## Agenda

- ORing Introduction
- Smart Street Light in Taiwan
- Why ORing?
ORing in Vertical Market

Industry 4.0
Industrial Internet of Things
Smart City
Smart Factory
IP Surveillance
Manufacturing Automation
ITS
Building Automation
Smart Grid
In-Vehicle Surveillance
Oil and Gas
Railway
Renewable Energy
Smart Streetlight in Taiwan Technology
Smart Streetlight - ZigBee

IIOT ORing

Master

Slave

Slave

Slave

Slave

3G / 4G

2.4Ghz

Mesh topology
Distance < 300m

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Smart Streetlight – LoRa/LoRaWAN

3G / 4G / Ethernet

Master/LoRaWAN Gateway

Slave

Sub-1 Ghz
Star topology
Distance < 15km (open area)
Smart Streetlight – NB-IoT

Licensed band
Unlimited distance
Without gateway
Smart Streetlight Products

- NB-IoT
- LoRa
- LoRaWAN
- ZigBee

- Zhaga
- NEMA
- ORIO

Master
- LoRaWAN GW
- Master
- Slave
- NEMA
- Zhaga
Global Projects

25,000pcs Deployed Globally.
Experienced Professionals & One-Stop Solutions
Smart Streetlight in Taiwan
Biz Model
Human Technology

Technology comes from Humanity

1. Energy
Reduce energy consumption.

2. Money
Pay by saving & ESPC.

3. Illumination
Excellent illumination & maintenance efficiency, PFI & PPP

4. Applications
Big data, ad, policy, emergency...

Street light company
ESCO (Energy Services Company)
ICT (Information and Communication Technology), Bank...
Consultant, Telecom, Gov...
Conclusion

Big data

IoT = I Love Technologies

Saving
Why ORing?
ORing IoT Total Solution Architecture

SaaS
- Smart Traffic Management
- Smart Energy Saving
- Smart Building/Elevator
- Environmental Monitoring
- Factory Automation

PaaS
- Account Management
- Thing Management
- Data Logger
- Security Management
- Network Management
- Rule Engine
- VPN Server
- REST API
- Node Red

Gateway/IO
- Switch
- AP/AR
- IoT Gateway
- Streetlight Master

Sensor/Actuator
- 3rd Party Integration

Edge Service

REST API
Node Red
ORing IoT Smart City Solution
ORing Product – Smart Lighting

- Dashboard
- Street Light Management
- Sensor
- Data Analyze
- Map
- Rule Engine
**ORing Product – Other solution**

**Successful Stories**

**Application:** AED  
**Project requirements:**  
- Location: Taiwan  
- Door Detection  
- System Information Report

**Product Spec:**  
- UART for read system information  
- DI for door detection

**Application:** Packing lock  
**Project requirements:**  
- Location: Taiwan  
- Parking Baffle Control and Power Monitor  
- Battery Embedded

**Product Spec:**  
- Motor Control  
- Voltage Sensor  
- Magnetic Sensor  
- **NBIoT + BLE (Hybrid)**
ORing Partner
Welcome & Enjoy
## ORing Product Line

<table>
<thead>
<tr>
<th>Industrial Ethernet Switch</th>
<th>Industrial Media Converter</th>
<th>Industrial Serial Products</th>
<th>Wireless Access Point</th>
<th>Industrial VPN Router</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managed L2/L3</td>
<td>Copper/ PoE to Optical Fiber</td>
<td>Serial to Ethernet/Wireless Device Server</td>
<td>Industrial Wireless Access Point</td>
<td>Industrial Cellular VPN Router</td>
</tr>
<tr>
<td>Lite-managed</td>
<td>Ethernet to VDSL</td>
<td>Serial to Optical Fiber</td>
<td>Outdoor IP67 Wireless Access Point</td>
<td>Outdoor IP67 Cellular VPN Router</td>
</tr>
<tr>
<td>Unmanaged</td>
<td></td>
<td>Serial to Serial / Repeater</td>
<td>IEEE 802.11a/b/g/n/ac</td>
<td>3G and 4G LTE</td>
</tr>
<tr>
<td>Copper/Fiber</td>
<td></td>
<td>Modbus TCP to Modbus RTU</td>
<td>Dual RF</td>
<td>Dual Modem / Dual SIM</td>
</tr>
<tr>
<td>10/100/1000Mbps and 10G</td>
<td></td>
<td></td>
<td></td>
<td>IEEE 802.11 a/b/g/n</td>
</tr>
<tr>
<td>Fixed or Modular design</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PoE 802.3af/at/bt</td>
<td></td>
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</tr>
<tr>
<td>PoE Injectors/Splitters/Extenders</td>
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- Copper/ to Optical Fiber
- Ethernet to VDSL
- Serial to Ethernet/Wireless Device Server
- Serial to Optical Fiber
- Serial to Serial / Repeater
- Modbus TCP to Modbus RTU
- Industrial Wireless Access Point
- Outdoor IP67 Wireless Access Point
- IEEE 802.11a/b/g/n/ac
- Dual RF
- Industrial Cellular VPN Router
- Outdoor IP67 Cellular VPN Router
- 3G and 4G LTE
- Dual Modem / Dual SIM
- IEEE 802.11 a/b/g/n
## ORing Product Line

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<th>Management Utility</th>
<th>Industrial M2M Gateway</th>
<th>Accessories</th>
<th>Industrial IOT</th>
</tr>
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<tbody>
<tr>
<td>● Network Management Software – Open-Vision 4.0</td>
<td>● 3G and 4G LTE</td>
<td>● Fiber Optical Accessories</td>
<td>● IoT Cloud Platform</td>
</tr>
<tr>
<td>● Topology View</td>
<td>● LPWA CAT-M1 and NB-IoT</td>
<td>● RF Accessories</td>
<td>● IoT APPs</td>
</tr>
<tr>
<td>● Commander</td>
<td>● Ethernet/Wi-Fi/Serial</td>
<td>● Power Supplies</td>
<td>● Smart Streetlight Controllers</td>
</tr>
<tr>
<td>● Host Monitor</td>
<td>● Modbus TCP/RTU</td>
<td>● Industrial Cables</td>
<td>● IoT Gateways and Remote I/O</td>
</tr>
<tr>
<td>● Centralized Management</td>
<td>● MQTT/CoAP/LWM2M</td>
<td>● Backup Unit</td>
<td>● IoT Modules</td>
</tr>
<tr>
<td>● Traffic Monitoring</td>
<td>● VPN</td>
<td></td>
<td>● LTE/CAT-M1/NB-IoT</td>
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</table>

- **ORing**

![ORing Logo](image)

Get Connected Anytime, Anywhere

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