temperature range from -40°C to 70°C can satisfy most of operating environment.

Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed Ethernet application.

Physical Ports
10/100 Base-T(X) Ports w/Auto MDI/MDIX: 8
Connector Type: Waterproof M12

Connector Type: Waterproof M12
Technology
Ethernet Standards: IEEE 802.3 for 10BaseT, IEEE 802.3u
for 100BaseT(X), IEEE 802.3x for Flow control, IEEE 802.1D
for STP (Spanning Tree Protocol), IEEE 802.1w for RSTP
(Rapid Spanning Tree Protocol), IEEE 802.1AB for LLDP
(Link Layer Discovery Protocol)
MAC Table: 8192 MAC addresses
Priority Queues: 4
Processing: Store-and-Forward
Switching bandwidth: 1.6 Gbps

Switching bandwidth: 1.6 Gbps VLAN: Port Based

Security Features: Enable/disable ports, VLAN to segregate and secure network traffic, SNMP v3 encrypted authentication

and secure network traffic, SNMP vs encrypted authentication and access security
Software Features: STP/RSTP/MSTP (IEEE 802.1D/w),
Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics,
Port monitoring, Port security

Network Redundancy: O-Ring, Open-Ring, Fast recovery, STP. RSTP. MSTP

Power Indicator: Green - Power LED x 2, Indicates power

input
Ready / Ring Master Indicator: Green - Indicate system ready and Ring master mode

O-Ring Indicator: Green- Indicates port operating in O-Ring

10/100TX Port Indicator: Green for port Link/Act. , Amber for Collision/Duplex indicator

Input power: Dual 12~48VDC Connector Type: Waterproof M12 Power consumption (typical): 5W Overload current protection: present Reverse polarity protection: present Physical Characteristic Dimension (W x D x H): 125mm x 65mm x 196mm

Weight: 896 g Environmental

Environmental
Storage Temperature: -40+85°C (-40+185°F)
Operating Temperature: -40+70°C (-40+188°F)
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A, EN50155
(EN50121-3-2, EN55011, EN50121-4)
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),
EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32

Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty Warranty period: 5 years





#07939 Net Price: Unit: pcs

# Managed switch, 16x 10/100 M12 + 2x 10/100/1000 M12 Bypass (ORing TES-3162GT-M12-BP1)

ORing's TransporterTM series managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TES-3082GT-M12-BP1 is a managed Redundant Ring Ethernet switch with 8x10/100Base-T(X) and 2x10/100/1000Base-T(X) ports which is specifically designed for the toughest and fully compliant with EN50155 requirement. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-Chain and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. Another Open-Ring technology is also supported which can applied for other vendor's proprietary ring.
TES-3082GT-M12-BP1 EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock.
TES-3082GT-M12-BP1 can be managed centralized and convenient by a powerful windows utility ~ Open-Vision. In addition, the wide operating temperature range from -40 oC to 70oC can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed Ethernet application.

Physical Ports

Physical Ports
10/100 Base-T(X) Bypass Ethernet Auto MDI/MDIX: 16
10/100/1000 Base-T(X) Bypass Ethernet Auto MDI/MDIX: 2
Connector Type: Waterproof M12
Technology
Ethernet Standards: IEEE 802.3 for 10Base-T, IEEE 802.3u

Ethernet Štandards: IEEE 802.3 for 10Base-T, IEEE 802.3 u for 100Base-TX, IEEE 802.3ab for 1000Base-T, IEEE 802.3x for Flow control, IEEE 802.3ad for LACP (Link Aggregation Control Protocol), IEEE 802.1D for STP (Spanning Tree Protocol), IEEE 802.1p for COS (Class of Service), IEEE 802.1A for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol), IEEE 802.1x for MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x for Authentication, IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) MAC Table: 8192 MAC addresses Priority Queues: 4
Processing: Store-and-Forward Switching bandwidth: 7.2Gbps
Max. Number of Available VLANs: 4096 IGMP multicast groups: 1024

IGMP multicast groups: 1024 Port rate limiting: User Define

Port rate limiting. User Define Security Features: Enable/disable ports, MAC based port security, Port based network access control (802.1x), VLAN (802.1Q) to segregate and secure network traffic, Supports Q-in-Q VLAN for performance & security to expand the VLAN space, Radius centralized password management, SNMP v1/v2c/v3 encrypted authentication and access security Software Features: STP/RSTP/MSTP (IEEE 802.1D/w), Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units, Port configuration, Port status, Port statistics, Port monitoring, Port security Network Redundancy: O-Ring, Open-Ring, Fast recovery, STP, RSTP, MSTP

LED Indicators

Power Indicator: Green - Power LED x 2
Ready / Ring Master Indicator: Green - Indicate system operated in O-Ring Master mode

operated in O-Ring Master mode
O-Ring Indicator: Amber - Indicates port operating in O-Ring
mode (per port)
10/100TX Port Indicator: Green for port Link/Act. (per port)
10/100/1000TX Port Indicator: Green for Link/Act. Amber for
100Mbps indicator
Relay: Relay output to carry capacity of 3A at 24VDC on M12
connector (5-pin A-coding)
Power

Input power: Dual 12~48VDC
Connector Type: Waterproof M23
Power consumption (typical): 12.48W
Overload current protection: present Reverse polarity protection: present Physical Characteristic Dimension (W x D x H): 260mm x 91,3mm x 216mm

Dimension (W x D x H): 260mm x 91,3mm x 216mm Weight: 2020 g Environmental Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (-40+158°F) Operating Humidity: 5%+95% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8 (ESD), EN61000-4-10 (ESD), EN61000-4-8 (ESD), EN6

Vibration: IEC60068-2-6

Safety: EN60950-1 Warranty

Warranty period: 5 years



#08188

Net Price: Unit: pcs

#### Wireless router 3G, 2x 10/100 RJ-45 (WAN + LAN) + 1x 802.11a/b/g (WLAN) + 1x USB (ORing TAR-3120-M12)

ORing's Transporter series cellular VPN router is designed for industrial and rolling stock wireless applications, such as vehicle, and railway applications.

TAR-3120-M12 is a reliable Dual-RF IEEE802.11a/b/g and IEEE 802.11b/g cellular VPN router with 2 ports LAN which is fully compliant with EN50155 certification. It supports 802.1X and MAC filter for security control. It can be configured to operate in 3 modes of routing function: Dynamic/Static IP route, PPPoE authentication, and Cellular Modem dial-up. Users can set up WLAN environment to fulfill demands of various applications rapidly by dialing up cellular modem.

TAR-3120-M12 EN50155 cellular VPN router use M-series connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. TAR-3120-M12 provides dual RF wireless interfaces, which can provide IEEE 802.11 a/b/g and IEEE 802.11 b/g dual band wireless communication and can be applied to fulfill any demands of wireless applications. TAR-3120-M12 provides dual Ethernet ports in switch mode, so that you can use Daisy Chain to reduce the usage of Ethernet switch ports.

Physical Ports 1...) Ports: RJ45 Auto MDI/MDIX 2 (M12 connector - D coding)
WLAN Interface

WAN Connection Type: Static/Dynamic IP, PPPoE, 3G

WAN Connection Type: Static/Dynamic IP, PPPGE, 3G Modem dial-up
Antenna and Connector: 2 x 2 dBi (b/g mode) / 3dBi (a mode) on Reverse SMA connector, 2 x 2 dBi (Cellular modem) on Reverse SMA connector
Radio Frequency Type: DSSS, OFDM

Modulation .

Modulation
IEEE 802.11a: OFDM with BPSK, QPSK, 16QAM, 64QAM
IEEE 802.11b: CCK, DQPSK, DBPSK
IEEE 802.11g: OFDM with BPSK, QPSK, 16QAM, 64QAM
Frequency Band: America / FCC 2.412~2.462 GHz (11
channels), 5.15 to 5.825 GHz (13 channels), Europe CE /
ETSI 2.412~2.472 Ghz (13 channels), 5.15 to 5.724 GHz (19

ETSI 2.412~2.472 Ghz (13 channels), 5.15 to 5.724 GH. channels)
Transmission Rate
IEEE 802.11b: 1/2/5.5/11 Mbps
IEEE 802.11a/g: 6/9/12/18/24/36/48/54 Mbps
Transmit Power: IEEE802.11a/b/g 20dBm max
Receiver Sensitivity
IEEE 802.11a: -77dBm+/-2.0dB @ 54Mbps PER< 10%
IEEE 802.11b: -86dBm+/-1.5dB @ 11Mbps PER< 8%;
IEEE 802.11g: -78dBm+/-1.5dB @ 54Mbps PER< 10%
IEEE 802.11g: -8dBm+/-1.5dB @ 54Mbps PER< 10%
IEEE 802.11g: -98dBm+/-1.5dB @ 64Mbps PER< WPA-PSK: (256-bit key pre-shared key supported) 802.1X: Authentication supported TKIP: encryption

Wireless Security: SSID broadcast disable

LED Indicators

Power Indicator: Green for Power indicator

RJ45 Port Indicator: Green for port Link/ Act at 100Mbps. Amber for port Link/ Act at 10Mbps. WLAN LEDs: Green for WLAN Link/ Act Cellular modem LED: Green for Cellular modem Link/ Act

Fault Contact
Relay: Relay output to carry capacity of 3A at 24VDC

Power
Redundant Input Power: Dual DC inputs. 12~48VDC on M23
connector (24VDC typ)
Power Consumption: 9.6 W
Overload Current Protection: Present
Reverse Polarity Protection: Present
Physical Characteristics
Enclosure: IP-40
Dimensions: (W x D x H) 125(W) x 65(D) x 196(H) mm (4.92 x 2.56 x 7.72 inch.)
Weight (07: 1050 a

x 2.56 x 7.72 incn.)
Weight (g): 1050 g
Environmental
Storage Temperature: -40 to 85°C (-40 to 185°F)
Operating Temperature: -20 to 70°C (-4 to 158°F)
Operating Humidity: 5% to 95% Non-condensing
EMI: FCC Part 15, CISPR (EN55022) class A, EN50155
(FINE)(21.2.2)

EMI: F-CC PART 15, CISPR (ENSOUZZ) class A, ENSUTS (ENS0121-3-2) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-7, EN61373 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6, EN61373

Cooling: EN60068-2-1 Dry Heat: EN60068-2-2 Safety: EN60950-1 Warranty: 3 years





Net Price: Unit: pcs

# Wireless router 4G, 2x 10/100/1000 M12 (LAN) + 1x 802.11b/a/g/n (WLAN) (ORing TGAR-2062+-4GS-M12)

ORing's TransporterTM series cellular router is designed for industrial and rolling stock wireless applications, such as vehicle, and railway applications. TGAR-2062-4G-M12 is reliable IEEE802.11 a/b/g/n router with 2 ports LAN which is fully compliant with EN50155 certification. It supports 802.1X and MAC filter for security control. It could be configured to operate in 3 modes of routing function: Dynamic/Static IP route, PPPoE authentication, and Cellular modem dial up Users can set up WLAN environment to fulfill demands of various applications rapidly by dialing up cellular modem. TGAR-2062-4G-M12 EN50155 cellular VPN router use M-series connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. In addition, TGAR-2062+-4G-M12 also provides P.D. feature on ETH2 which is fully compliant with IEEE802.3af PoE P.D. specification. Therefore, TGAR-2062-4G-M12 is one of the most reliable choices for rolling stock applications on the wireless network.

Physical Ports
10/100/1000 Base-T(X) Ports in M-12 Auto MDI/MDIX: 2
DIDO port in M12 (5-pin A-coding): 2 (DI x 4 and DO x 4)
SIM Card Slot: 2

RS-232 Console port in M12: 115200, 8 ,N ,1

WLAN interface Antenna Connector: 2 x External reverse SMA-type antenna

Radio Frequency Type: DSSS, OFDM Modulation IEEE802.11a: OFDM with BPSK, QPSK, QAM,

Modulation IEEE802.11b: CCK, DQPSK, DBPSK Modulation IEEE802.11g: OFDM with BPSK, QPSK, 16QAM,

64QAM Modulation IEEE802.11n: BPSK, QPSK, 16QAM, 64QAM Frequency Band: America/FCC 2.412-2.462 GHz (11 channels), 5.180-5.240 GHz & 5.745-5.825 GHz (9 channels), Europe CE/ETSI 2.412-2.472 Ghz (13 channels), 5.180-5.240 GHz (4 channels)
Transmission Rate: IEEE802.11b 1/2/5.5/11 Mbps, IEEE802.11g 6/9/12/18/24/36/48/54 Mbps, IEEE802.11n UP to 300 Mbps
Transmit Power:802.11a 12dBm +/- 1.5dBm@54Mbps, 802.11b 17dBm +/- 1.5dBm@11Mbps, 802.11a 16dBm +/-

Transmit Power:802.11a 12dBm +/- 1.5dBm@54Mbps, 802.11b 17dBm +/- 1.5dBm@11Mbps, 802.11g 16dBm +/- 1.5dBm@54Mbps, 802.11g 16dBm +/- 1.5dBm @MCS7, 802.11gn HT40 14dBm +/- 1.5dBm @MCS7, 802.11gn HT40 14dBm +/- 1.5dBm @MCS7, 802.11an HT20 -74dBm +/- 2dBm@MCS7, 802.11an HT40 -71dBm +/- 2dBm@MCS7

Receiver Sensitivity: 802.11b -85dBm +/- 2dBm@11Mbps, 802.11g -76dBm +/- 2dBm@54Mbps, 802.11gn HT20 -75dBm +/- 2dBm@MCS7, 802.11gn HT40 -72dBm +/- 2dBm@MCS7

Encryption Security: WEP (64-bit, 128-bit key), WPAWPA2

PSK - TKIP and AFS encryption (802.11i) 802.13/RADIUS

Zobmigimus / Encryption Security: WEP (64-bit, 128-bit key), WPAWPA2 PSK - TKIP and AES encryption (802.11i), 802.13/RADIUS Authentication supported, WPAPSK (256-bit key pre-shared key supported), TKIP encryption Wireless Security: SSID broadcast disable Cellular Interface Cellular Interface Cellular Standard: GSM / GPRS/ EGPRS/EDGE / WCDMA /HSDPA / HSUPA/HSPA+ /LTE Antenna Connector: 2 x SMA Female Band Option: America(US) LTE - 700/1700/2100/MHz UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+ - 800/850/1900/2100/MHz, GSM/GPRS/EDGE - 850/990/1800/1900MHz, Europe(EU) LTE - 800/900/1800/1900MHz, CSM/GPRS/EDGE - 900/1800/1900MHz, GSM/GPRS/EDGE - 900/1800/1900MHz, CSM/GPRS/EDGE - 900/1800/1900MHz

LED Indicators

Power Indicators: 2 x LEDs, (PW1) Green On - Power is on, (PW2) Green On - Power is on or power by PoE 100/1000Base-T(X) M-12 Port Indicator: 2 x LEDs, Green for

100/1000Base-I (X) M-12 Port Indicator: 2 x LEDs, Green port Link/ Act WLAN LEDs: 1 x LED, Green for WLAN Link/ Act WAN LED: 2 x LED, Green for Cellular modem Link/ Act Fault: 1 x LED, Red for Ethernet link down or power down indicator Fault Contact

Relay: Relay output to carry capacity of 1A at 24VDC Power Redundant Input Power: Dual DC inputs. 12~48 VDC on Redundant Input Power: Dual DC inputs. 12~48 VDC o 5-pin M23 connector (24 VDC Typ.)
Power consumption (typical): 15W
Overload Current Protection: Present
Reverse Polarity Protection: Present
Physical Characteristic
Enclosure: IP-40
Dimension (W x D x H): 125.6mm x 65mm x 196.1mm
Weight: 1030g
Environmental
Storage Temperature: -40+85°C (-40+185°F)

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -25+70°C (-13+158°F) Operating Humidity: 5%+95% Non-condensing

Operating Hullminy: 376-759 76 INDITECTION REPORTS IN PROPERTY OF INDITECTION REPORTS IN PROPERTY OF INDITECTION REPORTS END 121-3-2, EN55011, EN50121-4) EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),EN61000-4-8, EN61000-4-11

Dry Heat: EN60068-2-2 Safety: EN60950-1 Warranty period: 5 years

Wireless Devices



#06531 Net Price: 264,00 EUR Unit: pcs

## Wireless access point, 2x 10/100/1000 RJ-45 (LAN + PoE PD) + 1x 802.11b/g/n (WLAN) (ORing

IAP-420 / IAP-420+ series are reliable 802.11 b/g/n WLAN Access Point with 2 ports LAN. It supports 802.1X and MAC filters for security control. It can be configured to operate in AP/Bridge/Repeater/AP-Client mode. You are able to AP/Bioge/Repeater/AP-Client friode. You are able to configure IAP-420 / IAP-420+ series by WEB interface via LAN port or WLAN interface. In addition, IAP-420+ also provides P.D. feature on ETH1 which is fully compliant with IEEE802.3af PoE P.D. specification. Therefore, IAP-420 / IAP-420+ series are one of the best communication solutions for wireless applications on the industrial network.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 2 (one port

with PoE) PoE Present at ETH, Fully compliant with IEEE 802.3af Power Device specification, Over load and short circuit protection, Isolation Voltage 1000 VDC min., Isolation Resistance  $108 \text{M}\Omega$  min

WLAN interface
Operating Mode: AP/Bridge/Bridge/AP-Client
Antenna Connector: 1 x External reverse SMA-type antenna

connector
Radio Frequency Type: DSSS, OFDM
Modulation IEEE802.11b: CCK, DQPSK, DBPSK Modulation IEEE002.11D: CCK, DQPSK, DBPSK Modulation IEEE802.11g/n: OFDM with BPSK, QPSK, 16QAM, 64QAM

Trequency Band: 2.412-2.472 Ghz (13 channels)
Transmission Rate: IEEE802.11b 1/2/5.5/11 Mbps,
IEEE802.11g 6/9/12/18/24/36/48/54 Mbps, IEEE802.11n UP

IEEE80Z.11g 6/9/12/18/24/36/46/54 Mups, IEEE0VZ.11II Or to 150 Mbps
Transmit Power: 802.11b 19dBm +/- 1.5dBm@11Mbps, 802.11g 17dBm +/- 1.5dBm@54Mbps, 802.11g HT20
16.5dBm +/- 1.5dBm @MCS7, 802.11n HT40 14.5dBm +/- 1.5dBm @MCS7
Receiver Sensitivity: 802.11b -90dBm +/- 2dBm@1Mbps, 802.11g -72dBm +/- 2dBm@54Mbps, 802.11n HT20 -68dBm

+/- 2dBm@MCS7
Encryption Security: WEP (64-bit ,128-bit key), WPA/WPA2
PSK - TKIP and AES encryption (802.11i), 802.1X/RADIUS

Authentication supported Wireless Security: SSID broadcast disable Protocol Support: ARP, BOOTP, DHCP, DNS, HTTPs, IP, ICMP, SNTP, TCP, UDP, RADIUS, SNMP, STP (IEEE

LED Indicators

Power Indicator: LED x 3, PWR 1, 2, (PoE), Green On-Power is on and functioning Normally.

10/100Base-T(X) RJ45 Port Indicator: 2 x LEDs, Green for

port Link/ Act WLAN LEDs:LED, Green (blinking) for WLAN

Redundant Input Power: Dual DC inputs. 12~48VDC on 4-pin terminal block
Power consumption (typical): 4W

Overload Current Protection: Present
Reverse Polarity Protection: Present
Physical Characteristic
Enclosure: IP-30
Dimension (W x D x H): 41(W)x81(D)x95(H) mm
Weight: 292g

Environmental

Environmental
Storage Temperature: -40+85°C
Operating Temperature: -10+60°C
Operating Humidity: 5%+95% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-6
(EFT), EN61000-4-5 (Surge), EN61000-4-6
(CS),EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6
Safety: EN60950-1
Warranty

Warranty Warranty period: 5 years

#06535 Net Price: 778,00 EUR Unit: pcs

# Wireless router 4G LTE, 2x 10/100 RJ-45 (LAN) + 1x 802.11b/g/n (WLAN) + 1x RS-232/422/485 (ORing IMG-4312-4G)

IMG-4312-4G is an innovative 1 port RS-232/422/485 and 4G LTE cellular Gateway with 2 port 10/100Base-T(X) port. IMG-4312-4G also provide IEEE802.11 b/g/n wifi interface which have 150Mbps link speed. It could be configured to connect to the internet by dialing up 2G/3.5G/LTE cellular modem to fulfill demands of various applications rapidly a. In addition, IMG-4312-4G can also transfer data into 5 host PCs simultaneously for backup purposes. In addition, IMG-4312+4G also provides P.D. feature on ETH1 p which is fully compliant with IEEE802.3af PoE P.D. specification Therefore, IMG-4312-4G is one of the best solutions for applications of wireless and serial communication.

Physical Ports

10/100 Base-T(X) Ports RJ-45 Auto MDI/MDIX: 2 SIM Card Slot: 1 (Only Mini SIM without adapter) WLAN interface

Antenna Connector: 1 x RP-SMA Female Modulation IEEE802.11b: CCK, DQPSK, DBPSK Modulation IEEE802.11g/n: OFDM with BPSK, QPSK, 16QAM, 64QAM

Frequency Band: 2.412~2.472 Ghz Transmission Rate: IEEE802.11b 1/2/5.5/11 Mbps, IEEE802.11g 6/9/12/18/24/36/48/54 Mbps, IEEE802.11n UP to 150 Mbps Transmit Power: 802.11b 19dBm +/- 1.5dBm@11Mbps,

802.11g 17dBm +/- 1.5dBm@54Mbps, 802.11gn HT20 16.5dBm +/- 1.5dBm @MCS7, 802.11n HT40 14.5dBm +/-.5dBm @MCS7

Receiver Sensitivity: 802.11b -90dBm +/- 2dBm@1Mbps, 802.11g -72dBm +/- 2dBm@54Mbps, 802.11n HT20 -68dBm +/- 2dBm@MCS7

Encryption Security: WEP (64-bit ,128-bit key), WPA/WPA2 PSK - TKIP and AES encryption (802.11i), 802.1X/RADIUS Authentication supported

Cellular Interface

Antenna Connector: 2 x RP-SMA Female Cellular Standard: GSM/GPRS/EGPRS/EDGE/WCDMA/HSDPA/HSUPA/LTE

Band Option: Europe(EU grade) LTE -2100(B1)/1800(B3)/2600(B7)/900(B8)/800(B2) MHz, UMTS/HSDPA/HSUPA/HSPA-F/DC-HSPA+ -800/850/900/1900/2100 MHz, GSM/GPRS/EDGE -850/900/1800/1900 MHz

Serial Ports

Serial Ports Connector: DB9 x1 Operation Mode: RS-232, RS-422, RS-485 4/2-wire, can be configured by DS-Tool Serial Baud Rate: 110 bps to 460.8 Kbps

Data Bits: 7, 8
Parity: odd, even, none, mark, space

Parity: odd, even, none, mark, space Stop Bits: 1, 1.5, 2 RS-232: TxD,RxD,RTS,CTS,DTR,DSR,DCD,RI,GND RS-422: Tx+,Tx-,Rx+,Rx-,GND RS-485 (4-wire): Tx+,Tx-,Rx+,Rx-,GND RS-485 (2-wire): Data+,Data-,GND Flow Control: XON/XOFF, RTS/CTS, DTR/DSR Network Protocol: ICMP, IP, TCP, UDP, DHCP, BOOTP, DNS, SNMP V1/V2c, HTTPS

LED Indicators

Power Indicators 3 x LEDs, Green On - Power is on 10/100TX RJ45 port indicator: 2 x LEDs, Green for port Link/Act at 100Mbps.

Serial TX / RX LEDs: Red - Serial port is receiving data,

Green - Serial port is transmitting data
WIFI LEDs: 1 x LED, Green for WiFi Link/ Act
WAN LED: 1 x LED, Green for Cellular modem Link/ Act

Power Redundant Input Power: Dual DC inputs. 12~48 VDC on 6-pin terminal block

Power consumption (typical): 3W Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 45(W)x80.6(D)x95(H) mm

Environmental

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -10+60°C (14+130°F) Operating Humidity: 5%+95% Non-condensing

Operating Huminus: 5%-59% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27

Free Fall: IEC60068-2-31 Vibration: IEC60068-2-6 Safety: EN60950-1 Warranty

Warranty period: 5 years

Serial Device Servers



#### #06526

Net Price: 194 00 FUR Unit: pcs

### Device server, 1x RS-232/422/485 + 2x 10/100 RJ-45 (LAN) (ORing IDS-312L)

IDS-312L is an innovative secure 1 port RS-232/422/485 to 2 port LAN device server with standard features of device server, such like TCP/IP interface and versatile operation modes: Virtual Com, Serial Tunnel, TCP Server, TCP Client, and UDP. In addition, the Windows untility, DS-Tool, could configure multiple devices and set up the mappings of Virtual Com. On the other hand, IDS-312L can simultaneously Com. On the other hand, IDS-312L can simultaneously transfer data up to 5 redundant host PCs to aovid Ethernet connection breakdown or any host PC fails. IDS-312L supports RS-232/422/485 and provides dual redundant power inputs, 12~48 VDC, on terminal block to redundant power inputs, 12–48 VDC, on terminal block to guarantee a non-stop operation. With wide operating temperature, -40~70oC, and rugged IP-30 housing design, IDS-312L series could operate in the harsh industrial environment. Therefore, IDS-312L is the best solution to the high demand of secure serial to Ethernet critical data communication.

Physical Ports 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX: 2

To/ 100 Base 1 (x) Ports in R345 Auto MD/MDIX. 2 Serial Ports Connector: DB9 x1 Operation Mode: RS-232, RS-422, RS-485 4/2-wire, can be configured by DS-Tool Serial Baud Rate: 110 bps to 460.8 Kbps

Data Bits: 7, 8

Data Bits: 7, 8
Parity: odd, even, none, mark, space
Stop Bits: 1, 1.5, 2
RS-232: TxD,RxD,RTS,CTS,DTR,DSR,DCD,RI,GND
RS-422: Tx+,Tx-,Rx+,Rx-,GND
RS-485 (4-wire): Tx+,Tx-,Rx+,Rx-,GND
RS-485 (2-wire): Data+,Data-,GND
Flow Control: XON/XOFF, RTS/CTS, DTR/DSR
Network Protocol: ICMP, IP, TCP, UDP, DHCP, BOOTP,
DNS, SNMP V1/V2c, HTTPS
LED Indicators

LED Indicators

LEU Indicators
Power indicator PWR 1(2) / Ready: Green On - Power is on 10/100TX RJ45 port indicator: Green for port Link/Act Serial TX / RX LEDs: Amber - Serial port is receiving data, Green - Serial port is transmitting data
Power

Input power: Dual DC inputs. 12÷48VDC on 4-pin terminal

block
Power consumption (typical): 1.44W Overload current protection: present Reverse polarity protection: present Physical Characteristic

Enclosure: IP-30 Dimension (W x D x H): 26 (W) x 75 (D) x 110 (H) mm

Weight: 227g Environmental

Storage Temperature: -40+85°C (-40+185°F) Operating Temperature: -40+70°C (40+158°F) Operating Humidity: 5%+95% Non-condensing

Regulatory approvals
EMI: FCC Part 15B, CISPR 32 ( EN55032 Class A)
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4

EMS. ENG1000-4-2 (ESJ), ENG1000-4-3 (RS), EI (EFT), ENG1000-4-5 (Surge), ENG1000-4-6 (CS), ENG1000-4-8, ENG1000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: ENG0950-1

Warranty period: 5 years

### Industrial Transceivers



#### #08472

Net Price:

## Module, SFP+ 1x 10 Gbps LC MM, 300 m (Wave Optics, WO-PML-9685-300M-I)

Port: 1x 10 Gbps LC MM TX wavelength: 850 nm RX wavelength: 850 nm Max. distance: 300 m Operating case temperature: -40+85°C Cable type: 50/125, 62,5/125 Module type: SFP+

Manufacturer: Wave Optics

19 10 FUR Unit: pcs

## Module, SFP+ 1x 10 Gbps LC SM, 10 km (Wave Optics, WO-PSL-9613-010K-I)

Port: 1x 10 Gbps LC SM TX wavelength: 1310 nm RX wavelength: 1310 nm Max. distance: 10 km Operating case temperature: -40÷85°C Cable type: 50/125, 62,5/125 Module type: SFP+

Manufacturer: Wave Optics

### #08474

Net Price: 29,10 EUR Unit: pcs



#### #06732

Net Price: 8 64 FUR Unit: pcs

## Module, SFP 1x 1000 Mbps LC MM, 550 m, Tx:850 nm (WO-SML-1285-550M-I)

Port: 1x 1000 Mbps LC MM TX wavelength: 850 nm RX wavelength: 850 nm Max. distance: 550 m Cable type: 50/125, 62.5/125, 100/140 µm

Operating temperature: -40°C ÷ 85°C Module type: SFP





Net Price: 8,86 EUR Unit: pcs



#### #05949

Net Price: 8,64 EUR Unit: pcs



#### #06733

Net Price: 8,64 EUR Unit: pcs

# Module, SFP 1x 1000 Mbps LC MM, 550 m, Tx:850 nm, w/DDMI diagnostics (WO-SML-1285-550M-DI)

Port: 1x 1000 Mbps LC MM TX wavelength: 850 nm

TX wavelength: 850 nm Max. distance: 550 m Cable type: 50/125, 62:5/125, 100/140 µm Operating temperature: -40°C + 85°C DDM: yes

Module type: SFP

Module, SFP 1x 100 Mbps LC MM, 2 km, TX: 1310 nm (WO-SML-0113-002K-I)

Port: 1x 155 Mbps ATM LC MM
TX wavelength: 1310 nm
RX wavelength: 1310 nm
Max. distance: 2 km
Cable type: 50/125, 62.5/125, 100/140 µm
Operating temaperature: -40°C + 85°C
Module type: SFP

Warranty period: 1 year Supports: SDH/STM-1, SONET/OC-3, Fast Ethernet



### Module, SFP 1x 1000 Mbps LC SM, 20 km (WO-SSL-1213-020K-I)

Port: 1x 1000 Mbps LC SM TX wavelength: 1310 nm RX wavelength: 1310 nm Max. distance: 20 km

Cable type: 8.3/125, 8.7/125, 9/125, 10/125 µm Operating temperature: -40°C ÷ 85°C Module type: SFP



#### #06753

Net Price: 8,86 EUR Unit: pcs



#### #08175

Net Price: 12,30 EUR Unit: pcs



#### #06754

Net Price: 13,00 EUR Unit: pcs

### Module, SFP 1x 1000 Mbps LC SM, 20 km, w/DDMI diagnostics (WO-SSL-1213-020K-DI)

TX 4000 Mbps LC SM
TX wavelength: 1310 nm
RX wavelength: 1310 nm
RX wavelength: 1310 nm
Max. distance: 20 km
Cable type: 8.3/125, 8.7/125, 9/125, 10/125 µm
Operating temperature: -40°C + 85°C
DDMI: yes
Module type: SFP

### Module, SFP 1x 100 Mbps LC SM, 40 km, Tx:1310 nm, w/DDMI diagnostics (WO-SSL-0113-040K-DI)

Port: 1x 100 Mbps LC SM
TX wavelength: 1310 nm
RX wavelength: 1310 nm
Max. distance: 40 km
Cable type: 8.3/125, 8.7/125, 9/125, 10/125 µm
Operating temperature: -40°C + 85°C
DDMI: vec

DDMI: yes Module type: SFP Warranty period: 1 year

# Module, SFP 1x 1000 Mbps LC SM, 40 km, w/DDMI diagnostics (WO-SSL-1213-040K-DI)

Wordshi diagnostics (WO-SSL-1213)
Port: 1x 1000 Mbps LC SM
TX wavelength: 1310 nm
RX wavelength: 1310 nm
Max. distance: 40 km
Cable type: 50/125, 62.5/125, 100/140 μm
Operating temperature: -40°C ÷ 85°C
DDMI: yes
Module type: SFP
Wordshi voried: 1 year

Warranty period: 1 year



#### #06755

Net Price: 28,20 EUR Unit: pcs

#### #06737

Net Price: 14,80 EUR



#### #06757

Net Price: 14 80 FUR Unit: pcs

### Module, SFP 1x 1000 Mbps LC SM, 80 km, w/DDMI diagnostics (WO-SSL-1215-080K-DI)

Port: 1x 1000 Mbps LC SM Port: 1x 1000 mbps LC SM TX wavelength: 1550 nm RX wavelength: 1550 nm Max. distance: 80 km Cable type: 50/125, 62.5/125, 100/140 µm Operating temperature: -40°C + 85°C DDMI: yes Module type: SFP Warranty period: 1 year

Unit: pcs

### Module, SFP 1x 1000 Mbps SC LM, 20 km, WDM TX:1550 nm (WO-SWS-1215-020K-I)

Port: 1x 1000 Mbps SC SM Port: 1X 1000 Mopps SC SM
TX wavelength: 1550 nm
RX wavelength: 1310 nm
Max. distance: 20 km
Cable type: 8.3/125, 8.7/125, 9/125, 10/125 μm
Wave Division Multiplexing (WDM): yes
Operating temperature: -40°C + 85°C
Module type: SFP
Warranty neriod: 1 year Warranty period: 1 year

# Module, SFP 1x 1000 Mbps SC LM, 20 km, WDM TX:1550 nm, w/DDMI diagnostics (WO-SWS-1215-020K-DI)

WO-SWS-1219-020K-DI)
Port: 1x 1000 Mbps SC SM
TX wavelength: 1550 nm
RX wavelength: 1310 nm
Max. distance: 20 km
Cable type: 8.3/125, 8.7/125, 9/125, 10/125 μm
Wave Division Multiplexing (WDM): yes
Operating temperature: -40°C + 85°C
DDMI: yes
Module type: SFP
Warranty period: 1 year

Warranty period: 1 year



#### #06756

Net Price: 11 10 FUR Unit: pcs

#### #06758

Net Price: 14 80 FUR Unit: pcs



#### #06759

Net Price: 18 60 FUR Unit: pcs

### Module, SFP 1x 1000 Mbps SC SM, 20 km, WDM TX:1310 nm, w/DDMI diagnostics (WO-SWS-1213-020K-DI)

Port: 1x 1000 Mbps SC SM TX wavelength: 1310 nm RX wavelength: 1550 nm Max. distance: 20 km Cable type: 8.3/125, 8.7/125, 9/125, 10/125 µm Wave Division Multiplexing (WDM): yes Operating temperature: -40°C ÷ 85°C DDMI: yes Module type: SFP Warranty period: 1 year

### Module, SFP 1x 1000 Mbps SC SM, 40 km, WDM TX:1310 nm, w/DDMI diagnostics (WO-SWS-1213-040K-DI)

Port: 1x 1000 Mbps SC SM TX wavelength: 1310 nm RX wavelength: 1550 nm Max. distance: 40 km Cable type: 8.3/125, 8.7/125, 9/125, 10/125 µm Wave Division Multiplexing (WDM): yes Operating temperature: -40°C ÷ 85°C DDMI: yes Module type: SFP Warranty period: 1 year

### Module, SFP 1x 1000 Mbps SC SM, 40 km, WDM TX:1550 nm, w/DDMI diagnostics (WO-SWS-1215-040K-DI)

WO-SWS-1219-040K-DI)
Port: 1x 1000 Mbps SC SM
TX wavelength: 1550 nm
RX wavelength: 1310 nm
Max. distance: 40 km
Cable type: 8.3/125, 8.7/125, 9/125, 10/125 μm
Wave Division Multiplexing (WDM): yes
Operating temperature: -40°C + 85°C
DDM: yes
Module type: SEP Module type: SFP Warranty period: 1 year



Net Price: 22,50 EUR Unit: pcs

### Module, SFP 1x 10/100/1000 Mbps RJ-45 (Wave Optics, WO-SRL-1210-100M-I)

Port: 1x 10/100/1000 Mbps RJ-45 Port: 1x 10/100/1000 Mbps RJ-45 Max. distance: 100 m Cable type: UTP/STP cat. 5 Temperature range: -40°C + 85°C Module type: SFP Manufacturer: Wave Optics

Industrial Power Supplies



#08402

Net Price: 74,70 EUR Unit: pcs

#08405

Net Price: 144,00 EUR Unit: pcs



#08407

Net Price: 210.00 EUR Unit: pcs

### Power supply 120W 12VDC, P.F.C., DIN TS35 (Mean Well WDR-120-12)

DIN rail Mean Well WDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

PSU device is enclosed in a metal housing that is resistant to low and high temperatures

The power supply is cooled by the free flow of air, making it a highly fault-free - this is a very important feature when power supply is working continuously.

Output DC Voltage: 12V Rated current: 10A Current Range: 0÷10A Rated Power: 120W Rated Power: 120W
Ripple & noise (max.): 120mVp-p
Voltage adjustment range: 12+15V
Voltage tolerance: +/-1.5%
Line regulation: +/-0.5%
Load regulation: +/-0.5%
Setup & rise time: 2000ms & 70ms/400VAC at full load,
2000ms & 70ms/230VAC at full load
Hold up time (typ.): 50ms/400VAC at full load, 50ms/230VAC
at full load

at full load

at full load Input
Voltage range: 180+550VAC, 254+780VDC
Frequency range: 47+63Hz
Efficiency (typ.): 89,5%
AC current (typ.): 0.55A/115VAC, 1.2A/230VAC
Inrush current (typ.): 50A
Leakage current: <3,5mA/530VAC
Protection
Overload: 105%+130% rated output power, protection typeconstant current limiting - recovers automatically after fault constant current limiting - recovers automatically after fault condition is removed Overvoltage: 16+18V, protection type - shut down o/p voltage

Over temperature: 105°C +/-5°C (TSW1) detect on heatsink of power transistor, protection type - shut down o/p voltage & of power transistor, protection type - shut down o/p voltage & re-power on to recover Environment Working temperature: -25°C ÷ 70°C Working temperature: -20°S RH non-condensing Storage temperature: -40°C ÷ 85°C Storage Humidity: 10+95% RH Temperature coefficient: +/-0.03%/°C (0+50°C) Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min. each along XY Z axes Vibration (mounting): compliance to IEC60068-2-6

Vibration (mounting): compliance to IEC60068-2-6 Safety & EMC

Safety & EMC
Safety standards: UL508, UL60950-1, TUV EN60950-1
Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG

0.5kVAC Isolation resistance: I/P-O/P 100MΩ/500VDC, I/P-FG 100MΩ/500VDC, O/P-FG 100MΩ/500VDC EMI conduction & radiation: EN55011, EN55022 (CISPR22), EN61204-3 Class B Harmonic current: EN61000-3-2, EN61000-3-3

EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-2 (EN50082-2), heavy industry level criteria A

MTBF: min. 268000h MIL-HDBK-217F (25°C)
Dimension (W x H x D): 40mm x 125,2mm x 113,5mm Weight: 0,65kg

Power supply 240W 24VDC, P.F.C., DIN TS35 (Mean Well WDR-240-24)

DIN rail Mean Well WDR series meets the highest standards and criteria, so that it can be used to work in the industria automation systems, machine control, power, lighting and a wide range of devices

PSU device is enclosed in a metal housing that is resistant to low and high temperatures

The power supply is cooled by the free flow of air, making it a highly fault-free - this is a very important feature when power supply is working continuously.

Output DC Voltage: 24V Rated current: 10A Current Range: 0÷10A Rated Power: 240W Ripple & noise (max.): 150mVp-p Voltage adjustment range: 24÷28V Voltage tolerance: +/-1.0%

Line regulation: +/-0.5% Load regulation: +/-1.0% Setup & rise time: 800ms & 150ms/400VAC at full load,

1500ms & 150ms/230VAC at full load Hold up time (typ.): 18ms/400VAC at full load, 18ms/230VAC at full load

at full load Input
Voltage range: 180+550VAC, 254+780VDC
Frequency range: 47+63Hz
Efficiency (typ.): 91%
AC current (typ.): 714400VAC, 2A/230VAC
Inrush current (typ.): 50A
Leakage current: <3,5mA/530VAC
Protection
Overload: 105%+130% rated output power, protection typeconstant current limiting - recovers automatically after fault constant current limiting - recovers automatically after fault condition is removed

Overvoltage: 29÷33V, protection type - shut down o/p voltage

& re-nower on to recover

Over temperature: 90°C +/-5°C (TSW1) detect on heatsink of power transistor, protection type - shut down o/p voltage & re-power on to recover

re-power on to recover
Environment
Working temperature: -30°C + 70°C
Working humidity: 20+95% RH non-condensing
Storage temperature: -40°C + 85°C
Storage Humidity: 10+95% RH
Temperature coefficient: +/-0.03%/°C (0+50°C)
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min.
each along X Y Z axes
Vibration (mounting): compliance to IFC60068-2-6

Vibration (mounting): compliance to IEC60068-2-6 Safety & EMC

Safety standards: UL508, UL60950-1, TUV EN60950-1 Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG

U.SUAC Isolation resistance: I/P-O/P 100MΩ/500VDC, I/P-FG 100MΩ/500VDC, O/P-FG 100MΩ/500VDC EMI conduction & radiation: EN55011, EN55022 (CISPR22),

EN61204-3 Class B Harmonic current: EN61000-3-2, EN61000-3-3 EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-2 (EN50082-2), heavy industry level

criteria A

MTBF: min. 268000h MIL-HDBK-217F (25°C)
Dimension (W x H x D): 63mm x 125,2mm x 113,5mm

Weight: 1,06kg

### Power supply 480W 24VDC, P.F.C., DIN TS35 (Mean Well WDR-480-24)

DIN rail Mean Well WDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

PSU device is enclosed in a metal housing that is resistant to low and high temperatures

The power supply is cooled by the free flow of air, making it a highly fault-free - this is a very important feature when power supply is working continuously.

Output DC Voltage: 24V Rated current: 20A Current Range: 0÷20A Rated Power: 480W

Ripple & noise (max.): 100mVp-p Voltage adjustment range: 24÷28V Voltage tolerance: +/-1.0% Line regulation: +/-0.5% Load regulation: +/-1.0%

Setup & rise time: 800ms & 150ms/400VAC at full load,

2000ms & 150ms/230VAC at full load Hold up time (typ.): 18ms/400VAC at full load, 16ms/230VAC

at full load

at full load Input
Voltage range: 180+550VAC, 254+780VDC
Frequency range: 47+63Hz
Efficiency (typ.): 92%
AC current (typ.): 16AV400VAC, 4A/230VAC
Inrush current (typ.): 50A
Leakage current: <3,5mA/530VAC
Protection
Overload: 105%+130% rated output power, protection type-constant current limiting - recovers automatically after fault constant current limiting - recovers automatically after fault condition is removed

Overvoltage: 29÷33V, protection type - shut down o/p voltage

& re-power on to recover

Over temperature: 95°C +/-5°C (TSW1) detect on heatsink of power transistor, protection type - shut down o/p voltage & power transistor, protection type - snut down orp re-power on to recover Environment Working temperature: -30°C + 70°C Working humidity: 20+95% RH non-condensing Storage temperature: -40°C + 85°C Storage Humidity: 10+95% RH Temperature coefficient: +1-0.03%/°C (0+50°C)

Vibration (component): 10÷500Hz, 2G 10min./1cycle, 60min. each along X Y Z axes

Vibration (mounting): compliance to IEC60068-2-6 Safety & EMC

Safety standards: UL508, UL60950-1, TUV EN60950-1 Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG

Isolation resistance: I/P-O/P 100MΩ/500VDC, I/P-FG 100MΩ/500VDC, O/P-FG 100MΩ/500VDC EMI conduction & radiation: EN55011, EN55022 (CISPR22), EN61204-3 Class B

Harmonic current: EN61000-3-2, EN61000-3-3 EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-2 (EN50082-2), heavy industry level criteria A

MTBF: min. 268000h MIL-HDBK-217F (25°C)
Dimension (W x H x D): 85.5mm x 125.2mm x 128.5mm Weight: 1.7kg





Net Price: 12,10 EUR Unit: pcs

### Power supply 10W 24VDC, mini, DIN TS35 (Mean Well MDR-10-24)

DIN rail Mean Well MDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

The power supply is cooled by free air flow, making it a highly fault-free - a very important feature when power supply is working continuously. Operating temperature for this model ranges from -20 to +70 degrees Celsius.

Moreover, the PSU has an overload protection 105-160% of

the nominal value.

Output

Output
DC Voltage: 24V
Rated current: 0.42A
Current Range: 0+0.42A
Rated Power: 10W
Ripple & noise (max.): 150mVp-p

Noting the Arrivar (max.). 130m/y-p Voltage tolerance: +/-2.0% Line regulation: +/-1.0% Load regulation: +/-2.0% Setup & rise time: 500ms & 30ms/230VAC at full load, 1000ms & 30ms/115VAC at full load

Hold up time (typ.): 120ms/230VAC at full load, 25ms/115VAC at full load

Voltage range: 85÷264VAC, 120÷370VDC Frequency range: 47÷63Hz

Efficiency (typ.): 84%
AC current (typ.): 0.33A/115VAC, 0.21A/230VAC
Inrush current (typ.): 35A/115VAC cold start, 70A/230VAC

Leakage current: <1mA/240VAC

Overload: above 105% rated output power, protection type - Hiccup mode - recovers automatically after fault condition is removed Overvoltage: 27.6÷32.4V, protection type - shut down o/p

voltage & re-power on to recover Function

DC OK active signal: 18÷27V/20mA

DC OK active signal: 18+27V/20mA
Environment
Working temperature: -20°C ÷ 70°C
Working humidity: 20+90% RH non-condensing
Storage temperature: -40°C ÷ 85°C
Storage Humidity: 10+95% RH
Temperature coefficient: +/-0.03%/°C (0+50°C)
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min.
each along X Y Z axes
Vibration (mounting): compliance to IEC60068-2-6
Safety & EMC
Safety & EMC

Safety standards: UL508, TUV EN60950-1, NEC class 2 /

Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG

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0.5kVAC
Isolation resistance: I/P-O/P 100MΩ/500VDC, I/P-FG
100MΩ/500VDC

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EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-1, EN61204-3, light industry level

criteria A

Others
MTBF: min. 584000h MIL-HDBK-217F (25°C)
Dimension (W x H x D): 22.5mm x 90mm x 100mm

Weight: 0.17kg Warranty: 3 years

#06675

Net Price: 12,10 EUR Unit: pcs

## Power supply 24W 24VDC, mini, DIN TS35 (Mean Well MDR-20-24)

DIN rail Mean Well MDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

The power supply is cooled by free air flow, making it a highly fault-free - a very important feature when power supply is working continuously. Operating temperature for this model ranges from -20 to +70 degrees Celsius.

Moreover, the PSU has an overload protection 105-160% of

the nominal value

Output

Output
DC Voltage: 24V
Rated current: 1A
Current Range: 0+1A
Rated Power: 24W
Ripple & noise (max.): 150mVp-p
Voltage adjustment range: 21.6+26.4V
Voltage tolerance: +/-1.0%
Line regulation: +/-1.0%
Load regulation: +/-1.0%
Setup & rise time: 500ms & 30ms/230VAC at full load,

1000ms & 30ms/115VAC at full load Hold up time (typ.): 50ms/230VAC at full load, 20ms/115VAC at full load

Input Voltage range: 85÷264VAC, 120÷370VDC

Voltage range: 672-68Hz
Efficiency (typ.): 84%
AC current (typ.): 0.55A/115VAC, 0.35A/230VAC
Inrush current (typ.): 20A/115VAC cold start, 40A/230VAC

Leakage current: <1mA/240VAC

Protection

Overload: 105%÷160% rated output power, protection type constant current limiting - recovers automatically after fault condition is removed

Overvoltage: 27.6÷32.4V, protection type - shut down o/p voltage & re-power on to recover

Function

DC OK active signal: 18÷27V/20mA Environment

Environment
Working temperature: -20°C + 70°C
Working humidity: 20+90% RH non-condensing
Storage temperature: -40°C + 85°C
Storage Humidity: 10+95% RH
Temperature coefficient: +/-0.03%/°C (0+50°C)
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min.
each along X Y Z axes
Vibration (mounting): compliance to IEC60068-2-6
Safety & FMC

Safety & EMC Safety standards: UL508, TUV EN60950-1, NEC class 2 /

Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG 0.5kVAC

Isolation resistance: I/P-O/P 100MΩ/500VDC, I/P-FG 100MΩ/500VDC, O/P-FG 100MΩ/500VDC EMI conduction & radiation: EN55011, EN55022 (CISPR22), EN61204-3 Class B

EN01204-3 Class B Harmonic current: EN61000-3-2, EN61000-3-3 EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-1, EN61204-3, light industry level

MTBF: min. 236900h MIL-HDBK-217F (25°C)

Dimension (W x H x D): 22.5mm x 90mm x 100mm Weight: 0.19kg

Warranty: 3 years



#06676

Net Price: 18,10 EUR Unit: pcs

## Power supply 40W 24VDC, mini, DIN TS35 (Mean Well MDR-40-24)

DIN rail Mean Well MDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

The power supply is cooled by free air flow, making it a highly fault-free - a very important feature when power supply is working continuously. Operating temperature for this model ranges from -20 to +70 degrees Celsius.

Moreover, the PSU has an overload protection 105-160% of

the nominal value.

Output

Output
DC Voltage: 24V
Rated current: 1.7A
Current Range: 0+1.7A
Rated Power: 40.8W
Ripple & noise (max.): 150mVp-p
Voltage adjustment range: 24+30V
Voltage adjustment range: 24+30V
Voltage tolerance: +/-1.0%
Line regulation: +/-1.0%
Load regulation: +/-1.0%
Load regulation: 500ms & 30ms/230VAC at full load, 500ms
& 30ms/115VAC at full load
Hold up time (typ.): 50ms/230VAC at full load, 20ms/115VAC
at full load at full load

Input Voltage range: 85+264VAC, 120+370VDC

Voltage larige: 03-2649Ac, 120-379VBC Frequency range: 47-63Hz Efficiency (typ.): 88% AC current (typ.): 1.1A/115VAC, 0.7A/230VAC Inrush current (typ.): 30A/115VAC cold start, 60A/230VAC

Leakage current: <1mA/240VAC

Protection

Overload: 105%÷150% rated output power, protection type - constant current limiting - recovers automatically after fault condition is removed

Overvoltage: 31.2÷36V, protection type - shut down o/p voltage & re-power on to recover

Function

DC OK signal relay contact rating (max.): 30V/1A resistive Environment

Environment
Working temperature: -20°C + 70°C
Working humidity: 20+90% RH non-condensing
Storage temperature: -40°C + 86°C
Storage Humidity: 10+95% RH
Temperature coefficient: +/-0.03%°C (0+50°C)
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min. each along X Y Z axes
Vibration (mounting): compliance to IEC60068-2-6
Safety & EMC

Safety & EMC Safety standards: UL508, UL60950-1, TUV EN60950-1, NEC

class 2 / LPS
Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG 0.5kVAC

Isolation resistance: I/P-O/P 100MΩ/500VDC 25°C 70%RH, I/P-FG 100MΩ/500VDC 25°C 70%RH, O/P-FG 100MΩ/500VDC 25°C 70%RH

100MI/3600VDC 25°C 70%KH EMI conduction & radiation: EN55011, EN55022 (CISPR22), EN61204-3 Class B Harmonic current: EN61000-3-2, EN61000-3-3 EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204,

Weight: 0.3kg

EN55024, EN61000-6-2, EN61204-3, heavy industry level criteria A Others MTBF: min. 301700h MIL-HDBK-217F (25°C) Dimension (W x H x D): 40mm x 90mm x 100mm



Net Price: 19,80 EUR Unit: pcs

### Power supply 60W 24VDC, mini, DIN TS35 (Mean Well MDR-60-24)

DIN rail Mean Well MDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

The power supply is cooled by free air flow, making it a highly fault-free - a very important feature when power supply is working continuously. Operating temperature for this model ranges from -20 to +70 degrees Celsius.

Moreover, the PSU has an overload protection 105-160% of

the nominal value.

Output DC Voltage: 24V Rated current: 2.5A Current Range: 0÷2.5A Rated Power: 60W Ripple & noise (max.): 150mVp-p

Ripple & noise (max.): 150m/p-p
Voltage adjustment range: 24+30V
Voltage tolerance: +/-1.0%
Line regulation: +/-1.0%
Load regulation: +/-1.0%
Setup & rise time: 500ms & 30ms/230VAC at full load, 500ms & 30ms/115VAC at full load
Hold up time (typ.): 50ms/230VAC at full load, 20ms/115VAC at full load

Input Voltage range: 85+264VAC, 120+370VDC Voltage range: 43+264Mz Frequency range: 47+63Hz Efficiency (typ.): 88% AC current (typ.): 1.8A/115VAC, 1A/230VAC Inrush current (typ.): 30A/115VAC cold start, 60A/230VAC cold start

Leakage current: <1mA/240VAC

Protection

Overload: 105%÷150% rated output power, protection type - constant current limiting - recovers automatically after fault condition is removed

Overvoltage: 31.2÷36V, protection type - shut down o/p voltage & re-power on to recover

DC OK signal relay contact rating (max.): 30V/1A resistive Environment

Environment
Working temperature: -20°C + 70°C
Working humidity: 20+90% RH non-condensing
Storage temperature: -40°C + 85°C
Storage Humidity: 10+95% RH
Temperature coefficient: +/-0.03%/°C (0+50°C)
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min.
each along X Y Z axes
Vibration (mounting): compliance to IEC60068-2-6
Safety & FMC

Safety & EMC
Safety standards: UL508, UL60950-1, TUV EN60950-1, NEC

class 2 / LPS
Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG 0.5kVAC

Isolation resistance: I/P-O/P 100MΩ/500VDC 25°C 70%RH, I/P-FG 100MΩ/500VDC 25°C 70%RH, O/P-FG 100MΩ/500VDC 25°C 70%RH

EMI conduction & radiation: EN55011, EN55022 (CISPR22),

EM61204-3 Class B
Harmonic current: EN61000-3-2, EN61000-3-3
EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204,

EN55024, EN61000-6-2, EN61204-3, heavy industry level

MTBF: min. 299200h MIL-HDBK-217F (25°C) Dimension (W x H x D): 40mm x 90mm x 100mm Weight: 0.33kg

#06678

Net Price: 29,80 EUR Unit: pcs

## Power supply 96W 24VDC, mini, DIN TS35 (Mean Well MDR-100-24)

DIN rail Mean Well MDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

The power supply is cooled by free air flow, making it a highly fault-free - a very important feature when power supply is working continuously. Operating temperature for this model ranges from -20 to +70 degrees Celsius.

Moreover, the PSU has an overload protection 105-160% of

Output

Output
DC Voltage: 24V
Rated current: 4A
Current Range: 0-4A
Rated Power: 96W
Ripple & noise (max.): 150mVp-p
Voltage adjustment range: 24+30V
Voltage tolerance: +/-1.0%
Line regulation: +/-1.0%
Load regulation: +/-1.0%
Setup & rise time: 3000ms & 50ms/230VAC at full load,

3000ms & 50ms/115VAC at full load Hold up time (typ.): 50ms/230VAC at full load, 20ms/115VAC at full load

Input Voltage range: 85÷264VAC, 120÷370VDC

Voltage range: 67+63Hz
Efficiency (typ.): 86%
AC current (typ.): 1.3A/115VAC, 0.8A/230VAC
Inrush current (typ.): 30A/115VAC cold start, 60A/230VAC

Leakage current: <1mA/240VAC

Overload: 105%÷150% rated output power, protection type - constant current limiting - recovers automatically after fault condition is removed

Overvoltage: 31.2+36V, protection type - shut down o/p voltage & re-power on to recover Over temperature: 90°C +/-10°C (RTH2) detect on heatsink of power transistor, protection type - shut down o/p voltage & re-power on to recover

Function DC OK signal relay contact rating (max.): 30V/1A resistive Environment

Environment
Working temperature: -10°C + 60°C
Working humidity: 20+90% RH non-condensing
Storage temperature: -40°C + 85°C
Storage Humidity: 10+95% RH
Temperature coefficient: +/-0.03%/°C (0+50°C)
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min.
each along X Y Z axes
Vibration (muuting): compliance to 15000000 R

Vibration (mounting): compliance to IEC60068-2-6
Safety & EMC
Safety standards: UL508, UL60950-1, TUV EN60950-1, NEC

Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG 0.5kVAC

Isolation resistance: I/P-O/P 100MO/500VDC 25°C 70%RH

I/P-FG 100MΩ/500VDC 25°C 70%RH, O/P-FG 100MΩ/500VDC 25°C 70%RH

EMI conduction & radiation: EN55011, EN55022 (CISPR22),

EN61204-3 Class B Harmonic current: EN61000-3-2, EN61000-3-3 EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level

MTBF: min. 346000h MIL-HDBK-217F (25°C) Dimension (W x H x D): 55mm x 90mm x 100mm Weight: 0.42kg



#06910

Net Price: 11,90 EUR Unit: pcs

## Power supply 15W 24VDC, DIN TS35 (Mean Well HDR-15-24)

Output DC Voltage: 24V Rated current: 0.63A Rated Power: 15W

Ripple & noise (max.): 150mVp-p Voltage adjustment range: 21.6÷29.0V Voltage tolerance: +/-1.0%

Line regulation: +/-1.0% Load regulation: +/-1.0%

Voltage range: 85÷264VAC, 120÷370VDC Efficiency (typ.): 86%

Protection

Protection
Overload: 105%+160% rated output power, protection typeconstant current limiting - recovers automatically
Overvoltage: 115%+150%, protection type - shut down ,
clamp by zener diode
Environment

Working temperature: -30°C + 70°C Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min. each along X Y Z axes Safety & EMC

Safety standards: UL62368-1, UL508, TUV EN61558-2-16, IEC62368-1, EAC Tp TC 040, BSMI CNS14336-1 approved Withstand voltage: I/P-O/P 4kVAC
EMC Standards: EN55032 class B, EN61000-3-2,33, EN61000-6-2, EN61000-4-2,3,4,5,6,8,11, EN61204-3

Others MTBF: min. 441500h MIL-HDBK-217F (25°C)





Net Price: 14,40 EUR Unit: pcs

## Power supply 30W 24VDC, DIN TS35 (Mean Well HDR-30-24)

Output DC Voltage: 24V Rated current: 1.5A Rated current: 1.5A Current Range: 0+1.5A Rated Power: 30W Ripple & noise (max.): 150mVp-p Voltage adjustment range: 21.6+29.0V Voltage tolerance: +/-1.0% Line regulation: +/-1.0%

Load regulation: +/-1.0% Input Voltage range: 85÷264VAC, 120÷370VDC

Efficiency (typ.): 89%
Protection
Overload: 105%+160% rated output power, protection type -Constant current limiting - recovers automatically
Overvoltage: 115%+150%, protection type - shut down &
re-power on to recover

Environment

Working temperature: -30°C ÷ 70°C Vibration (component): 10÷500Hz, 2G 10min./1cycle, 60min. each along X Y Z axes

each along A T 2 exes Safety & EMC Safety standards: UL62368-1, UL508, TUV EN61558-2-16, IEC62368-1, EAC Tp TC 040, BSMI CNS14336-1 approved Withstand voltage: I/P-O/P 4kVAC EMC Standards: EN55032 class B, EN61000-3-2,33, EN61000-6-2, EN61000-4-2,3,4,5,6,8,11, EN61204-3

Others
MTBF: min. 441500h MIL-HDBK-217F (25°C)
Dimension (W x H x D): 35mm x 90mm x 5.5mm



#### #06912

Net Price: 19,50 EUR Unit: pcs



#### #06669

Net Price: 19,50 EUR Unit: pcs

## Power supply 60W 24VDC, DIN TS35 (Mean Well HDR-60-24)

Output
DC Voltage: 24V
Rated current: 2.5A
Current Range: 0+2.5A
Rated Power: 60W
Ripple & noise (max.): 150mVp-p
Voltage adjustment range: 21.6+29.0V
Voltage tolerance: +/-1.0%
Line regulation: +/-1.0%
Load regulation: +/-1.0%

Load regulation: +/-1.0%

Input Voltage range: 85÷264VAC, 120÷370VDC

Efficiency (typ.): 60% Protection Overload: 105%+160% rated output power, protection type -Constant current limiting - recovers automatically Overvoltage: 115%+150%, protection type - shut down & re-power on to recover

Environment

Working temperature: -30°C ÷ 70°C Vibration (component): 10÷500Hz, 2G 10min./1cycle, 60min. each along X Y Z axes

each along A T Z axes Safety & EMC Safety standards: UL62368-1, UL508, TUV EN61558-2-16, IEC62368-1, EAC Tp TC 040, BSMI CNS14336-1 approved Withstand voltage: I/P-0/P 4kVAC EMC Standards: EN55032 class B, EN61000-3-2,33, EN61000-6-2, EN61000-4-2,3,4,5,6,8,11, EN61204-3

Others MTBF: min. 441500h MIL-HDBK-217F (25°C) Dimension (W x H x D): 52.5mm x 90mm x 5.5mm

## Power supply 60W 48VDC, DIN TS35 (Mean Well HDR-60-48)

Output
DC Voltage: 48V
Rated current: 1.25A
Current Range: 0+1.25A
Rated Power: 60W
Ripple & noise (max.): 240mVp-p
Voltage adjustment range: 43.2+55.2V
Voltage tolerance: +/-1.0%
Line regulation: +/-1.0%
Load requilation: +/-1.0% Load regulation: +/-1.0%

Input Voltage range: 85+264VAC, 120+370VDC

Efficiency (typ.): 91%
Protection
Overload: 105%+160% rated output power, protection type -

constant current limiting - recovers automatically Overvoltage: 115%+150%, protection type - shut down & re-power on to recover

Environment

Working temperature: -30°C ÷ 70°C Vibration (component): 10÷500Hz, 2G 10min./1cycle, 60min. each along X Y Z axes

each along A T 2 axes Safety & EMC Safety standards: UL62368-1, UL508, TUV EN61558-2-16, IEC62368-1, EAC Tp TC 040, BSMI CNS14336-1 approved Withstand voltage: IPO-0/P 4kVAC EMC Standards: EN55032 class B, EN61000-3-2,33, EN61000-6-2, EN61000-4-2,3,4,5,6,8,11, EN61204-3

Others MTBF: min. 441500h MIL-HDBK-217F (25°C) Dimension (W x H x D): 52.5mm x 90mm x 5.5mm



#### #06694

Net Price: 27,90 EUR Unit: pcs



#### #06670

Net Price: 27,90 EUR

## Power supply 100W 24VDC, DIN TS35 (Mean Well HDR-100-24)

Output DC Voltage: 24V Rated current: 3,83A Current Range: 0÷3,83A Rated Power: 100W Ripple & noise (max.): 150mVp-p Voltage adjustment range: 21.6+29.0V Voltage tolerance: +/-1.0% Line regulation: +/-1.0% Load regulation: +/-1.0% Input

Voltage range: 85+264VAC, 120+370VDC Efficiency (typ.): 90% Protection Overload: 102%+110% rated output power, protection type constant current limiting - recovers automatically Environment Working temperature: -30°C ÷ 70°C

Vibration (component): 10÷500Hz, 2G 10min./1cycle, 60min. each along X Y Z axes Safety & EMC

Safety Standards: UL60950-1, IEC60950-1 approved, UL62368-1, UL508, TUV EN61558-2-16, IEC62368-1, EAC Tp TC 040, BSMI CNS14336-1 approved Withstand voltage: I/P-O/P 3kVAC EMC Standards: EN55032 class B, EN61000-3-2,33, EN61000-6-2, EN61000-4-2,3,4,5,6,8,11

Dimension (W x H x D): 70mm x 90mm x 54.5mm

## Power supply 100W 48VDC, DIN TS35 (Mean Well HDR-100-48)

Output DC Voltage: 48V Rated current: 1.92A Current Range: 0÷1.92A Rated Power: 100W Ripple & noise (max.): 240mVp-p Voltage adjustment range: 48.0+48.7V Voltage tolerance: +/-1.0% Line regulation: +/-1.0% Load regulation: +/-1.0% Input

Voltage range: 85+264VAC, 120+370VDC
Efficiency (typ.): 90%
Protection
Overload: 102%+110% rated output power, protection type constant current limiting - recovers automatically Environment

Working temperature: -30°C ÷ 70°C

Vibration (component): 10÷500Hz, 2G 10min./1cycle, 60min. each along X Y Z axes Safety & EMC

Safety 8 EMC
Safety Standards: UL60950-1, IEC60950-1 approved,
UL62368-1, UL508, TUV EN61558-2-16, IEC62368-1, EAC
Tp TC 040, BSMI CNS14336-1 approved
Withstand voltage: I/P-O/P 3kVAC
EMC Standards: EN55032 class B, EN61000-3-2,33,
EN61000-6-2, EN61000-4-2,3,4,5,6,8,11

Dimension (W x H x D): 70mm x 90mm x 54.5mm



Net Price: 54,40 EUR Unit: pcs

### Power supply 120W 24VDC, DIN TS35, P.F.C. (Mean Well SDR-120-24)

DIN rail Mean Well SDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

PSU device is enclosed in a metal housing that is resistant to low and high temperatures. Power supplies of this group can withstand a load of 150% of the rated power for 3 seconds.

The power supply is cooled by the free flow of air, making it a highly fault-free - this is a very important feature when power supply is working continuously.

Output DC Voltage: 24V Rated current: 5A

Rated current: 5A
Current Range: 0+5A
Rated Power: 120W
Ripple & noise (max.): 100mVp-p
Voltage adjustment range: 24+28V
Voltage tolerance: +/-1.0%
Line regulation: +/-0.5%
Load regulation: +/-1.0%
Setup & rise time: 1500ms & 60ms/230VAC at full load, 3000ms & 40ms/115VAC at full load

Hold up time (typ.): 20ms/230VAC at full load, 20ms/115VAC at full load

Voltage range: 88÷264VAC, 124÷370VDC

Frequency range: 47+63Hz Power factor (typ.): 0.93/230VAC at full load, 0.96/115VAC at

Efficiency (typ.): 91% AC current (typ.): 1.4A/115VAC, 0.7A/230VAC Inrush current (typ.): 35A/115VAC cold start, 70A/230VAC cold start

Leakage current: <1mA/240VAC

Protection
Overload: 110%+150% rated output power, protection type constant current limiting - recovers automatically after fault

constant current limiting - recovers automatically after fault condition is removed Overvoltage: 29+33V, protection type - shut down o/p voltage & re-power on to recover Over temperature: 95°C +/-5°C (TSW1) detect on heatsink of power transistor, protection type - shut down o/p voltage & re-power on to recover

Environment

Environment
Working temperature: -25°C + 70°C
Working humidity: 20+95% RH non-condensing
Storage temperature: -40°C + 85°C
Storage Humidity: 10+95% RH
Temperature coefficient: +/-0.03%/°C (0+50°C)
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min.
each along X Y Z axes
Vibration (mounting): compliance to IEC60068-2-6
Safety & EMC

Safety & EMC

Safety standards: UL508, UL60950-1, TUV EN60950-1 Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG

Isolation resistance: I/P-O/P 100MΩ/500VDC, I/P-FG

100MQ/500VDC, O/P-FG 100MQ/500VDC EMI conduction & radiation: EN55011, EN55022 (CISPR22),

EMI conduction & radiation. Engageri, Engageri, Engageria EN61204-3 Class B
Harmonic current: EN61000-3-2, EN61000-3-3
EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-2 (EN50082-2), heavy industry level

MTBF: min. 289900h MIL-HDBK-217F (25°C)
Dimension (W x H x D): 40mm x 125,2mm x 113,5mm
Weight: 0,67kg



#06695

Net Price: 35,30 EUR Unit: pcs

### Power supply 150W 24VDC, DIN TS35 (Mean Well HDR-150-24)

Output
DC Voltage: 24V
Rated current: 6,25A
Current Range: 0+6,2A
Rated Power: 150W
Ripple & noise (max.): 150mVp-p
Voltage adjustment range: 21.6+29.0V
Voltage tolerance: +/-1.0%
Line regulation: +/-1.0%
Load regulation: +/-1.0%

Load regulation: +/-1.0%

Input Voltage range: 85÷264VAC, 120÷370VDC

Vollage range to 2007/70, 120 0.505 Efficiency (typ.): 90,5% Protection Overload: 105%+130% rated output power, protection type constant current limiting - recovers automatically

Environment
Working temperature: -30°C ÷ 70°C
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min. each along X Y Z axes
Safety & EMC
Safety standards: IEC62368-1, UL62368-1, UL61010, TUV
EN61558-2-16, IEC62368-1, EAC TP TC 004 approved,
Design refer to En0178, TUV EN62368-1
Withstand voltage: IP-0/P 4kVAC
EMC Standards: EN55032 class B, EN61000-3-2,33,
EN61000-6-2, EN61000-4-2,3,4,5,6,8,11
Others

Dimension (W x H x D): 105mm x 90mm x 54.5mm



#08398

Net Price: 91,40 EUR Unit: pcs

### Power supply 240W 24VDC, DIN TS35, P.F.C. (Mean Well SDR-240-24)

DIN rail Mean Well SDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

PSU device is enclosed in a metal housing that is resistant to low and high temperatures. Power supplies of this group can withstand a load of 150% of the rated power for 3 seconds.

The power supply is cooled by the free flow of air, making it a highly fault-free - this is a very important feature when power supply is working continuously.

Output DC Voltage: 24V Rated current: 10A Rated current: 10A
Current Range: 0+10A
Current Range: 0+10A
Rated Power: 240W
Ripple & noise (max.): 100mVp-p
Voltage adjustment range: 24+28V
Voltage tolerance: +/-1.0%
Line regulation: +/-0.5%
Load regulation: +/-1.0%
Setup & rise time: 1500ms & 60ms/230VAC at full load,
3000ms & 40ms/115VAC at full load
Hold up time (typ.): 20ms/230VAC at full load, 20ms/115VAC
at full load
Input

Input

Voltage range: 88+264VAC, 124+370VDC Frequency range: 47+63Hz Power factor (typ.): 0.93/230VAC at full load, 0.96/115VAC at

ruli load Efficiency (typ.): 94% AC current (typ.): 2.6A/115VAC, 1.3A/230VAC Inrush current (typ.): 33A/115VAC cold start, 65A/230VAC cold start

Leakage current: <1mA/240VAC

Protection
Overload: 110%+150% rated output power, protection type constant current limiting - recovers automatically after fault condition is removed Overvoltage: 29+33V, protection type - shut down o/p voltage

& re-power on to recover Over temperature: 95°C +/-5°C (TSW1) detect on heatsink of power transistor, protection type - shut down o/p voltage & re-power on to recover

Environment

Environment

Working temperature: -25°C + 70°C

Working humidity: 20+95% RH non-condensing

Storage temperature: -40°C + 85°C

Storage Humidity: 10+95% RH

Temperature coefficient: +/-0.03%/°C (0+50°C)

Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min.
each along X Y Z axes

Vibration (mounting): compliance to IEC60068-2-6

Safety & EMC

Safety & EMC

Safety standards: UL508, UL60950-1, TUV EN60950-1 Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG 0.5kVAC Isolation resistance: I/P-O/P 100MΩ/500VDC, I/P-FG

100MΩ/500VDC, O/P-FG 100MΩ/500VDC EMI conduction & radiation: EN55011, EN55022 (CISPR22),

EMI conduction & radiation. En35511, En35521, En35521, En35521, En35521, En35521, En35521, En35521, En35521, En355224, EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-2 (EN50082-2), heavy industry level

MTBF: min. 169300h MIL-HDBK-217F (25°C)
Dimension (W x H x D): 63mm x 125,2mm x 113,5mm
Weight: 1,03kg



#08399 Net Price: 112,00 EUR Unit: pcs

### Power supply 240W 48VDC, DIN TS35, P.F.C. (Mean Well SDR-240-48)

DIN rail Mean Well SDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

PSU device is enclosed in a metal housing that is resistant to low and high temperatures. Power supplies of this group can withstand a load of 150% of the rated power for 3 seconds.

The power supply is cooled by the free flow of air, making it a highly fault-free - this is a very important feature when power supply is working continuously.

Output DC Voltage: 48V Rated current: 5A

Rated current: 5A
Current Range: 0+5A
Rated Power: 240W
Ripple & noise (max.): 120mVp-p
Voltage adjustment range: 48+55V
Voltage tolerance: +/-1.0%
Line regulation: +/-0.5%
Setup & rise time: 1500ms & 60ms/230VAC at full load, 3000ms & 40ms/115VAC at full load

Hold up time (typ.): 20ms/230VAC at full load, 20ms/115VAC at full load

Voltage range: 88+264VAC, 124+370VDC Frequency range: 47+63Hz Power factor (typ.): 0.93/230VAC at full load, 0.96/115VAC at

Efficiency (typ.): 94% AC current (typ.): 2.6A/115VAC, 1.3A/230VAC Inrush current (typ.): 33A/115VAC cold start, 65A/230VAC cold start

Leakage current: <1mA/240VAC

Protection
Overload: 110%+150% rated output power, protection type constant current limiting - recovers automatically after fault

constant current limiting - fecovers automatically after fault condition is removed Overvoltage: 56+65V, protection type - shut down o/p voltage & re-power on to recover Over temperature: 95°C +/-5°C (TSW1) detect on heatsink of power transistor, protection type - shut down o/p voltage & re-power on to recover

Environment

Environment
Working temperature: -25°C + 70°C
Working humidity: 20+95% RH non-condensing
Storage temperature: -40°C + 85°C
Storage Humidity: 10+95% RH
Temperature coefficient: +/-0.03%/°C (0+50°C)
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min.
each along X Y Z axes
Vibration (mounting): compliance to IEC60068-2-6
Safety & EMC

Safety & EMC

Safety standards: UL508, UL60950-1, TUV EN60950-1 Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG 0.5kVAC

Isolation resistance: I/P-O/P 100MΩ/500VDC, I/P-FG

100MQ/500VDC, O/P-FG 100MQ/500VDC EMI conduction & radiation: EN55011, EN55022 (CISPR22),

EMI conduction & radiation. Engageri, Engageri, Engageria EN61204-3 Class B
Harmonic current: EN61000-3-2, EN61000-3-3
EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-2 (EN50082-2), heavy industry level

ENSDUZ4, EN61000-6-2 (ENS0082-2), neavy industry is criteria A Others
MTBF: min. 169300h MIL-HDBK-217F (25°C)
Dimension (W x H x D): 63mm x 125,2mm x 113,5mm
Weight: 1,03kg

#08400 Net Price: 147,00 EUR Unit: pcs

### Power supply 480W 24VDC, DIN TS35, P.F.C. (Mean Well SDR-480-24)

DIN rail Mean Well SDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

PSU device is enclosed in a metal housing that is resistant to low and high temperatures. Power supplies of this group can withstand a load of 150% of the rated power for 3 seconds.

The power supply is cooled by the free flow of air, making it a highly fault-free - this is a very important feature when power supply is working continuously.

Output DC Voltage: 24V Rated current: 20A

Rated current: 20A
Current Range: 0+20A
Rated Power: 480W
Ripple & noise (max.): 100mVp-p
Voltage adjustment range: 24+28V
Voltage tolerance: +/-1.2%
Line regulation: +/-0.5%
Load regulation: +/-1.05%
Setup & rise time: 1500ms & 60ms/230VAC at full load,
3000ms & 40ms/115VAC at full load
Hold up time (typ.): 14ms/230VAC at full load, 20ms/115VAC
at full load
Input

Voltage range: 90+264VAC, 127+370VDC Frequency range: 47+63Hz Power factor (typ.): 0.94/230VAC at full load, 0.99/115VAC at

Ion load Efficiency (typ.): 94% AC current (typ.): 5A/115VAC, 2.5A/230VAC Inrush current (typ.): 40A/115VAC cold start, 80A/230VAC cold start

Leakage current: <0.8mA/240VAC

Overload: 110%÷150% rated output power, protection type constant current limiting - recovers automatically after fault

condition is removed Overvoltage: 29+33V, protection type - shut down o/p voltage

& re-power on to recover Over temperature: 105°C +/-5°C (TSW1) detect on heatsink of power transistor, protection type - shut down o/p voltage & re-power on to recover

Environment

Environment
Working temperature: -25°C + 70°C
Working humidity: 20+95% RH non-condensing
Storage temperature: -40°C + 85°C
Storage Humidity: 10+95% RH
Temperature coefficient: +/-0.03%/°C (0+50°C)
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min.
each along X Y Z axes
Vibration (mounting): compliance to IEC60068-2-6
Safety & EMC

Safety & EMC

Safety standards: UL508, UL60950-1, TUV EN60950-1 Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG

Isolation resistance: I/P-O/P 100MQ/500VDC, I/P-FG

100MΩ/500VDC, O/P-FG 100MΩ/500VDC EMI conduction & radiation: EN55011, EN55022 (CISPR22),

EN61204-3 Class B

EN01204-5 Class B Harmonic current: EN61000-3-2, EN61000-3-3 EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-2 (EN50082-2), heavy industry level

MTBF: min. 112900h MIL-HDBK-217F (25°C)
Dimension (W x H x D): 85.5mm x 125.2mm x 128.5mm
Weight: 1.6kg

#08401

Net Price: 147,00 EUR Unit: pcs

### Power supply 480W 48VDC, DIN TS35, P.F.C. (Mean Well SDR-480-48)

DIN rail Mean Well SDR series meets the highest standards and criteria, so that it can be used to work in the industrial automation systems, machine control, power, lighting and a wide range of devices.

PSU device is enclosed in a metal housing that is resistant to low and high temperatures. Power supplies of this group can withstand a load of 150% of the rated power for 3 seconds.

The power supply is cooled by the free flow of air, making it a highly fault-free - this is a very important feature when power supply is working continuously.

Output DC Voltage: 48V Rated current: 10A

Rated current: 10A
Current Range: 0+10A
Rated Power: 480W
Ripple & noise (max.): 120mVp-p
Voltage adjustment range: 48+55V
Voltage tolerance: +/-1.2%
Line regulation: +/-1.05%
Load regulation: +/-1.0%
Setup & rise time: 1500ms & 60ms/230VAC at full load,
3000ms & 40ms/115VAC at full load
Hold up time (typ.): 14ms/230VAC at full load, 20ms/115VAC
at full load
Input

Input

Voltage range: 90+264VAC, 127+370VDC Frequency range: 47+63Hz Power factor (typ.): 0.94/230VAC at full load, 0.99/115VAC at

Efficiency (typ.): 94% AC current (typ.): 5A/115VAC, 2.5A/230VAC Inrush current (typ.): 40A/115VAC cold start, 80A/230VAC

Leakage current: <0.8mA/240VAC

Protection
Overload: 110%÷150% rated output power, protection type constant current limiting - recovers automatically after fault condition is removed Overvoltage: 56÷65V, protection type - shut down o/p voltage

& re-power on to recover Over temperature: 105°C +/-5°C (TSW1) detect on heatsink of power transistor, protection type - shut down o/p voltage & re-power on to recover Environment

Environment
Working temperature: -25°C + 70°C
Working humidity: 20+95% RH non-condensing
Storage temperature: -40°C + 85°C
Storage Humidity: 10+95% RH
Temperature coefficient: +/-0.03%/°C (0+50°C)
Vibration (component): 10+500Hz, 2G 10min./1cycle, 60min.
each along X Y Z axes
Vibration (mounting): compliance to IEC60068-2-6
Safety & EMC

Safety & EMC

Safety standards: UL508, UL60950-1, TUV EN60950-1 Withstand voltage: I/P-O/P 3kVAC, I/P-FG 1.5kVAC, O/P-FG 0.5kVAC

Isolation resistance: I/P-O/P 100MΩ/500VDC, I/P-FG

100MΩ/500VDC, O/P-FG 100MΩ/500VDC EMI conduction & radiation: EN55011, EN55022 (CISPR22),

EMI conduction & radiation: EN93011, EN93022 (OIST NEE, EN61204-3 Class B Harmonic current: EN61000-3-2, EN61000-3-3 EMS immunity: EN61000-4-2/3/4/5/6/8/11, ENV50204, EN55024, EN61000-6-2 (EN50082-2), heavy industry level

MTBF: min. 112900h MIL-HDBK-217F (25°C)
Dimension (W x H x D): 85.5mm x 125.2mm x 128.5mm
Weight: 1.6kg



Net Price: 176,00 EUR Unit: pcs

### RMC-1000 Chassis Power Supply 130W (ORing RPM-130-AC)

RMC-1000 Chassis (#08437) Power Supply

Power PowerSingle output: with maximum 130Watts (cooling fan

Power Powersingle output: with maximum 130Watts (cooling fan included)
Input Requirements Ethernet Standards: 100 ~ 240VAC
100 ~ 240VAC: 47 ~ 63 Hz
Steady Current: 3.3 Arms max
Inrush Current (cold start 25°C): 80A max
Leakage Current (DC-DC exclude): 3.5mA max.
Output Requirements
Specified O/P Voltage: 12VDC
Current Max.: 10.8A
Ripple & Noise: 120mV
Line Regulation: +1% ~ -1%
Load Regulation: +1% ~ -1%
Load Regulation: +1% ~ -1%
Cover-Voltage Protection: +14.5V / -2.5V
Over-Temperature Protection: 130°C (typical)
Over-Current Protection: 10.8 ~ 21.6A
No Load Operation: Present
Short Circuit Protection: Present
Environmental
Storage Temperature: -40+85°C
Operating Temperature: -10+70°C
Operating Humidity: 0%+95% Non-condensing
Regulatory approvals
EMI: CISPR 22 class A, EN55022 class A, FCC parts 15
class A
EMS: IEC61000-4-2 (ESD), IEC61000-4-3 (RS),

EMİ: CISPR 22 class A, EN55022 class A, FCC parts 15 class A EMS: IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT), IEC61000-4-5 (Surge), IEC61000-4-6 (CS), IEC61000-4-8, IEC61000-4-11, IEC-61000-3-2 class A & class D Safety: UL60950-1, EN60950-1, CUL - CAN/CSA C22.2 NO.60950-1, HI-POT (L,N to DC output) - 42VDC, 1 minute, limit - 8mA, HI-POT (L,N to FG) - 21VDC, 1 minute, limit -8mA, I.R. - 50MQ (min. at room temperature) / 500VDC MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C): 352648 Warranty period: 5 years

#### Other accessories



#07995

Net Price: 206,00 EUR Unit: pcs



#07970

Net Price: 180.00 EUR Unit: pcs



#04536

Net Price: 1 000.00 EUR Unit: pcs

# Industrial Gigabit High Power Injector, 2x10/1000 RJ-45 PoE + 2x10/1000 RJ-45 (ORing INJ-102GT++)

The INJ-102GT++ PoE Injector series is not only an IEEE802.3at compliant device but also an advanced high power PoE injector. It is intelligent detection that provided 2-ports 10/100/1000Base-T (X) PoE outputs. The device does not turn on power until it detects a valid PoE signature from the PoE devices attached downstream on the Ethernet cable. This protection against damage to non-PoE compliant equipment which may be connected to the Ethernet cable. Therefore, only an IEEE 802.3at/802.3af compliant device can be powered with the INJ-102GT++ PoE Injector. Typically in Gigabit networks the maximum allowable CAT5 cable length is about 100 meters, due to the limitation of the Ethernet standards. Because of its 24~57VDC power input with boosting circuit, the total output power can be up to 180Watts[Note2] for all ports usage. The installer doesn't need to worry about voltage drops caused by cable length. The INJ-102GT++ PoE Injector can function with any PoE P.D. equipment which is fully compliant with the IEEE 802.3at/802.3af PoE standards.

Note1: The equipment being powered must be fully IEEE 802.3at/802.3af compliant in order for the power supply to be able to sense the PoE devices signature and apply power. Power is supplied on Ethernet pins 1/2 (V+) and 3/6 (V-).

Note 2: LTPoE++TM PSE technology is applied on this product. Only when an LTPoE++ TM Powered Device (PD) is attached can the PSE port deliver up to 180W of output

Physical Ports 10/100/1000Base-T(X) in RJ-45 Ethernet Port Input: 2 10/100/1000Base-T(X) in RJ-45 Ethernet Port with P.S.E.

Output: 2
Operating Voltage
Input Voltage: 50 ~ 57 VDC / 4-pin terminal block
Output Power: 57V / 3157mA, 180 Watts max. Per port
LED Indicators

Power indicator: PWR / Ready 1 x LED, Green On - Power is

on and functioning Normally
PoE Indicators: 2 x LED, Blue On - PoE Device Link, Blue Off None PoE Device Detected

Protection Short Circuit Protection: present Over Load Protection: present

Physical Characteristic

Enclosure: IP-30
Dimension (W x D x H): 26.1mm x 70mm x 95mm

Weight: 300g Environmental

Storage Temperature: -40÷80°C(-40÷176°F)

Operating Temperature: -20+70°C (-44+158°F)
Operating Humidity: 5%+90% Non-condensing
Regulatory approvals
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
(EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS),

EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6 Safety: EN60950-1

Warranty period: 5 years

### Industrial Gigabit PoE Splitter, 1x10/1000 RJ-45 PoE + 1x10/1000 RJ-45 (ORing SPL-101GT)

SPL-101GT is a high power PoE Splitter for use in Power over Ethernet systems. With Ethernet Input (data + power) port and Output (data only) port, SPL-101GT may split power from existing LAN cable and convert up to 24VDC/1.25A for power hungry applications such as Wireless APs, Security cameras and IP Phones. The internal current limit, short-circuit and overload protection are implemented for use as a DC power supply.

Physical Ports

10/100/1000Base-T(X) in RJ-45 Ethernet Port Input: 1 10/100/1000Base-T(X) in RJ-45 Ethernet Port with P.S.E. Output: 1

Output: Operating Voltage
Input Voltage: 36 ~ 57 VDC / 4-pin terminal block
Output Power: 24V / 1.25mA, 30 Watts max. Per port LED Indicators

Power indicator: PWR / Ready 1 x LED, Blue On - Power is on and is functioning Normally Protection

Short Circuit Protection: present Over Load Protection: present Isolation Protection: 1500V

Physical Characteristic Enclosure: IP-30 Dimension (W x D x H): 26.1mm x 70mm x 95mm

Weight: 250g Environmental

Storage Temperature: -40+80°C(-40+176°F)
Operating Temperature: -20+70°C (-4+158°F)
Operating Humidity: 5%+90% Non-condensing

Operating Huminay: 5%-59-% Non-condensing Regulatory approvals EMI: FCC Part 15, CISPR (EN55022) class A EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11

Safety: EN60950-1 Warranty

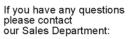
Warranty period: 2 years

#### Network Management Utility (Oring Open Vision v3.6 M50)

A powerful management utility is important for administrators to monitor and manage all devices in a local network

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