ORing Product Categories

E

Access to Comeplete IIoT Solutions

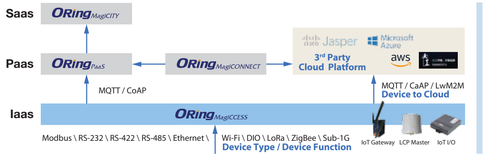
ORing diversified hardware components as above can help you upgrade existing infrastructure into smart solution.

We have wireless connection of IoT Master and Slave, which can connect via Zigbee, LoRa, Sub-1G, NB-IoT and Cat. M1 depending on different application environment. For wire connection, we support UART, RS-232/485, PoE and PLC. All of the IoT Master can upload data to cloud via MQTT.

All services are integrated in PaaS layer. Things Control is for controlling device such as street light, robotic arm and other IoT embedded devices. Things Management is to maintain connected devices, configure and obtain status of devices. VPN router can provide service of Remote Access including relative services. SCADA can record, store and analyze historical data and provide mechanism of alert for abnormal situation from connected properties. Network Management can display current topology of connected devices. When installing IP cameras, IP surveillance service can be compatible with various branding cameras with our ONVIF standard.

It is easy to customize your own IoT solution such as street lights, bus, smart metering with our modern RESTFUL API.

About ORing MagiCITY



ORing IOT Products

F

IoT Gateway : IMG-4312-MN

- LTE CAT-M1/CAT-NB1 model included
- High Speed Air Connectivity: WLAN interface support up to 150Mbps link speed
- Support Open VPN, PPTP VPN, MQTT
- Redundant multiple host devices: 5 host devices: Virtual COM, TCP Server, TCP Client mode, UDP mode(4 IP Ranges)
- 1KV isolation for PoE P.D. (IMG-4312+-MN)

RF Modules

- Transparent and API simplify software integration
- Reduced hardware complexity with 2 antenna required
- Support ZigBee,NB-IoT,LoRa,LoRa WAN,Sub-1G
- Compact Size
- Can integrate with different devices
- Programmable output gain,up to +23dBm
- DIP type,24pin

IOT Meter

- Standard product for variety meter application
- Support UART /TTL/RS-485
- Support NB-IOT
- Support MQTT protocol
- Long battery life support

IOT Antenna

- High performance rail rooftop antenna with omnidirectional antenna.
- Support 2G/3G/4G and wifi 2.4GHz applications
- Wide temperature range -30 to 85°C
- Rugged design suitable for railway applications
- GPS + Glonass Active Antenna

Cloud PaaS

- Simple, Manage Authorization
- ORing Account Management is way of utilizing ACL and OAuth 2.0 which keeps account management, permission setup and authorization more easily
- Connect, Just in a Finger
- By using the device management of ORing PaaS, to obtain the device status and much more information, just at a glance

ORing Paas

Remote I/O

- Support two Serial Ports for RS232/RS422/4W-RS485/2W-RS485
- Support NB-IOT/CAT M1/CAT 1/ZigBee/BT (BLE3.0)/LoRa (by model)
- Support 4 Digital inputs (Dry/Wet) / 4 Digital outputs (Sink)
- Support Data Log form mini SDCard
- Support GPS (optional)
- Support Modbus protocol
- Support MQTT/COAP protocol

IOT lighting

NEMA

- NEMA socket connected (ANSI C136.41)
- Support NB-IoT,LoRa,LoRa WAN,3G,4G
- Smart Control function (ON/OFF/Dimming), fault detection

Zhaga

- Platform connection - supporting MQTT and CoAP transfer protocol
- Supporting integrated ambient light sensor and accelerometer
- Electrical parameters monitoring

ORing Edge Server

- Powerful rack mount server
- Cluster computing and data backup
- Pre-configured system: Intel® Xeon®E3-1220v6, 8GB Memory, 1TB storage space
- Supported IoT protocol: MQTT and CoAP
- Device management system / LoRaWAN server

Antenna Model : IOTA-O5-IM-WG-01

(PCB Antenna for Smart Street Light unit)

- Small Size
- Customized design based on customers' needs
- High Reliability
- Provide different antenna design according to each field site

Cloud MagiCITY

- designed for Smart City Management
- Smart Streetlight Management
- Sensor Monitoring
- Path Tracking
- Smart Metering

ORing MagiCITY

ORing CMS

G

Visualized Management

Users can check the status of each light on a map. Any abnormal situation can be easily identified from the map i.e. red street light sign stands for defective working status. The visualized management can facilitate users to detect irregular failure from a big range of lighting territory.

Group Management & Flexiable Schedule

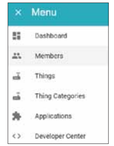
The quantity of each street light project is usually numerous. Group management provides users a more convenient way to overall inspect the status of street lights. The scheduling provides more flexibility in assemble on/off and dimming based on level of lightness due to seasonable changes. Users can also design based on the ambient numbers of people. For example, if the location where street light installed has fewer people during mid-night, the dimming level can be reduced to level adapt to the ambience and save unnecessary energy consumption.

Power Consumption Calculating

Via our Data collecting and analysis system, you can easily to obtain the indivisual or totoal power comsumtion of your devices

Console Panel

In ORing Console Panel, you can easily manage members, thing, thing categories and applications. You can also find the statistical data at the dashboard page.



Smart Data Logger

Easy to log and save your data to database, currently we support MySQL, MongoDB and Redis

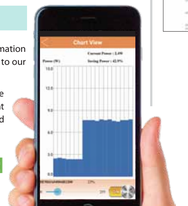
MySQL redis mongoDB

Powerful APP

Construction APP is capable of collecting essential information from street lights such as GPS, Zigbee ID and upload data to our public or private cloud.

Light control APP can manipulate, monitor and manage the street lights remotely. Statistical chart in light control APP can display power consumption and cloud server can make further analysis.

android



IoT Device Installation Flow

H

IOT device Installation APP Tool

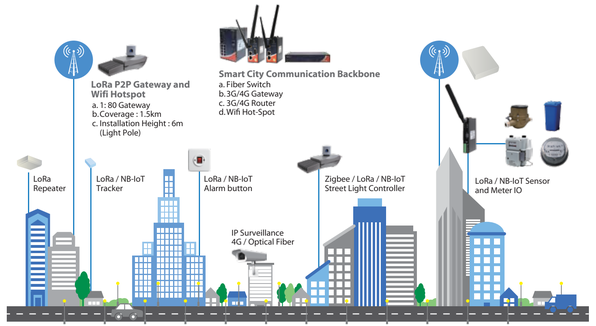
I

How to build the IoT devices clear and accuracy is the most important know-how in Smart City Total Solution.

- QR Code Device Management
- GPS
- Network Setting
- Camera
- Engineering Report
- Engineering Installation Instruction

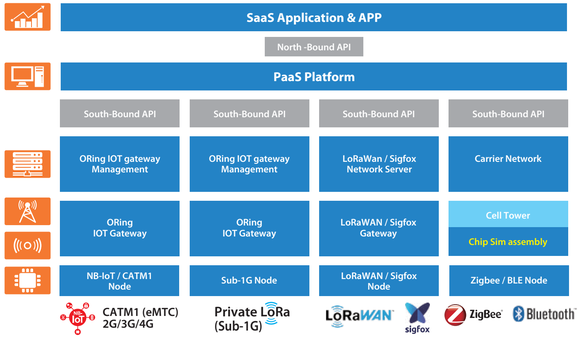
ORing Smart City Solutions

C



ORing Solution for variant IoT technologies

D



Success Stories

J

Panama City

In Panama, the electricity source is from DC(direct current) 24V solar panel which is on the top of lamp; the structure is different than other countries. It will lead to more modifications of its CMS different than others. ORing demonstrates its unusual flexible R&D strength to suit diversified demands in each country.

Jiangsu Province, China

China has vast realm and so as well potential in developing IoT Smart Lighting Control System as its massive energy demand and eager for power saving scheme. ORing has installed 13,000 nodes in Jiansu Province, southern part of China. The achievement of power saving in this project is up to 80% depending on different dimming levels. For such a large area implementation, it easily saves the cost of maintenance and monitoring the status of street light via ORing intellectual street light management system. As China has its own visualized Baidu Map, ORing implement the CMS into Baidu Map rather than Google map. The remote control on/off and dimming transform the city into a best practice of smart city in China.

Taoyuan, Taiwan

ORing got the project of 6000 nodes in Taoyuan, Taiwan. Installing smart lighting control unit makes it easier to manage and monitor the status of street lights remotely and save maintenance time and man effort. The precise power consumption monitoring makes operator more aware of the power saving benefits, energy efficiency and reduction of carbon footprint.

We Bring You

Power Efficiency	Business Efficiency
Energy Saving Save energy up to 80% via LED and dimming	**Maintenance** Massively save the cost and time via remote monitor
Environmental Friendly Diminish carbon dioxide emission	**Security** Keep the fundamental function of street light and power saving simultaneously
Integration Well integrated with other renewable energy supply such as solar power	**Stability** Minimize the down time via auto-alert to staff in charge

ORing

Get Connected Anytime, Anywhere

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2018.8

The Next Generation of Your City.

Upgrade Your City with Our IIoT Solution

- Smart Street Lighting Control System
- IP Surveillance
- Traffic Status & Congestion Alert
- Urban Communication Networks
- Sensors of Air Quality (PM2.5)
- Smart Parking Service
- City Information Bulletin Board

ORing

www.ORingnet.com

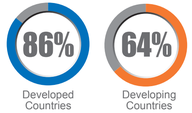
The "Must Have" in Future Cities

A

From the forecast of Strategy Analytics 2015, urban living will contain 86% of the developed countries and 64% of developing countries by 2020.

The circumstance of global population shifting to urban centers is stimulating the development of "Smart Cities" which is to maximize the efficiency of crucial resources such as utilities, water supply and transportation services and so on. These cities in the future will combine and leverage Internet of Things (IoT) and Information and Communications (ICT).

From the forecast of Strategy Analytics 2015, urban living will contain 86% of the developed countries and 64% of developing countries. It makes resource allocation me more critical for global development, especially in ICT and relative integrated IoT system. According to the report of "The Future of Smart Cities- Opportunities, solution and Players," ICT revenues from urban living will reach $977 Billion by 2022. End to end systems such as cloud computing and data collection mechanism becomes essential to sustainably urban living in terms of how to make proper use of energy and further increase service quality of public infrastructure.



What can ORing Do for You?

B

Creat your IoT Application Agilely

ORing has a strong R&D team for developing wireless communications technology. In light of the emergence of IoT, ORing has incorporated its technology strength with its gateways, modules, smart antennas and cloud service platform and apps to provide a complete IIoT solution. Our solution perfectly reflects the concept of Smart City and helps crate a sustainable future.

Potential IoT applications are growing such as Wi-Fi hotspots, PM2.5 air quality detection, urban marketing, and real-time surveillance systems. More business opportunities can be found in tremendous IoT solutions and we really look forward to inviting our ambitious customers to join our global IoT group.