

- Make Sensing Matter ▪



## Milesight IoT Product Brochure

V1.9



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Product Brochure



LoRaWAN®  
Product Catalogue



5G Router  
Catalogue



# About Milesight IoT

Milesight is a multi-dimensional sensing products company transforming how the world is perceived and connected, and delivering safety, efficiency, and business insights.

Our mission is to digitalize the world with connected sensors, deliver the most accurate and valuable data, and extract actionable insights with our partners. Together, we are driving real and positive impact for businesses.

Our vision is to continuously drive the society and environment towards a more connected, efficient, and sustainable future.



## Milesight Milestone



# Why Milesight



## Professional Technology

- Strong IoT know-how
- State-of-the-art IoT technology: 5G, sensing, LoRaWAN®, Milesight D2D, AI



## Strong Capabilities

- 56% of employees are working in R&D team
- 15% revenue invested into R&D



## Compliance and Associations



## Flexible Integration

- The Things Industries, ChirpStack, Actility, AWS, and many more
- Embrace easy interoperability with other network servers and clouds



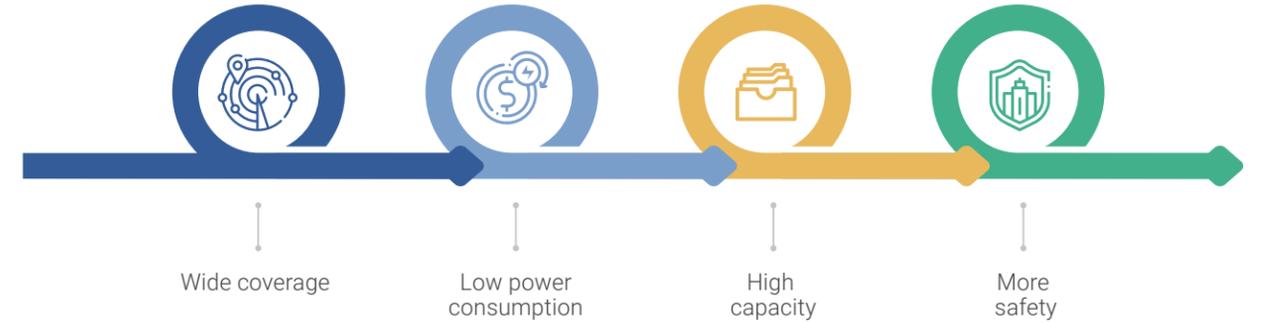
## Worldwide Coverage

- Provide services over 120+ countries and regions
- Form a healthier and value-added channel management network

# WHY MILESIGHT

# Why LoRaWAN®

LoRaWAN® is a long range, wide area, and low-power networking protocol.



# Why Milesight D2D

Milesight D2D is a device to device communications protocol which enables LoRaWAN® based devices to communicate directly with one another when they are in the same group.

\* Independently Developed by Milesight

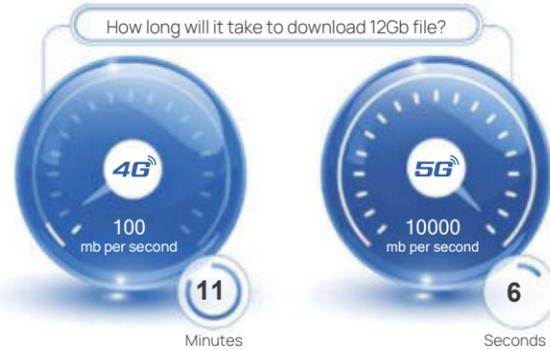


- Low latency
- Low power for battery operation of both sides
- Long range and as secure as LoRaWAN®
- No useless beaconing and difficult synchronization
- Initial feature which coexists with LoRaWAN®
- No additional hardware and LoRaWAN® gateways are needed



# Why 5G

## What Is 5G?



5G's ultra high-speed, which is around 100 times faster than 4G, is designed to connect virtually everyone and everything together including machines, objects and devices.

## How Can Mulesight Empower Business and Industry?

According to the GSMA, 5G accounted for 8 percent of global mobile connections in 2021, with the share considerably lower in most parts of the world. People remain less convinced 5G will change how they connect to the internet and less likely to pay more for 5G connections. Against that backdrop, Mulesight is committed to develop the most universal, pragmatic, and innovative products & solutions to those industries who need 4G to 5G migration solution, as well as boost the 5G adoption.

- Accelerate the Fusion of 5G and AI to Help Industries Development
- Replace Expensive Wired Cable with Reliable 5G Connections
- Lower Latency Enables Business Improvements



# WHY Mulesight? Because We Make Sensing Matter



### Capturing Meaningful Data Matters

We provide multi-potential sensing products, focusing on the data that adds value, reflects patterns, and assists decision-making.



### Responding to Customer Demands Matters

We adapt to evolving customer needs, creating products that are relevant to them and making a significant impact across varied applications, projects, and industries.



### Thriving Together with Partners Matters

Alongside our expanding partner ecosystem, we develop comprehensive solutions, deliver value offerings, and accelerate results for customers.

# Product Application Matrix

**Product Series**

- Occupancy & People Counting Series
- WS & WT & CT Series
- EM Series
- AM & GS Series

## Smart Building

<b>People Sensing (Spatial Efficiency)</b>	ToF: VS13x-VS330, VS351-VS341, VS340-VS350-VS360, VS125-VS121-VS321, VS370
<b>Workplace Facility Management</b>	Wireless Control: WS101, WS156/WS136, WS50x, WS558, WS202, WS302, WS301
<b>Energy Management</b>	Current Monitoring: CT3xx, CT10x; Circuit Management & Power Collection: WS51x, WS523, WS558
<b>HVAC &amp; TH Monitoring</b>	Temperature Control: WT30x, WT201, WT101; TH Monitoring: WS203, EM300-TH, EM320-TH
<b>Smart Restroom</b>	9-in-1 IAQ Monitoring: AM300 Series; Fill-level & Leakage Monitoring: WS201-WS303; Fill-level Monitoring: EM400-TLD; Cubicle Detection: VS330
<b>Indoor Air Quality Monitoring</b>	3-in-1 IAQ Monitoring: AM100 Series; 9-in-1 IAQ Monitoring: AM300 Series; Odor Detection: GS301(NH <sub>3</sub> & H <sub>2</sub> S), GS601
<b>Resource Management</b>	Leakage Monitoring: WS303, EM300-MLD, EM300-SLD/ZLD
<b>Parking Management</b>	Ultrasonic Distance Measurement: EM400-MUD, EM400-UDL; RGB: PM3322-E

## Smart Retail

<b>People Sensing (Spatial Efficiency)</b>	ToF: VS13x&VS330, VS351&VS341, VS340&VS350&VS360, VS125&VS121&VS321, VS370
<b>Environmental Sensing</b>	Temperature & Humidity Monitoring: EM300-TH, EM320-TH; 3-in-1 IAQ Monitoring: AM100 Series; 9-in-1 IAQ Monitoring: AM300 Series; Odor Detection: GS301(NH <sub>3</sub> & H <sub>2</sub> S)

## Smart City

<b>Resource Monitoring</b>	Ultrasonic Distance Measurement: EM400-MUD; ToF Distance Detection: EM400-TLD; Tilt Monitoring: EM320-TILT; Magnetic Contact: EM300-MCS
<b>Outdoor Environmental Sensing</b>	CO <sub>2</sub> Monitoring: EM500-CO <sub>2</sub> ; Illumination Monitoring: EM500-LGT; Water Level Monitoring: EM500-SWL; Picture Capture: EM410-RDL, X5
<b>Others (Public Utility)</b>	Ultrasonic Distance Measurement: EM400-UDL, EM500-UDL; Pulse Detection: EM300-DI; Pipe Pressure Detection: EM500-PP; Picture Capture: X1; Current Monitoring: CT3xx

## Smart Agriculture

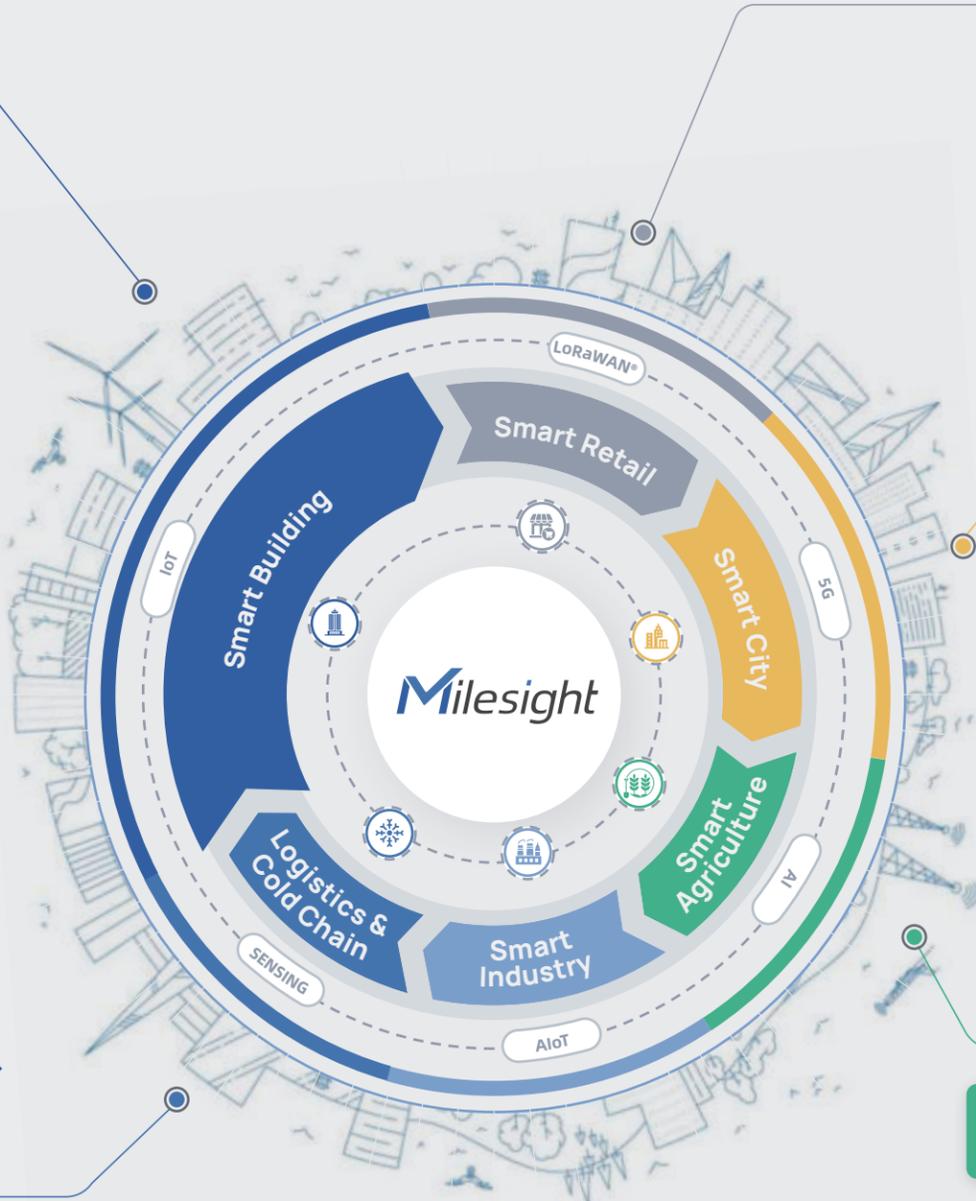
<b>Irrigation &amp; Soil Monitoring</b>	3-in-1 Soil Monitoring: EM500-SMTC; Solenoid Valve: UC51x
<b>Outdoor Environmental Sensing</b>	Illumination Monitoring: EM500-LGT; CO <sub>2</sub> Monitoring: EM500-CO <sub>2</sub> ; Weather Station: WTS506

## Logistics & Cold Chain

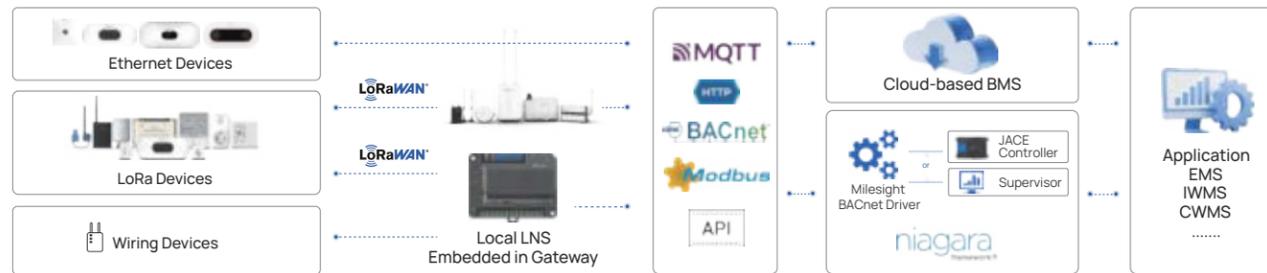
<b>Food Hygiene</b>	Temperature & Humidity Monitoring: EM320-TH, EM300-TH, TS30x	<b>Warehousing</b>	Temperature & Humidity Monitoring: EM300-TH, TS201
<b>Pharmaceutical Cold Chain</b>	Temperature & Humidity Monitoring: EM320-TH, TS30x, TS201	<b>Transportation</b>	Temperature & Humidity Monitoring: TS60x

## Smart Industry

<b>Industrial Environmental Sensing</b>	Temperature Monitoring: EM500-PT100, TS30x	<b>Facility Management</b>	Ultrasonic Distance Measurement: EM400-UDL, EM500-UDL; Magnetic Contact: EM300-MCS; Industrial Signal Converter: UC50x
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# Empower Smart Building Integration with Niagara



Facility Protection & Maintenance	Efficient Management	Meter Retrofits	Restroom Management
<p><b>Circuit Operational Status Monitoring</b></p> <p>CT Series</p> <hr/> <p><b>HVAC System Performance Monitoring</b></p> <p>WT Series    IAQ Series</p> <hr/> <p><b>Facility Protection</b></p> <p>TS Series    EM Series</p>	<p><b>HVAC Control</b></p> <p>WT Series</p> <hr/> <p><b>Lighting Control</b></p> <p>WS Series</p>	<p><b>Remote Meter Reading</b></p> <p>UC Series</p> <hr/> <p><b>EM300-DI</b></p> <p>EM300-DI</p>	<p><b>Restroom Cleaning Schedule Management</b></p> <p>People Sensing    WS Series</p> <hr/> <p><b>Restroom Supplies Management</b></p> <p>WS Series</p>

HVAC Management	Lighting Management	Energy Monitoring & Management
<p><b>Unified Manual Dispatch &amp; Local Automation Adjustment</b></p> <p>WT Series</p> <p><b>Data-Driven Control: Real-Time Local Interaction</b></p> <p>IAQ &amp; WS Series    VS Series</p> <hr/> <p><b>Data-Driven Control: Energy-Saving Strategy Optimization</b></p> <p>CT Series    EM &amp; TS Series    EM Series</p>	<p><b>Smart Lighting Control</b></p> <p>WS Series</p> <hr/> <p><b>VS Series</b></p> <p>VS Series</p>	<p><b>Data-Driven Control: Real-Time Local Interaction</b></p> <p>WS Series</p> <hr/> <p><b>Data-Driven Control: Energy-Saving Strategy Optimization</b></p> <p>WS Series</p> <hr/> <p><b>CT Series</b></p> <p>CT Series</p>

# People Sensing Driven Smart Building



Facility Management
<p>Facility Protection &amp; Maintenance</p> <p>Efficient Management</p> <p>Meter Retrofits</p> <p>Smart Restroom Management</p>
Energy Management
<p>HVAC Management</p> <p>Lighting Management</p> <p>Energy Monitoring &amp; Management</p>
Value-Driven Space Management
<p>Environmental Comfort Improvement</p> <p>Office/Workspace Space Management</p> <p>Smart Restroom Comfort</p> <p>People Caring</p> <p>Human Well-being Certification Assistance</p>

Environmental Comfort	Workspace Management	People Caring	Smart Restroom Comfort
<p><b>Temperature and Humidity Control</b></p> <p>IAQ &amp; EM Series</p> <p>WT Series</p> <p>VS Series</p> <hr/> <p><b>Noise Monitoring (E-)Cigarette Detection</b></p> <p>WS302    GS601</p>	<p><b>Space Optimization</b></p> <p>VS &amp; DS Series</p> <hr/> <p><b>Footfall Monitoring</b></p> <p>VS Series</p> <hr/> <p><b>Sanitation Management</b></p> <p>VS Series</p>	<p><b>Safety &amp; Healthy Monitoring</b></p> <p>VS373 Fall Detection</p> <hr/> <p><b>Human Well-being Certification Assistance</b></p> <p>IAQ Monitoring</p> <p>Sustainability</p> <p>Fire Safety</p>	<p><b>Restroom Air Quality Management</b></p> <p>GS301</p> <hr/> <p><b>User Satisfaction Management</b></p> <p>VS350    Display</p>

# Put the "Smart" in Milesight Headquarters:

Unveiling Milesight's Smart Green Building for Enhanced Energy Efficiency and Cost Savings



## A Glimpse into Milesight Headquarters

- Area **10,400m<sup>2</sup>**
- Workstations **740**
- Sensors **352**
- Functional Rooms/Areas **20**
- 40** Meeting Rooms
- 126** Cameras
- 5** Floors
- 1** Underground Parking
- 1** Rooftop



## Inside the Smart Green Building of Milesight



Energy efficiency and sustainable development have always been our goals to design the smart Milesight building. Moreover, for our staff, the company is where they spend the most time outside of their homes during the week. We aspire furnish employees with an intelligent, comfortable workspace, elevating job contentment.

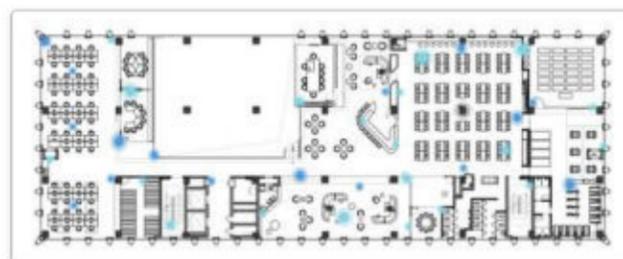


----- Sway Hong, Director of R&D Department



## Deployment Map

In the Milesight Green Building, there are a total of 352 Milesight sensors and 126 AI Network Cameras in deployment. These sensors play a crucial role in making the building smarter, enhancing energy efficiency and employee satisfaction. Additionally, the 126 Milesight AI Network Cameras strategically placed throughout the building serve to detect unauthorized access and suspicious loitering, effectively safeguarding lives and property.

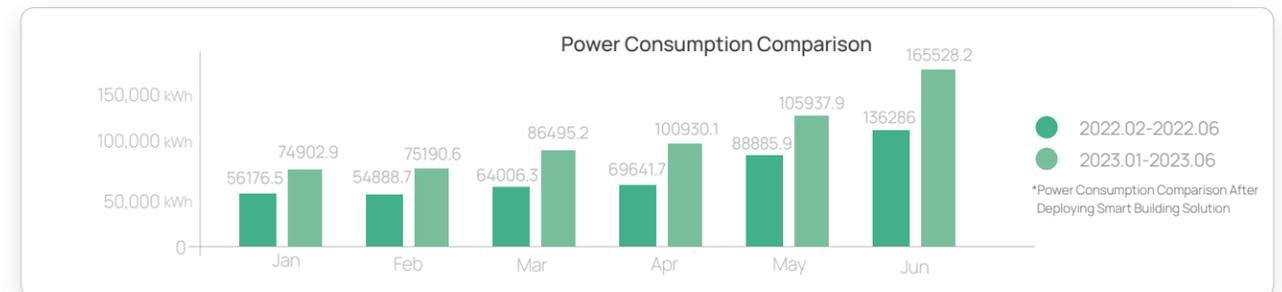


● Cameras ● Sensors

# Results on Quantifiable Benefits: Save Approximately \$45,000 per Year



## Energize Energy Efficiency and Sustainability



## Enhancing ESG with Milesight Green Building



### Environmental Impact

The Milesight Green Building emphasizes energy efficiency and sustainability, aligning with global environmental goals. By utilizing advanced technologies like LoRaWAN®, AI, and 5G, the building optimizes energy and water consumption, significantly reducing its carbon footprint. Real-time monitoring and intelligent systems ensure that resources are utilized efficiently, contributing to a greener environment.



### Social Responsibility

Milesight's dedication to creating a smart and comfortable workspace for employees demonstrates their commitment to social responsibility. The focus on indoor air quality occupant comfort, and smart restroom solutions enhances the overall well-being and satisfaction of the workforce. This approach fosters a conducive work environment that prioritizes the health and happiness of its employees



### Governance

Incorporating state-of-the-art security measures and advanced surveillance systems Milesight showcases its dedication to robust corporate governance. The deployment of AI-powered cameras, face-human recognition, and comprehensive security protocols ensures the safety of employees and protects valuable assets. These initiatives underline Milesight's commitment to maintaining a secure and well-governed workplace.

# Enable All-around Connectivity

Milesight IoT Gateway



Comparison Guide for IoT Gateways



## HL31 Wi-Fi HaLow Gateway

- Support sub-1 GHz spectrum operation for a wider transmission
- Support Wi-Fi HaLow AP mode to connect to Wi-Fi HaLow sensors
- Support both Ethernet & Cellular networks for data transmission
- Provide Wi-Fi 2.4G AP mode for configuration

## LoRaWAN® Gateway Overall Features

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>▶ Provide large capacity &amp; faster data processing</li> <li>▶ Handle higher amount of traffic with lower consumption</li> <li>▶ Handle massive sensor data efficiently</li> <li>▶ OpenVPN/IPsec/PPTP/L2TP/GRE/DMVPN</li> <li>▶ Support CN470/RU864/IN865/EU868/AU915/US915/KR920/AS923-1&amp;2&amp;3&amp;4</li> <li>▶ Connecting end nodes varies from Class A/B/C</li> <li>▶ Extraordinary features: Noise analyzer, multicast, gateway fleet</li> <li>▶ Embedded node-RED development tool (UG56/65/67)</li> <li>▶ Embedded Python SDK (UG56/65/67)</li> </ul> | <ul style="list-style-type: none"> <li>▶ Listen before talk</li> <li>▶ Support BACnet (UG56/65/67)</li> <li>▶ High Compatibility with Multiple Network Servers, including:                     <ul style="list-style-type: none"> <li>• Remote Embedded NS</li> <li>• Milesight DeviceHub LNS</li> <li>• Embedded Network Server</li> <li>• Milesight Development Platform LNS</li> <li>• Compatible with Mainstream Network Servers</li> </ul> </li> </ul> |
|--|---|



## SG50 Ultra Low Power Solar LoRaWAN® Gateway

- Rated at IP67 and industrial design
- Built-in rechargeable batteries & Solar panel
- Support typical use for up to 4 days without sunlight
- Support cellular backhaul network



redot winner 2024



## UG63 Mini LoRaWAN® Gateway

- Rated at IP30 and mini-sized
- Desktop, wall or ceiling mounting
- Power supply via 5V type-C port, PoE or 5-12V DC by terminal block
- Backhaul backup: Ethernet and cellular

## UG56 Industrial LoRaWAN® Gateway

- Rated at IP30 and industrial design
- Desktop and wall mounting
- 5V Type-C port or PoE
- Backhaul backup: Ethernet, cellular and Wi-Fi
- Support Milesight BACnet Driver



## UG65 Semi-Industrial LoRaWAN® Gateway

- Rated at IP65 and semi-industrial grade
- Desktop, wall or pole mounting
- 9-24 VDC Jack connector or PoE
- Backhaul backup: Ethernet, cellular and Wi-Fi
- Support Milesight BACnet Driver

## UG67 Outdoor LoRaWAN® Gateway

- Rated at IP67 and industrial design
- Wall or pole mounting
- DC, PoE or solar power supply (optional)
- Backhaul Backup: Ethernet, cellular and Wi-Fi
- Support Milesight BACnet Driver
- Power outage alert
- GPS positioning



## EG71 Building IoT Gateway

- Integrated LoRaWAN® network server
- Programmable and support local BMS operation
- Support mainstream BMS protocols including BACnet/IP, Modbus RTU/TCP, KNX, and M-Bus

# See the Unseen to Know Indoor Air Quality

IAQ Sensor



Comparison Guide for IAQ Sensors



## 2-in-1 AM102/AM102L

- Traffic light indicator
- Anti-theft protection
- Battery life up to 7 years (AM102)/ 9 years (AM102L)
- Cost-effective bulk deployment



temperature  
humidity

## 3-in-1 AM103/AM103L



- Traffic light status indicator
- Anti-theft protection
- Smart screen mode
- Hibernation mode
- Support data storage and retransmission
- 2.13-inch E-ink screen (AM103)
- Battery life up to 3 years (AM103) / 4 years (AM103L)

## 7/8/9-in-1 AM307/AM308(L)/AM319

- Traffic light indicator & buzzer
- Higher accuracy & Smart screen mode
- Anti-theft protection
- Data retrieval and data retransmission
- 4.2-inch E-ink screen (AM307/AM308/AM319)
- Vivid emoticon indication (AM307/AM308/AM319)
- Powered via USB Type-C(AM319)
- Battery life up to 3 years (AM307) / 1.5 years (AM308L) / 1 year (AM308)



# Empowering Efficient Energy Management

CT Series



## Overall Features

- ▶ Self-powered operation
- ▶ Superior accuracy with up to 3.3kHz frequency
- ▶ Real-time accumulated ampere hour calculation
- ▶ Non-invasive installation
- ▶ Irregular current/temperature status alert
- ▶ LoRaWAN® wireless technology

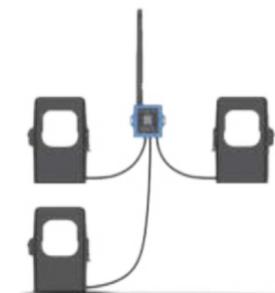
## CT10x Smart Current Transformer



- CT101 with 100A current capacity
- CT103 with 250A current capacity
- CT105 with 500A current capacity
- Detachable and cable-free design

## CT3xx Smart Current Transformer

- CT303 with 300A current capacity
- CT305 with 500A current capacity
- CT310 with 1000A current capacity
- Innovative one-to-three design



# Top in Occupancy & People Counting, and Lead the People Sensing

People Sensing



**Space Occupancy Detection**  
**VS121 AI Workplace Occupancy Sensor**

- Accuracy: Up to 95%
- Technology: AI, RGB
- Functionality: Bi-directional/Regional people counting, multi-zone occupancy detection
- Application: Workplace

**Wireless Bathroom Occupancy Detection**  
**VS330 Bathroom Occupancy Sensor**

- Accuracy: Up to 99.5%  
 \*Will be influenced by outdoor sunlight  
 \*Not appropriate for some cubicles
- Technology: PIR, ToF
- Functionality: Occupancy detection
- Application: Restrooms



**Occupancy Detection in Meeting Rooms**  
**VS370 Radar Human Presence Sensor**

- Accuracy: Up to 99%
- Technology: Millimeter Wave Radar and PIR
- Functionality: Presence detection
- Application: Meeting rooms of all sizes

**Wireless Occupancy Sensor**  
**VS321 Battery Version Workplace Occupancy Sensor**

- Accuracy: Up to 95%
- Technology: PIR, RGB, AI
- Functionality: Occupancy detection
- Application: Offices, meeting rooms, campuses, etc.



**Fall Detection**  
**VS373 Radar Fall Detection Sensor**

- Accuracy: Up to 99%
- Technology: Millimeter Wave Radar
- Functionality: Fall detection
- Application: Nursing home rooms, hospital wards, public restrooms, etc.



Comparison Guide for People Counting Products

## People Counting



### Indoor People Counting VS133 AI ToF People Counting Sensor

- Accuracy: Up to 99.8%
- Technology: AI, 2nd generation ToF
- Functionality: Bi-directional/Regional people counting, dwell time detection
- Application: Retail, building, airport, supermarket
- Advanced Features: Staff detection · adults/children differentiation · group counting · heat map · multi-device stitching (4 devices) · shopping cart & tailgating detection



### Wireless Indoor Passage People Counting VS350 Passage People Counter

- Accuracy: Multiple people: ~80%
- Technology: Dual PIR
- Functionality: Bi-directional people counting
- Application: Retail, workplace, restroom

### High-Ceiling Indoor and Semi-Outdoor People Counting VS135 Ultra ToF People Counter

- Accuracy: Up to 99.8%
- Technology: AI, 2nd generation ToF
- Functionality: Bi-directional/Regional people counting, dwell time detection
- Application: Retail, building, airport, supermarket
- Advanced Features: Staff detection · adults/children differentiation · group counting · heat map · multi-device stitching (8 devices) · shopping cart & Tailgating detection



6.5m High Mounts IP65

### Wireless Indoor Entrance People Counting VS351 Mini AI Thermopile People Counter

- Accuracy: Up to 95%
- Technology: Radar, thermopile
- Functionality: Bi-directional people counting
- Application: Meeting room



### Indoor People Counting VS125 AI Stereo Vision People Counter

- Accuracy: Up to 99.8%
- Technology: AI, binocular stereo vision
- Functionality: Bi-directional/Regional people counting, dwell time detection
- Application: Retail, building, airport, supermarket
- Advanced Features: Staff detection · adults/children differentiation · group counting · heat map · multi-device stitching (16 devices) · shopping cart & Tailgating detection

GDPR Outdoor Version Large Field-of-view Version

### Indoor Semi-Open Area People Counting VS360 IR Breakbeam People Counter

- Accuracy: Multiple people: 85%
- Technology: IR breakbeam
- Functionality: Bi-directional people counting
- Applications: Meeting room entrances, corridors, escalators, pop-up stores



### Storefront People Counter VS361 Storefront Footfall Sensor

- Accuracy: Up to 99%
- Technology: Infrared
- Functionality: Footfall and people counting
- Application: Retail storefront



### High Ceiling Indoor People Counting VS126 AI Ultra High-Mount People Counter

- Accuracy: Up to 99.8%
- Technology: AI, binocular stereo vision
- Functionality: Bi-directional/regional people counting, dwell time detection
- Application: Retail, building, airport, supermarket



# Smart Heating and Cooling Controls

WT Series



## WT101 Smart Radiator Thermostat

- LoRaWAN® based for wireless transmission
- Accurate temperature detection and calibration
- Up to 16 heating plans within 1 pre-set date period
- Support child lock to prevent tampering
- Open window detection for smart management
- Fully compatible valve adapters out of the box
- Support integration with BMS systems
- Easy configuration via NFC
- Support freeze protection

## WT102 Smart Radiator Thermostat

- Self-powered without extra power
- LoRaWAN® Class B for rapid, precise, and efficient control
- Smart temperature control: fast comfort, optimal energy efficiency
- Remote panel enables easy, unified control across devices with WT401



## WT201 Smart Thermostat

- LoRaWAN® based for wireless transmission
- 4.2 -inch LCD screen
- 64 independent local scheduling
- 4 customizable temperature control and 3 fan modes
- Compatible with hotel room card systems
- Support child lock to prevent tampering
- Support integration with BMS systems
- Easy configuration via NFC
- Support Milesight D2D featuring LoRa®



## WT303/WT304 FCU Thermostat

- Suitable for 2 pipe/4-pipe FCU
- On/off Relay/0-10V Valve
- AC100-240V
- Support Milesight D2D
- Data-driven control
- Energy-saving strategy

## WT401 Wireless Smart Thermostat

- Wireless operational mode
- Simplified management
- Local automation adjustment
- 5-year battery life
- Better with UC711 HVAC Controller

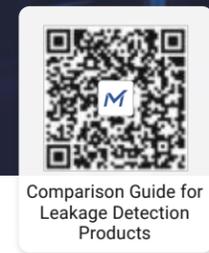


## UC711 HVAC Controller

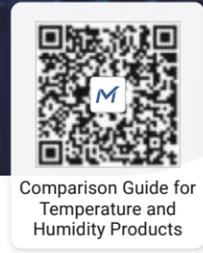
- Work smoothly pairing with WT401 wireless thermostat via BLE or PowerBus
- Supports up to 4 Heat/2 Cool, & Cool, Heat, Auto, & 5 Fan modes including Auto/High/Medium/Low/Circulate
- Specialized HVAC system management module for more professional applications
- Schedules can work as you set even during disconnection for up to 72h
- Support 24VAC power Supply

# Monitor Conditions and Optimize Controls

EM300 Series - Environment Monitoring Sensor



Comparison Guide for Leakage Detection Products



Comparison Guide for Temperature and Humidity Products



## Overall Features

- ▶ Industrial-grade Design
- ▶ Support Extra Temperature and Humidity Detection (Except UDL&TILT&MLD)
- ▶ Rated at IP67
- ▶ Battery Life up to 5 Years
- ▶ Easy Configuration via NFC



Smart Office



Smart Hotel

### EM300-DI Pulse Counter

- Pulse/digital signals & temperature & humidity
- Great partner of old water meters
- IP67 rating for harsh environment
- Data retrieval and data retransmission



### EM300-MCS Magnetic Contact Switch Sensor

- Detect the opening or closing event of door & window to ensure security
- Data retrieval and data retransmission

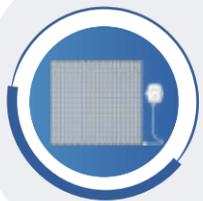


### EM300-TH Temperature & Humidity Sensor

- Temperature & humidity sensor
- $\pm 0.3^{\circ}\text{C}$  high accuracy of temperature and  $\pm 3\%$  RH of humidity
- Data retrieval and data retransmission

### EM300-SLD/ZLD Leak Detection Sensor

- Detect water leakage based on the principle of liquid conduction (SLD: Spot leak detection, ZLD: Zone leak detection)
- LoRaWAN<sup>®</sup> certified (EM300-SLD)
- Data retrieval and data retransmission



### EM300-MLD Membrane Leak Detection Sensor

- Accurate conductive liquids' leakage detection in a large area
- Support local data storage and data retransmission & retrievability

### EM320-TH FDA Approved Temperature and Humidity Sensor

- $\pm 0.2^{\circ}\text{C}$  high accuracy of temperature and  $\pm 2\%$  RH of humidity
- Strong waterproof performance for harsh environments
- FDA-approved food contact material
- Anti-theft and anti-slip pad design on back cover
- Data retrieval and data retransmission
- Low power consumption with 10 years battery life



### EM320-TILT FDA Approved Tilt Sensor

- 3-Axis accelerometer & built-in zero adjustment
- 36 customized trigger rules & rated at IP67

# Revolutionizing Measurement and Monitoring

EM400 Series Distance/Level Measurement Sensor



## EM400-TLD ToF Laser Distance Sensor

- Detection ranges from 2 cm to 350 cm
- Designed for level monitoring in small trash bins
- Two pre-set modes: standard mode/ bin mode
- ToF Technology for high accuracy and almost no blind spot



## EM400-MUD Multifunctional Ultrasonic Distance Sensor

- Detection ranges from 3 cm to 450 cm
- Specialized in distance detection in trash bin and parking lot
- Pre-set modes: standard mode & bin mode
- Support pre-set parking lot mode (LoRaWAN® version only)
- Ultrasonic technology with small blind spots and support calibration



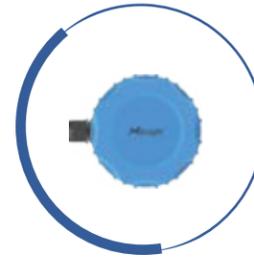
## EM400-UDL Ultrasonic Distance Sensor

- Detection ranges from 25 cm to 1000 cm
- Professional for detecting water level in reservoir, industrial tank level and etc.
- Standard/professional versions available
- Support calibration for better accuracy



## EM410-RDL Radar Distance Detector

- Millimeter-wave radar technology
- Up to 12 meters measurement range, 60GHz, 8°
- High dust protection level
- Battery-powered
- Sewer level detection



## EM411-RDL Radar Distance Detector

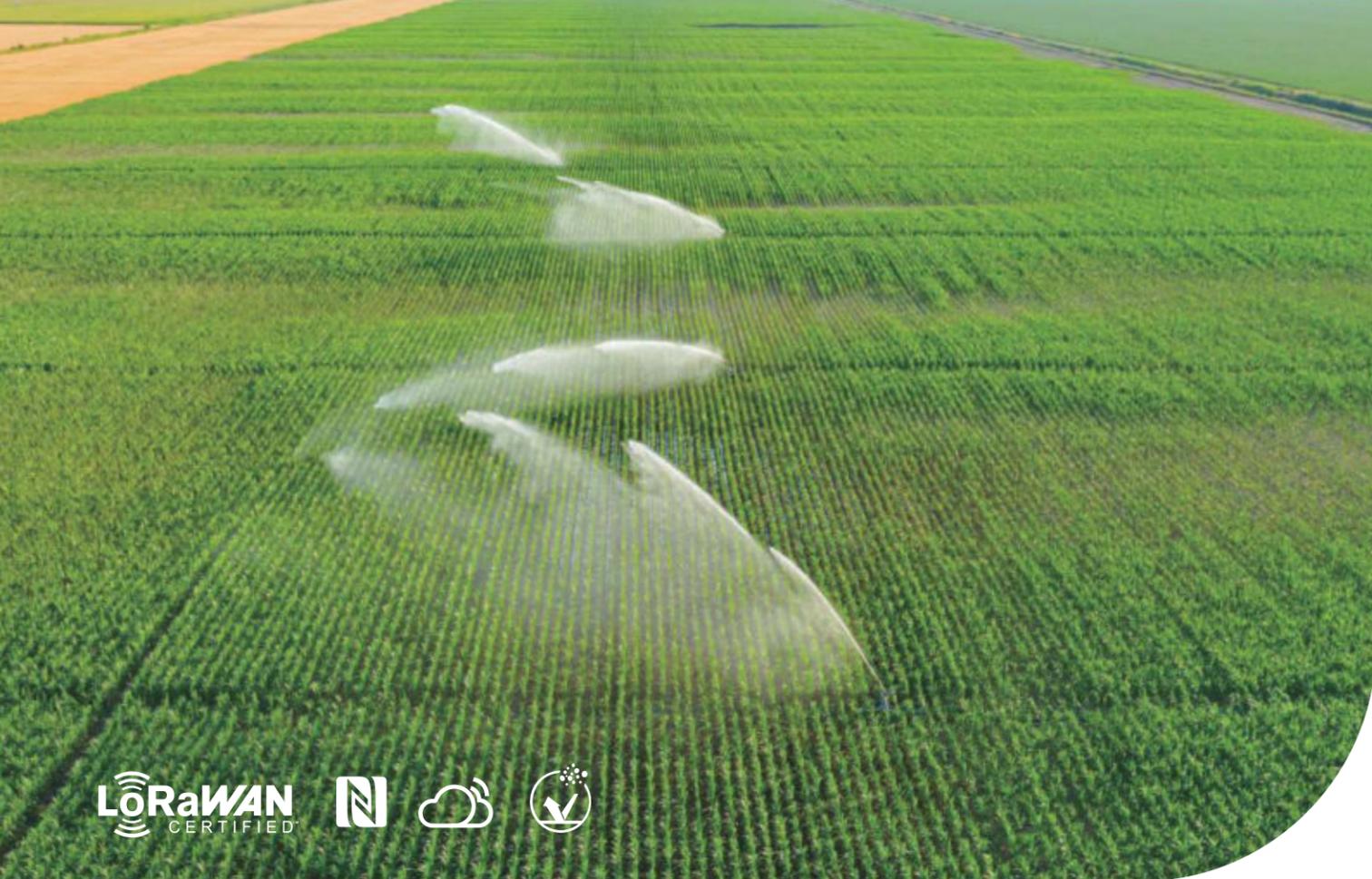
- ATEX Explosion-proof certified
- Flexible installation with both G-thread and NPT-thread versions
- Supports LoRaWAN® with multiple SKU configurations
- local data storage & data retransformation for reliable performance



Smart Parking Lot



Boiler Expansion Monitoring



# Reliable Data Collection for Long-term Remote Operation

EM500 Series - Outdoor Environment Monitoring Sensor

## Overall Features

- ▶ Rated at IP67
- ▶ Replaceable battery life up to 10 years
- ▶ Ultra-wide-distance transmission
- ▶ NFC configuration



### EM500-PT100 Industrial Temperature Sensor

- Customizable temperature (-200 ~ 800°C)
- Terminal heads are available varying from the straight tube, armored, SMT, threaded, magnet



### EM500-CO<sub>2</sub> Carbon Dioxide Sensor (4 in 1)

- 4 in 1 (CO<sub>2</sub>, temperature, humidity, barometric pressure)
- Measuring ranges (0 to 50°C): 400 ppm to 5000 ppm



### EM500-UDL Ultrasonic Distance /Level Sensor

- Suitable for measuring benign & chemical mediums
- Non-contact detection for any corrosive liquid chemicals or combustibles
- Measurements in very small containers or openings
- Measuring ranges: 0.3-5 m/0.5-10 m



### EM500-LGT Light Sensor

- Accurate detection of any light changes
- Measuring ranges from 0 to 100,000 lux with high precision



### EM500-SMTC Soil Moisture, Temperature and Electrical Conductivity Sensor

- Research-grade accuracy in multiple soil media
- Corrosion resistance & tough probe
- Rapid monitoring of growing conditions



### EM500-PP Pipe Pressure Sensor

- Shock & vibration & corrosion resistant
- Measuring accuracy around  $\pm 0.5\%$  FS to prevent leakage danger
- Temperature compensation for correcting temperature changes



### EM500-SWL Submersible Water Level Sensor

- Submersible pressure sensor not affected by foam, wind, or rain
- Measuring medium: water (Customizable for oil and other non-corrosive media)
- Customizable measuring range up to 200 m

# The Workplace of the Future - Safer and Smarter

CoWork Series



## WS101 Smart Button

- Support multiple press actions
- Convenient size
- Built-in LED indicator & buzzer
- Support Milesight D2D Featuring LoRa®
- Battery life over 5 years



## WS201 Smart Fill Level Monitoring Sensor

- Detection ranges from 1 cm to 55 cm
- Suitable for diverse toilet paper dispenser
- Accurate fill level monitoring with ToF technology
- Battery life up to 2 years



## WS202 PIR & Light Sensor

- Occupancy or motion detection
- Convenient size
- Built-in light sensor & PIR sensor
- Support Milesight D2D Featuring LoRa®
- Battery life up to 4 years



## WS156 & WS136 Smart Scene Panel

- 100% wire-free
- Customizable display (WS156)
- Customizable stickers (WS136)
- Battery life up to 3 years
- Support Milesight D2D Featuring LoRa®
- LoRaWAN® certified (WS156)



## WS203 Motion & TH Sensor

- Flexible motion detection
- Adjustable detection angles
- Battery life up to 5 years
- Built-in temperature and humidity sensor
- Support local data storage and data retransmission & retrievability
- Support Milesight D2D featuring LoRa®



## WS302 Sound Level Sensor

- Peak and average sound level measurement
- Simple design for blending with any interiors
- NFC configuration & wire-free installation
- LED alarm indicator
- Battery life up to 4 years



## WS50x Wall Switch

- Time-delay, schedule, remote and scene-based control
- 1/2-gang & multinational versions (AU, EU, UK & US)
- Power consumption statistics
- Multicast for remote control in bulk
- Support Milesight D2D featuring LoRa®



## WS523 Portable Socket

- Remote & time-based ON/OFF
- Power consumption measurement and collection
- Overload protection/alarm
- Support multicast



## WS558 Smart Light Controller

- Control up to 8 lighting circuits
- Remote & time-based ON/OFF
- Power consumption measurement
- Support Milesight D2D Featuring LoRa®



## WS303 Mini Leak Detection Sensor

- Water leak detection with 0.5 mm to trigger alert
- Immediate warning locally and remotely
- Battery life up to 5 years & IP67 rated
- Support Milesight D2D featuring LoRa®



## WS51x Smart Wall Socket

- Easy remote and local control
- Customizable scheduling control
- Group control with multicast
- Support overload protection
- V-0 flame-retardant material
- Support Milesight D2D featuring LoRa®



## WS301 Magnetic Contact Switch Sensor

- 100% wire-free
- Tamper detection
- Built-in LED indicator
- Battery life up to 5 years
- Support Milesight D2D Featuring LoRa®



## SCT01 Sensor Configuration Tool

- Support fast configuration
- Support Bluetooth connectivity for export
- Ideal for on-site deployments and large-scale projects

# Sense the Invisible Danger

GS Series



## GS301 LoRaWAN® Bathroom Odor Detector

- Detect NH<sub>3</sub> & H<sub>2</sub>S with high accuracy
- Traffic light indicator & buzzer
- Battery life up to 3 years
- Support Mitesight D2D Featuring LoRa®



## GS601 Vape Detector

- Vape detection
- Type-C for frequent supervising
- 70dBA buzzer and Multi-color indicator
- Anti-demolition & Warning



# Integrate Connectivity and Applications in One

DS Series



## DS3604 IoT E-ink Display

- 4.2 E-ink screen
- Three pigment ink system: red/white/black
- Customized templates in multiple modules
- Support over 150 languages
- Battery life up to 5 years
- Open API & LoRaWAN® Button



## Deployment with Ease

Mitesight Accessories



## FT101 Mitesight Field Tester

- Real-time network signal testing and analysis
- 5.72 inch full HD touch screen
- Full frequency band testing capability
- Records signal test results with GPS location
- Seamless report export and data analysis
- Long-lasting battery life

## UPS01 Uninterruptible Power Supply

- Capacity up to 12000mAh & IP67 rated
- Up to 32 hours' supplement
- Data protection & Plug and play



# Professional Temperature Monitoring

TS Series



## TS101 Insertion Temperature Sensor



- ±0.5°C detection accuracy
- Food-grade enclosure and probe
- IP67 rated & IK10 rated (transceiver)
- Support data storage and retransmission
- Battery life up to 10 years

## TS201 Cost-Effective Temperature Sensor

- LED light status indicator
- Rugged IP67 rating
- Up to 2800/4000 sets of data logging
- Comply with EN12830 standard
- Average battery life: 3 years
- Waterproof probe with temperature probe DS18B20 available
- Digital temperature and humidity probe SHT41 available
- Independent calibration



## TS30x LoRaWAN® Temperature Sensor



- Rated at IP65
- Compliance with HACCP and 21 CFR Part 11B
- Optimized readability with LCD screen
- Efficient data export in PDF
- Support connection of PT100 temperature probe and door magnetic sensor

## TS60x Temperature & Humidity Sensor

- Waterproof probe with temperature probe DS18B20 available
- Digital temperature and humidity probe SHT41 available



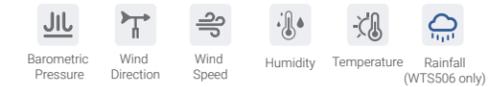
# Accurate, Reliable and Continuous Weather Monitoring

WTS Series



## Overall Features

- All-in-one IoT weather station
- Solar-powered & Chargeable batteries backup
- Robust and rugged
- Various application scenarios
- Data retrieval and data retransmission



**WTS506**  
IoT Weather Station



## Protect and Manage Critical Assets at All Times

AT Series



### AT101 Outdoor Asset Tracker

- Highly-accurate GNSS positioning
- Cooperate with Wi-Fi positioning
- Support geofencing
- Provide motion/periodic/timing modes
- IP67 rated & IK09 rated
- Easy configuration via NFC or Bluetooth
- Embedded 3-Axis accelerometer & NTC thermistor
- Support data storage and retransmission
- Battery life over 15 years

# Sensing to Get Advanced Imaging Insights

Milesight X Infinity Series

4G<sup>+</sup>  Wi-Fi HaLow



## X1 Sensing Camera for Indoor Scenarios



- Inspire sensing insights through images
- 2MP high-definition images
- Easy-to-get wireless deployment
- Low power consumption
- Multi-object catching
- Multi-capturing modes
- Compact design
- Powerful camera capacity
- Collaborate with AIoT Sensing Platform
- Compatible with third-party platforms
- Battery life up to 2 years
- Wi-Fi HaLow version available

## X5 Sensing Camera for Outdoor Applications

- 4G transmission
- Wi-Fi configuration
- Active based on time, DI, PIR, radar, temperature or noise
- IP66 rated & Adjustable rain cover
- Support GPS
- 2MP high-definition images
- Support infrared supplement light without disturbance
- Wireless deployment
- Power supply via type-c and solar power
- Support hibernate mode
- Collaborate with AIoT Sensing Platform
- Compatible with third-party platforms



# iBox Kit Series

Milesight iBox Kit is designed for users to quickly evaluate the LoRaWAN<sup>®</sup> technology with testified devices and services. Going comprehensively digital transformation with more certainty, these solutions are the one step before users to scale connected device deployments securely with high reliability.



## Overall Features

- Starters enjoy it for putting PoCs into action with reduced time & cost
- Operators need it for new projects and potential market demands
- Deployers love it for easy to deploy and integrate with multiple NS platforms

- AM319
- AM103
- UG56
- Milesight IoT Cloud

\*Enjoy free cloud services for a specified period of time



Indoor Air Quality Solution

### iBox IAQ Kit

- WS101
- AM103
- WS558
- UG56
- Milesight IoT Cloud

\*Enjoy free cloud services for a specified period of time



Smart Building Solution

### iBox Smart Building Kit

- VS121
- DS3604
- Milesight IoT Cloud

\*Enjoy free cloud services for a specified period of time



Smart Office Solution

### iBox CoWork Kit

- VS121
- WS301
- UC100
- Milesight IoT Cloud

\*Enjoy free cloud services for a specified period of time



Smart Office Solution

### iBox CoWork Kit

- WS101
- GS301
- UC100
- Milesight IoT Cloud

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Smart Restroom Solution

### iBox Smart Restroom Kit

- EM500-SMTC
- UC511
- UG56
- Milesight IoT Cloud

\*Enjoy free cloud services for a specified period of time



Smart Agriculture Solution

### iBox Smart Agriculture Kit

# Ultra-Fast and Futuristic

5G Series

# 5G



## UF51 5G CPE

- Flexible deployment
- Dual band Wi-Fi
- Outstanding performance
- Flexible installation
- Multiple industrial interfaces
- PoE PD powered



## UF31 5G Dongle

- Plug & play dongle for 5G connectivity
- SA/NSA & super-fast 5G speed
- Palm-sized design for any limited space
- Accelerator of 5G embedded applications



## UR75 High-Performance 5G Industrial Router

- Fast speed 4G/5G network
- Wi-Fi 6
- Rich interfaces
  - ① Gigabit Ethernet ports for lightning transmission of data
  - ② 1 x RS232, 1 x RS485, 1 x DI, 1 x DO
  - ③ 4 x Wi-Fi, 4 x cellular, 1 x GPS
  - ④ 1 x USB port
- Industrial-grade design



# Rugged Communications for Mission-Critical Applications

Industrial Cellular Router & Switch



## UR32L Industrial Cellular Router

- High cost-effective with main router function
- 2 x 10/100 Mbps Ethernet interfaces for reliable network
- Support global 4G LTE network



verizon

## UR32 Industrial Cellular Router

- Rich interfaces
  - ① Wi-Fi/GPS (alternative)
  - ② PoE (optional)
  - ③ 2 x Ethernet ports, 1 x RS232, 1 x DI, 1 x DO
- Support secondary development with Python SDK & API
- Industrial-grade design
- Verizon Open Development Certification



## UR35 Industrial Cellular Router

- Rich interfaces
  - ① 4 x PoE PSE Ethernet ports
  - ② 1 x RS232, 1 x RS485, 1 x DI, 1 x DO
  - ③ Wi-Fi & GPS
  - ④ FXS port for telephone communication
- Wide input voltage
- Support secondary development with Python SDK & API
- Industrial-grade design



## UR41(L) Mini Industrial Router

- Itsy-bitsy router with great flexibility
- Rich interfaces
  - ① GNSS
  - ② 1 x RS232/RS485, 1 x DI, 1 x DO
  - ③ 1 x Ethernet port
- Ultra-low power consumption
- Industrial-grade design



## PoE Switch

- Multiple-port options: 4, 8, 16, 24
- Smart PoE power supply
- Superb transmission
- Flexible extend mode
- SFP uplink port
- Surge protection

# Bring Data Acquisition & Remote Control with Ease

IoT Controller



## UC100 IoT Controller

- RS485 to LoRaWAN® transmission
- Cost-effective & super-tiny size
- Support Milesight D2D Featuring LoRa®



## UC300 IoT Controller

- Backhaul connectivity: LoRaWAN® technology or 4G LTE
- Rich interfaces: DI/DO/AI/RS232/RS485/PT100 RTD input
- Customized trigger rules
- Desk, wall & DIN mounting
- Support Milesight D2D Featuring LoRa®



## UC50x Series Controller

- Rich industrial interfaces: RS232/RS485(Switchable), GPIO, analog input and SDI-12
- Waterproof design including IP67 case and M12 connectors
- DC powered and built-in battery (optional)
- Solar powered (UC501)
- NFC or wired USB port for configuring
- Battery life up to 10 years
- Support internal antenna or external antenna version
- Multicast function and over threshold reporting are available
- Support local data storage (600 pieces), retrievability and retransmission



## UC51x Series LoRaWAN® Solenoid Valve Controller

- 2 x outputs for connecting DC latching solenoid valve
- Two GPIO interfaces for flow monitoring or valve status monitoring
- DC powered or solar powered (UC511)
- Time and flow control
- LoRaWAN® certified (UC512)
- Battery life up to 10 years
- Support internal antenna or external antenna version
- Store locally 500 historical records and support retransmission to prevent data loss

## Smart Restroom Solution

Reshape Restroom, Release the Values of Smartness

Milesight Smart Restroom Solution seamlessly integrates advanced operational and environmental sensors and IoT technologies breaking the limitations of traditional restrooms.



- Effective toilet paper replacement with fill level monitoring
- Advanced HVAC systems based on H<sub>2</sub>S and NH<sub>3</sub> detection data
- Detect leaks immediately with leak detection and take countermeasures
- Integrated information displayed for users can have a visual view of the restroom conditions
- Metering management in real time to improve energy utilization and energy saving
- Occupancy mastery based on cubicles vacancy data

# Remote Management Platform



## Milesight IoT Cloud

Milesight IoT Cloud provides unparalleled levels of vertical integration with Milesight LoRaWAN® devices.



Get the **Free Trial** now and begin your data-driven future.

- Transform real-time and historical data into drag-and-drop widgets on dashboard
- Control access and monitor projects from anywhere
- Email and mobile push notifications based on triggered events
- Built on AWS to provide confidential and reliable infrastructure for your data
- Licensing with ease: just copy & paste and upgrade is done

## DeviceHub

Milesight DeviceHub is a platform which is designed to provide a high-efficiency, low maintenance solution to easily deploy Milesight IoT devices (especially industrial cellular routers) across multiple locations, reducing complexity and increasing productivity.

- Large scale deployment
- Real-time monitoring
- Comprehensive report



## Milesight Development Platform



Milesight Development Platform delivers enterprise-grade IoT device management and deployment, empowering efficient large-scale IoT implementations.

- Simplified device deployment through Redirect Provision Service (RPS)
- Bulk device configuration
- Remote access and device sharing
- Over-the-air updates
- Open API and Webhooks for external integrations and data exchange

## MilesightVPN

MilesightVPN is a web-based VPN monitoring and management platform.

- Intuitive Web GUI
- Connection status overview
- Easy to setup VPN tunnel
- Access to remote devices securely
- Support up to 1000+ connected devices

