

# IoT Solutions & Products Catalogue

AI & Sensing Technology



Make Sensing Matter

V3.4



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Product Brochure



LoRaWAN<sup>®</sup> 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



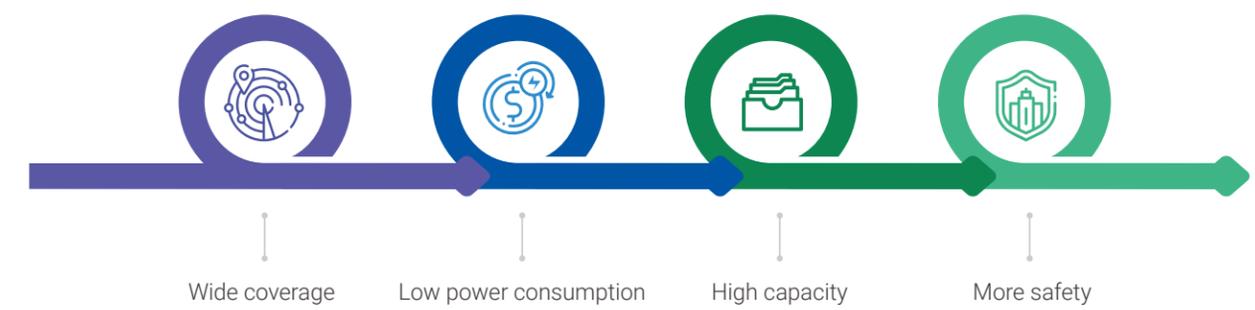
## Worldwide Coverage

- 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.

# How Milesight Can Help in Maximizing Energy Efficiency in Green Buildings

## Smart Water Management

All types of utilities need to take a leading role in deploying smart technologies to minimize waste. Real-time detection of water leaks can be helpful for critical assets or spaces, such as data centers. Retrofitting traditional metering with sensors and cameras can help achieve a more advanced level of management.

## People Counting

By getting accurate and real-time people flow statistics, it greatly contributes to better space utilization, improved energy saving, and more value-added business running.

## Occupancy Monitoring

With real-time people counting data, the overall space capacity and usage patterns will be clearer to allocate resources, avoid unnecessary energy waste and optimize space utilization.

## Indoor Air Quality Monitoring

By monitoring indoor air quality (IAQ), such as temperature, relative humidity, CO<sub>2</sub>, PM2.5 & PM10, TVOC and more, real-time and remote management is actionable. This is suitable for bench-marking and developing ventilation, filtration, and other indoor air quality management strategies.

## Energy Efficiency Solution

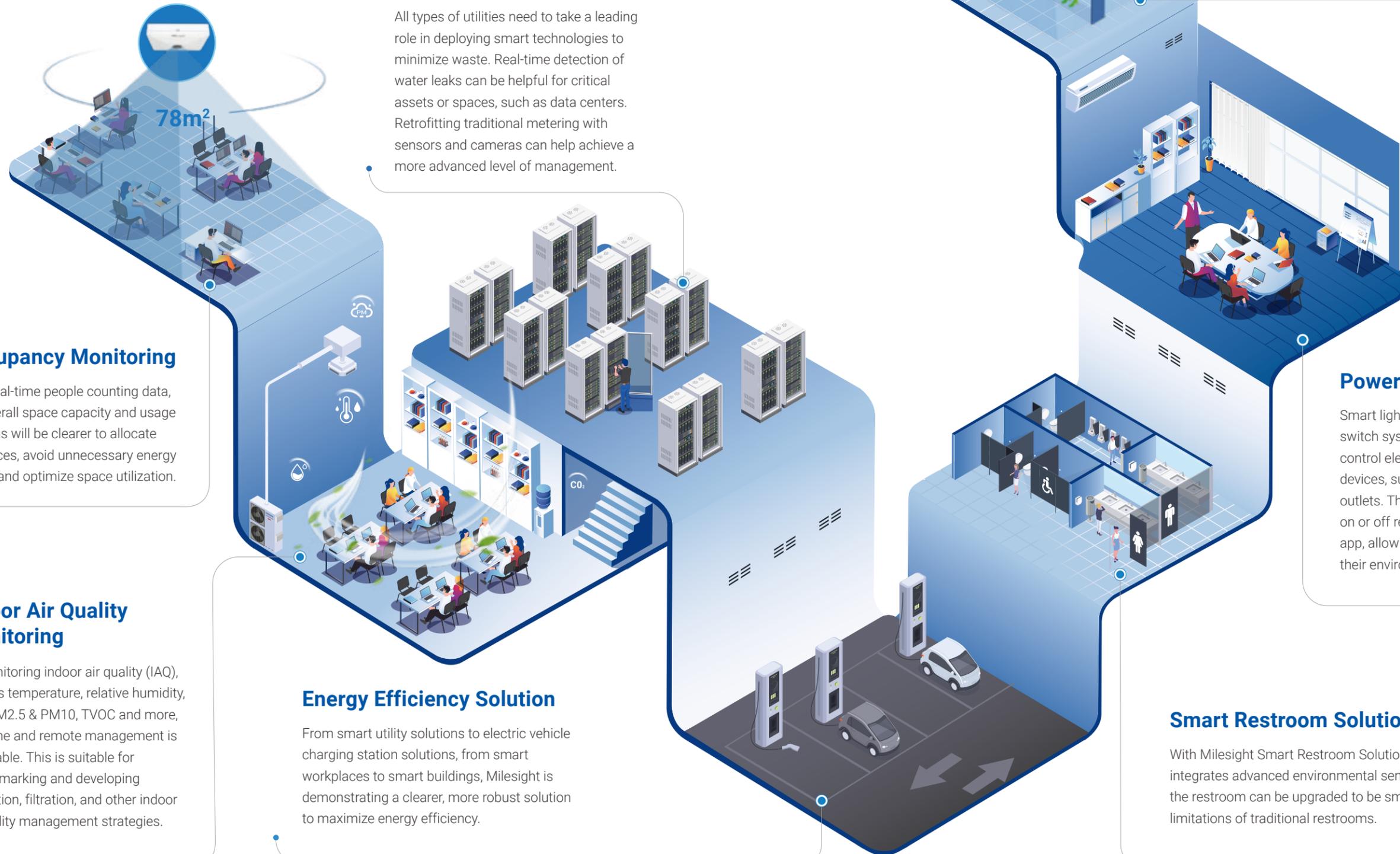
From smart utility solutions to electric vehicle charging station solutions, from smart workplaces to smart buildings, Milesight is demonstrating a clearer, more robust solution to maximize energy efficiency.

## Power Consumption

Smart lighting systems and smart switch system can be used to control electrical and electronic devices, such as switches and outlets. These devices can be turned on or off remotely through a mobile app, allowing occupants to control their environment more easily.

## Smart Restroom Solution

With Milesight Smart Restroom Solution which seamlessly integrates advanced environmental sensors and IoT technologies, the restroom can be upgraded to be smart enough to break the limitations of traditional restrooms.



# How Milesight Can Help in Smart City and Smart Agriculture

## Temperature and Humidity Monitoring

Widespread but essential, the temperature and humidity sensor serves applications across industries. In the food industry, it is critical to ensure that food is stored at the proper temperature to prevent spoilage. As industries increasingly welcome temperature and humidity monitoring to improve efficiency and lower costs, the importance of temperature and humidity sensors becomes clear.



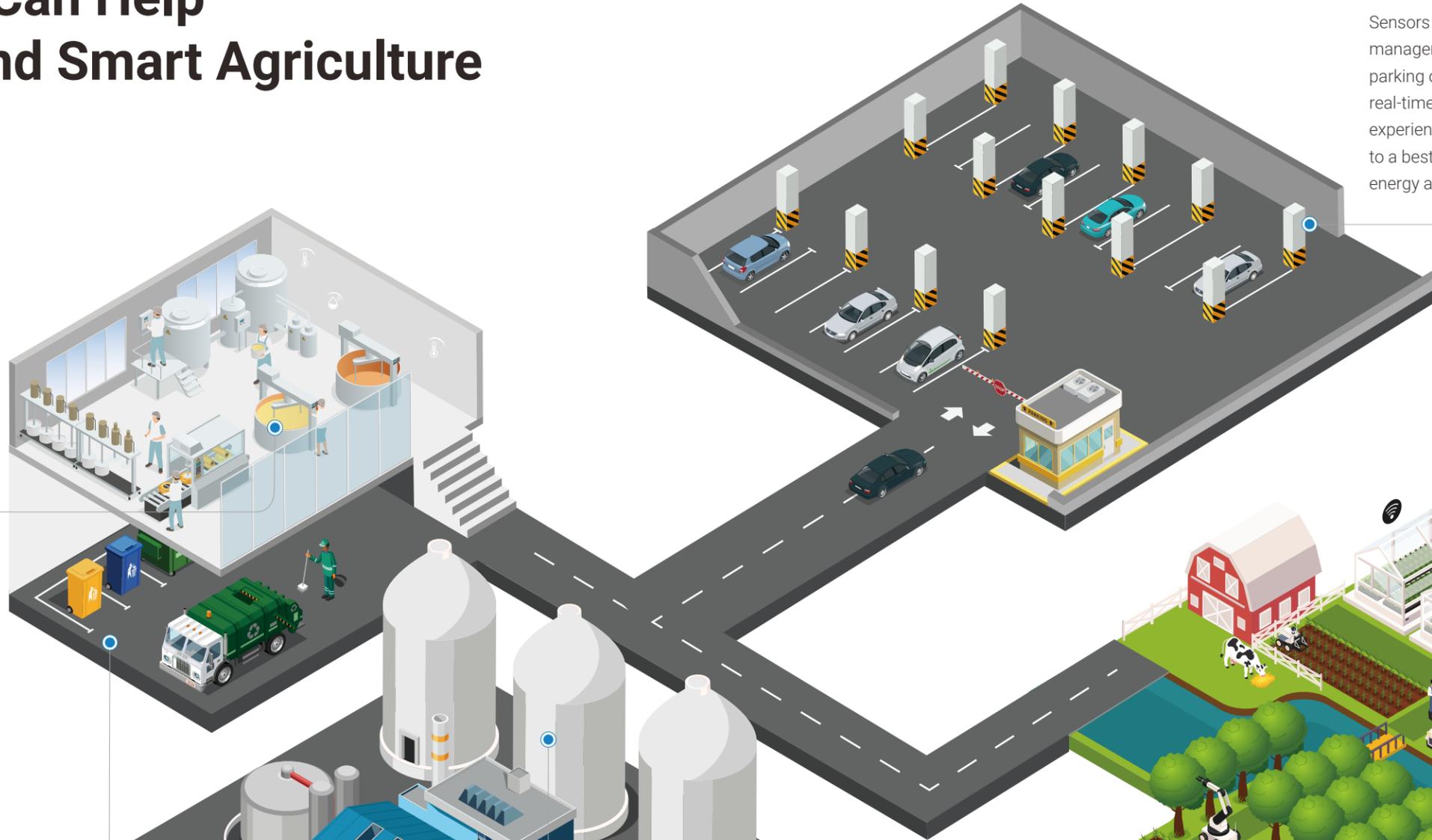
## Trash Bin Management

Traditionally, the waste bins are cleared one by one in a fixed route, which is cumbersome. Now Milesight Smart Bin Solution offers a real-time indicator of the garbage level in waste bin at any given time. The data will help optimize waste collection routes and ultimately reduce fuel consumption.



## Distance and Level Monitoring

Accurate measurement of distance and level can help optimize production, eliminate waste, and ensure safety. Choosing the right distance/level measurement sensor is essential to achieve reliable and precise measurements.



## Smart Parking Management

Sensors play a crucial role in indoor parking management. They can capture real-time parking occupancy information. With real-time data, it streamlines driving experience, ensuring that drivers are guided to a best parking available and saving time, energy and money.

## Smart Agriculture

Smart agriculture solution brings innovative sensing technology to farming from smart irrigation, greenhouse automation, weather monitoring, animal tracking, etc. It makes agriculture more productive and more consistent, and enables farmers to use time and resources more efficiently.



# Product Application Matrix

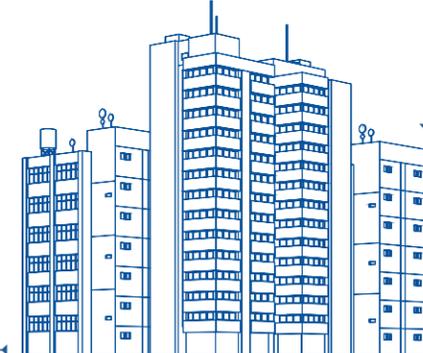


Product Series

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

## Smart Building

People Sensing (Spatial Efficiency)	ToF, Thermopile, PIR/IR Breakbeam, RGB, Radar	VS13x-VS330, VS351-VS341, VS340-VS350-VS360, VS125-VS121-VS321, VS370-VS373
Workplace Facility Management	Wireless Control, Light Control, IEQ Monitoring	WS101, WS156/WS136, WS50x, WS558, WS202, WS302, WS301
Energy Management	Current Monitoring, Circuit Management & Power Collection	CT3xx, CT10x, WS51x, WS523, WS558
HVAC & TH Monitoring	Temperature Control, TH Monitoring	WT303, WT201, WT101, WS203, EM300-TH, EM320-TH
Smart Restroom	9-in-1 IAQ Monitoring, Fill Level & Leakage Monitoring, Fill Level Monitoring, Cubicle Detection	AM300 Series, WS201-WS303, EM400-TLD, VS330
Indoor Air Quality Monitoring	3-in-1 IAQ Monitoring, 9-in-1 IAQ Monitoring, Odor Detection	AM100 Series, AM300 Series, GS301(NH <sub>3</sub> & H <sub>2</sub> S), GS601
Resource Management	Leakage Monitoring	WS303, EM300-MLD, EM300-SLD/ZLD
Parking Management	Ultrasonic Distance Measurement, RGB	EM400-MUD, EM400-UDL, PM3322-E



## Logistics & Cold Chain

Food Hygiene	Temperature & Humidity Monitoring	EM320-TH, EM300-TH, TS30x	Warehousing	Temperature & Humidity Monitoring	EM300-TH, TS201
Pharmaceutical Cold Chain	Temperature & Humidity Monitoring	EM320-TH, TS30x, TS201	Transportation	Temperature & Humidity Monitoring	TS60x



## Smart Retail

People Sensing (Spatial Efficiency)	ToF, Thermopile, PIR/IR Breakbeam, RGB, Radar	VS13x&VS330, VS351&VS341, VS340&VS350&VS360, VS125&VS121&VS321, VS373&VS370
Environmental Sensing	Temperature & Humidity Monitoring, 3-in-1 IAQ Monitoring, 9-in-1 IAQ Monitoring, Odor Detection	EM300-TH, EM320-TH, AM100 Series, AM300 Series, GS301(NH <sub>3</sub> & H <sub>2</sub> S)



## Smart City

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



## Smart Agriculture

Irrigation & Soil Monitoring	3-in-1 Soil Monitoring, Solenoid Valve	EM500-SMTC, UC51x	Outdoor Environmental Sensing	Illumination Detection Monitoring, CO <sub>2</sub> Monitoring, Weather Station	EM500-LGT, EM500-CO <sub>2</sub> , WTS506
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## Smart Industry

Industrial Environmental Sensing	Temperature Monitoring	EM500-PT100, TS30x	Facility Management	Ultrasonic Distance Measurement, Magnetic Contact, Industrial Signal Converter	EM400-UDL, EM500-UDL, EM300-MCS, UC50x
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## LoRaWAN® Gateway

Enable All-Round Connectivity

- Mini LoRaWAN® Gateway UG63
- Industrial LoRaWAN® Gateway UG56
- Semi-Industrial LoRaWAN® Gateway UG65
- Outdoor LoRaWAN® Gateway UG67
- Ultra Low Power Solar LoRaWAN® Gateway SG50



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## Wi-Fi HaLow Gateway

Wi-Fi HaLow Gateway HL31



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## LoRaWAN® Smart Thermostat and Radiator

Smart Heating & Cooling Controls with Milesight WT Series

- Smart Radiator Thermostat WT101
- Smart Radiator Thermostat WT102
- Smart Thermostat WT201
- Smart Fan Coil Thermostat WT303/WT304
- Wireless Smart Thermostat WT401



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## Occupancy & People Counting Sensor

Smart People Counting That Matters in Buildings & Retail

- AI Workplace Occupancy Sensor VS121
- AI ToF People Counting Sensor VS133
- Cubicle Occupancy Sensor VS330
- Desk & Seat Occupancy Sensor VS340/VS341
- Passage People Counter VS350
- Ultra ToF People Counter VS135
- AI Stereo Vision People Counter VS125
- Outdoor AI Stereo Vision People Counter VS125 Outdoor
- Mini AI Thermopile People Counter VS351
- IR Breakbeam People Counter VS360
- Radar Human Presence Sensor VS370
- Radar Fall Detection Sensor VS373
- Wireless AI Occupancy Sensor VS321
- AI Ultra High-Mount People Counter VS126



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## Indoor Air Quality (IAQ) Sensor

Directly, See CO<sub>2</sub> and More

- 2-in-1 IAQ Sensor AM102/AM102L
- 3-in-1 IAQ Sensor AM103/AM103L
- 9-in-1 IAQ Sensor AM307/AM308(L)/AM319



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## Space Optimization & Management Sensor

Explore the Potential of Workplace with CoWork Series

- Smart Button WS101
- Smart Scene Panel WS136 & WS156
- Smart Fill Level Monitoring Sensor WS201
- PIR & Light Sensor WS202
- Motion & TH Sensor WS203
- Wire-Free Magnetic Contact Switch WS301
- Sound Level Sensor WS302
- Mini Leak Detection Sensor WS303
- Smart Wall Switch WS50x
- Smart Wall Socket WS51x
- Smart Portable Socket WS523
- Smart Light Controller WS558



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## IoT Display

Integrate Connectivity and Applications in One

- IoT E-ink Display DS3604



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## iBox Kit Series

Kick off IoT PoCs with LoRaWAN® Demo Kits

- iBox IAQ Kit
- iBox CoWork Kit
- iBox Smart Building Kit
- iBox Smart Restroom Kit
- iBox Smart Agriculture Kit



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### ► Temperature Sensor

Safeguard Freshness for Better Wellness

- Cost-Effective Temperature Sensor TS201
- LoRaWAN® Temperature Sensor TS301/TS302
- Temperature & Humidity Sensor TS601/TS602
- Insertion Temperature Sensor TS101

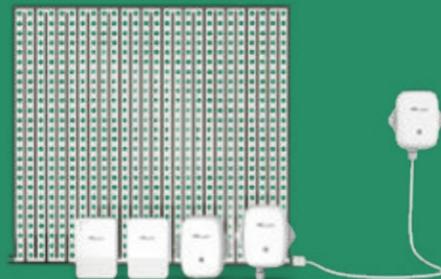


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### ► Building & Urban Environment Monitoring Sensor

Develop Smart Cities with Milesight EM300 Series

- Pulse Counter EM300-DI
- Magnetic Contact Switch EM300-MCS
- Membrane Leakage Detection Sensor EM300-MLD
- Temperature & Humidity Sensor EM300-TH
- Leak Detection Sensor EM300-SLD/ZLD
- FDA Approved Temperature & Humidity Sensor EM320-TH
- FDA Approved Tilt Sensor EM320-TILT



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### ► Indoor Gas Sensor

Accurately, See NH<sub>3</sub> and More

- Bathroom Odor Detector GS301
- Vape Detector GS601



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### ► Distance/Level Measurement Sensor

Discover New Possibilities with Milesight EM400 Series

- ToF Laser Distance Sensor EM400-TLD
- Multifunctional Ultrasonic Distance Sensor EM400-MUD
- Ultrasonic Distance Sensor EM400-UDL
- Radar Distance/Level Sensor EM410-RDL /EM411-RDL



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### ► Industrial & Suburban Environment Monitoring Sensor

Build Smart World with Milesight EM500 Series

- CO<sub>2</sub> Sensor (4 in 1) EM500-CO<sub>2</sub>
- Light Sensor EM500-LGT
- Pipe Pressure Sensor EM500-PP
- Industrial Temperature Sensor EM500-PT100
- Ultrasonic Distance/Level Sensor EM500-UDL
- Soil Moisture, Temperature and Electrical Conductivity Sensor EM500-SMTC
- Submersible Water Level Sensor EM500-SWL



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### ► Smart Current Transformer

Protect and Manage Critical Assets at All Times

- Smart Current Transformer CT10x
- Smart Current Transformer CT3xx



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### ► Asset Tracker

Protect and Manage Critical Assets at All Times

- Outdoor Asset Tracker AT101
- Uninterruptible Power Supply UPS01
- Milesight Field Tester FT101
- Sensor Configuration Tool SCT01



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### IoT Weather Station

Measure Atmospheric Conditions Precisely

- IoT Weather Station Pro Version WTS506



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### IoT Controller Series

Empower Automatic and Intelligent Control

- Modbus to LoRaWAN® IoT Controller UC100
- LoRaWAN®/4G IoT Controller UC300
- Multi-Interface LoRaWAN® Controller UC50x
- LoRaWAN® Solenoid Valve Controller UC51x



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### Remote Management Platform

User-Friendly and Effortless Management

- Milesight IoT Cloud
- DeviceHub
- MilesightVPN
- Milesight Development Platform



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# Enable All-around Connectivity

Milesight IoT Gateway



### Overall Features

- Provide Large Capacity & Faster Data Processing
- Handle Higher Amount of Traffic with Lower Consumption
- Handle Massive Sensor Data Efficiently
- OpenVPN/IPsec/PPTP/L2TP/GRE/DMVPN
- Embedded Network Server & High Compatibility with Mainstream Networks Including Activity and Senet
- Support CN470/RU864/IN865/EU868/AU915/US915/KR920/AS923-1&2&3&4
- Connecting End Nodes Varies from Class A/B/C
- Extraordinary Features: Noise Analyzer, Multicast, Gateway Fleet and Listen Before Talk (Except UG63)
- Embedded Node-RED Development Tool (UG56/65/67)
- Embedded Python SDK (UG56/65/67)
- Support BACnet (UG56/65/67)

## Enable All-around Connectivity

Model		UG63	
 <p><b>Mini LoRaWAN® Gateway</b></p>	LoRaWAN®	Chipset	SX1302, 8 Channels (Half-duplex)
		Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4
	Connectivity	Ethernet	1 x 10/100Mbps (1 x WAN)
		Cellular(Opt.)	1 x SIM-3FF
		Wi-Fi	IEEE 802.11 b/g/n, 2.4GHz, AP Mode
	Hardware	CPU	Dual-core 240MHz, 32-bit Xtensa® LX7
		Power Supply	① 5VDC by Type-C Port ② 802.3af PoE via PoE Splitter ③ 5-12 VDC by Terminal Block
	Physical Characteristics	Ingress Protection	IP30
		Installation	Desktop, Wall Mounting, Ceiling Mounting

Model		UG56	
 <p><b>Industrial LoRaWAN® Gateway</b></p>	LoRaWAN®	Chipset	SX1302, 8 Channels (Half-duplex)
		Antenna	1 x 50 Ω SMA Connector (Center PIN: SMA Female)
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
	Connectivity	Protocol	V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class C
		Ethernet	1 x RJ45 PoE PD Port, 10/100 Base-T (IEEE 802.3)
		Wi-Fi	IEEE 802.11b/g/n, 2.4 GHz
	Hardware	Cellular (Opt.)	1 x Mini SIM-2FF Slot, Support Global GSM/3G/4G LTE Frequency Bands
		CPU	Quad-core 1.3 GHz, 64-bit ARM Cortex-A35
	Physical Characteristics	Power Supply	① 1 x 802.3af Standard PoE Input ② 5V, 2A by Type-C Port
		Ingress Protection	IP30
Dimension		110 x 75 x 24 mm (4.33 x 2.95 x 0.94 in)	
Installation		Desktop, Wall Mounting	

Model		UG65	
 <p><b>Semi-Industrial LoRaWAN® Gateway</b></p>	LoRaWAN®	Chipset	SX1302, 8 Channels (Half/Full-duplex)
		Antenna	1 x 50 Ω N-Female External Connector
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
	Connectivity	Protocol	V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class C
		Ethernet	1 x RJ45 PoE PD Port, 10/100/1000 Base-T (IEEE 802.3)
		Wi-Fi	IEEE 802.11b/g/n, 2.4 GHz
	Hardware	Cellular (Opt.)	1 x Mini SIM-2FF Slot, Support Global GSM/3G/4G LTE Frequency Bands
		Processor	Quad-core 1.5 GHz, 64-bit ARM Cortex-A53
	Physical Characteristics	Built-in	Watchdog, RTC, Timer
		Power Supply	① 1 x 802.3af Standard PoE Input ② 9 ~ 24 VDC by DC Male Jack Connector
Ingress Protection		IP65	
Physical Characteristics	Dimension	180 x 110 x 56.5 mm (7.09 x 4.33 x 2.22 in)	
	Installation	Desktop, Wall or Pole Mounting	

## Enable All-around Connectivity

Model		HL31	
 <p><b>Wi-Fi HaLow Gateway</b></p>	Wi-Fi HaLow	HaLow Chipset	MM6108
		Frequency	850~950MHz
		Channel Bandwidth	1/2/4/8MHz
	Connectivity	Work Mode	AP
		Wi-Fi	IEEE 802.11b/g/n, 2.4 GHz
		Cellular (Opt.)	1 x SIM-3FF
	Hardware	Ethernet	1 x 10/100Mbps (1 x WAN)
		Processor	RK3308, 1.3 GHz, 64-bit ARM Cortex-A35 Quad Core
	Physical Characteristics	Power Supply	① 5 VDC by Type-C Port ② 802.3af PoE via PoE Splitter ③ 5-12 VDC by Terminal Block
		Ingress Protection	IP30
Installation		Desktop, Wall Mounting, Ceiling Mounting	

Model		SG50	
 <p><b>Ultra Low Power Solar LoRaWAN® Gateway</b></p>	LoRaWAN®	Chipset	SX1302, 8 Channels (Half-duplex)
		Antenna	1 x 50 Ω N-Female External Connector
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
	Connectivity	Protocol	V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class C
		Wi-Fi	IEEE 802.11 b/g/n, 2.4GHz, AP Mode
		Cellular	1 x Nano SIM-4FF, Support Global GSM/3G/4G LTE Frequency Bands
	Hardware	CPU	Dual-core 240MHz, 32-bit Xtensa® LX7
		Built-in	Watchdog, Timer
		Power Supply	① Solar Power or DC Power (12~24VDC) via M12 Connector ② 3.6V, 2500mAh Backup Batteries ③ 5V, by Type-C Port
	Physical Characteristics	Ingress Protection	IP67
Dimension		250 x 157.5 x 46mm (9.84 x 6.20 x 1.81 in)	
Installation		Wall or Pole Mounting	

Model		UG67	
 <p><b>Outdoor LoRaWAN® Gateway</b></p>	LoRaWAN®	Chipset	SX1302, 8 Channels (Half/Full-duplex)
		Antenna	2 x 50 Ω N-Female External Connectors
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
	Connectivity	Protocol	V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class C
		Ethernet	1 x RJ45 PoE PD Port, 10/100/1000 Base-T (IEEE 802.3)
		Wi-Fi	IEEE 802.11b/g/n, 2.4 GHz
	Hardware	Cellular (Opt.)	1 x Mini SIM-2FF Slot, Support Global GSM/3G/4G LTE Frequency Bands
		GPS	Support (Internal Antenna)
	Physical Characteristics	Processor	Quad-core 1.5 GHz, 64-bit ARM Cortex-A53
		Built-in	Watchdog, RTC, Timer
Power Supply		① 1 x 802.3af Standard PoE Input ② 12 VDC with M12 Connector	
Physical Characteristics	Ingress Protection	IP67	
	Dimension	240 x 164 x 90.9 mm (9.45 x 6.46 x 3.58 in)	
	Installation	Wall or Pole Mounting	

# Smart Heating and Cooling Controls

WT Series



## Overall Features

- Great Candidate for Smart Temperature Control via HVAC Systems
- Accurate Temperature Detection and Calibration
- Support Pre-set Date Period with Programmable Schedules
- Support Child Lock to Prevent Tampering (WT101/WT201)
- Compatible with Hotel Room Card Systems for Convenient Remote Management (WT201/WT30x)
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Support Integration with BACnet Systems

Model		WT101	WT102
	Wireless Transmission	Technology	LoRaWAN®
		Frequency	868MHz (IN865/RU864/EU868)
		Mode	OTAA/ABP Class A   OTAA/ABP Class A, Class B
	Valve Control	Actuator	Stepping Motor
		Default Valve Fitting	M30x1.5mm
		Optional Adapters	RA, RAV, RAVL, Giacomini, M28 (Comap, Herz, TA)   Metal Valve Adapter: RA, RAV, RAVL, Giacomini, M28 (Herz, Comap, TA, markaryd), other types available upon request.
		Advanced Feature	Automatic Temperature Control, Valve Opening Control, Heat Plans, Freeze Protection, Open-window Detection, Tamper Alarm, Effective Stroke.
	Temperature Sensor	Sensor Type	NTC
		Range	-20°C ~ 65°C
		Accuracy	± 0.5°C (0°C ~ 50°C)
	Physical Characteristics	Power Supply	2 x 1.5V Li-FeS <sub>2</sub> : AA Replaceable Batteries (3000 mAh in Total)   Self-powered, USB-C port
		Battery Life*	Around 5 Years
		Ingress Protection	IP30
		Installation	Latching on the Valve

\* Tested under laboratory conditions and for guideline purposes only.

## Smart Heating and Cooling Controls

Model		WT201	
	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class C
	Thermostat Feature	Temperature Control Mode Options	Heat, EM (Emergency) Heat, Cool, Auto
		Fan Mode Options	Auto, On, Circulate
		Advanced Feature	Local Control Schedule, Threshold Alarm, Freeze Protection, Child Lock, Multicast, Milesight D2D Controller, Milesight D2D Agent, Data Storage, Data Retransmission
Sensor	Sensor Type & Range	Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0% - 100% RH	
Others	Configuration	NFC	
	Physical Characteristics	Power Supply	20 to 30 VAC, 24 VAC Nominal
		Ingress Protection	IP30
		Dimension	113 x 110 x 21 mm ( 4.45 x 4.33 x 0.83 in)
		Installation	Wall Screw Mounting

Model		WT303	WT304
	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class C
	Thermostat Feature	Compatible Fan Coil	2-pipe and 4-pipe Fan Coil Units (FCUs) with 3-speed fans or EC(0-10V)fans
		Valve & Fan Relay Amps	Resistance: 4A, Inductive: 3A
		Compatible Valve	2-wire or 3-wire On/Off Motorized Valves   0-10V Proportional Integral Valves, 2-wire or 3-wire On/Off Motorized Valves
		Advance Feature	Local Control Schedule, Freeze Protection, Open Window Detection, FanDelay, Temp. Control and Dehumidify
Temperature Sensor	Range & Accuracy	-20°C ~ 60°C, ± 0.5°C (0°C ~ 60°C), ± 1°C (-20°C ~ 0°C)	
Humidity Sensor	Range & Accuracy	0%-100% RH, Typical ± 2% RH, Max.± 5% RH	
	Physical Characteristics	Power Supply	100 ~ 240 VAC, 50 ~ 60Hz
		Dimension	86 x 86 x 42 mm
		Installation	86mm Square or European 60mm Round Box Mounting 118 or 120 Wall Box Mounting via (optional) Wall Plate Accessories

Model		WT401	
	Wireless Transmission	Technology	LoRaWAN®
		Frequency	IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A/Class C
	Thermostat Feature	Temperature Control Mode	Heat, EM (Emergency) Heat, Cool, Auto
		Fan Mode	Low, Medium, High, Auto, Circulate
		Advanced Feature	Local Control Schedule, Occupancy Detection, Button Customization
		Compatibility	Work with most HVAC systems via LoRaWAN® Work with PTAC (2H/1C), Boilers, Furnaces or Heat Pumps (2H/1C) via Milesight UC711 HVAC controllers Work with radiators via Milesight WT101 thermostat
Temperature Sensor	Range & Accuracy	-20°C ~ 60°C, ± 0.2°C (Maximum ± 0.5°C)	
Humidity Sensor	Range & Accuracy	0%-100% RH, ± 2% RH (Maximum ± 5% RH)	
PIR Sensor	Detection Area & Distance	120° Horizontal, 90° Vertical, Maximum 6 m	
	Physical Characteristics	Power Supply	1.2x2700 mAh ER14505 Li-SOCl <sub>2</sub> Replaceable Batteries 2.AC/DC 24V by Power Connector 3. DC 5V by Type-C Port
		Dimension	86 x86 x24 mm
		Installation	Wall Screw Mounting, 86mm Square or European 60mm Round Box Mounting, Recessed installation

# Smart People Counting That Matters in Buildings & Retails

Occupancy & People Counting Series



## Overall Features

- High Accuracy of Detection
- All LoRaWAN® Versions Are GDPR-Compliant & 100% Anonymity-Detecting
- Unique Milesight D2D for Easy Communication
- High Ceiling Mount Version Available (VS121/VS135 Series)
- Smart U-Turn Detection (VS121/VS133/VS135/VS351)
- Dwell Time Detection (VS121/VS125/VS133/VS135)
- Bi-Directional People Counting via In/Out Counting (VS121/VS125/VS133/VS135/VS350/VS351)
- Advanced Heat Map Available (VS125/VS133/VS135)

## Smart People Counting That Matters in Buildings & Retails

Model		VS121	VS121-P	
  <b>AI Workplace Occupancy Sensor</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
		Frequency	CN470/IN865/RU864/EU868/ US915/AU915/KR920/ AS923-1&2&3&4	
		Mode	OTAA/ABP Class C	
 <b>AI Workplace Occupancy Sensor</b>	Ethernet Transmission	Ethernet Port	1× RJ45 10/100 Mbps (PoE PD)	
		Network Protocol	-	MQTT(s), HTTP(s), RTSP, NTP, SSH, etc.
  <b>AI Workplace Occupancy Sensor</b>	Measurement	Field of View	Standard Version: 190° Horizontal, 112° Vertical High Ceiling Mount Version: 129.4° Horizontal, 68.4° Vertical	
		Recognition Range	Standard Version: a Radius of 5 Meters, At the Height of 3m High Ceiling Mount Version: 18m × 7m, At the Height of 7m	
		Recognition Rate	Region Counting: Up to 95% Line Crossing Counting: Up to 95% People Flow Analysis: Up to 95%	
		Installation Height	Standard Version: 2.5m to 4m High Ceiling Mount Version: 5m to 7m	
		Advanced Feature	Mapped Detection Region Customization, Filter U-Turns, Privacy Mask, Dwell Time Detection	
 <b>AI Workplace Occupancy Sensor</b>	Physical Characteristics	Configuration	Wi-Fi	Ethernet
		Power Supply	5 VDC / 1.5A by Type-C Port	1. 5 VDC / 2A by Terminal Block 2. 802.3af PoE
		Installation	Ceiling Mounting	

Model		VS133	VS133-P	
  <b>AI ToF People Counting Sensor</b>	Wireless Transmission	Technology	LoRaWAN®	
		Frequency	CN470/IN865/RU864/EU868/ US915/AU915/KR920/ AS923-1&2&3&4	
		Mode	OTAA/ABP Class C	
 <b>AI ToF People Counting Sensor</b>	Ethernet Transmission	Ethernet Port	1× RJ45 10/100 Mbps (PoE PD)	
		Network Protocol	-	MQTT(s), HTTP(s), NTP, 802.1x, SSH, LLDP, BACnet/IP, etc.
  <b>AI ToF People Counting Sensor</b>	Measurement	ToF	FOV: 98° Horizontal, 80° Vertical Light Beam: 940nm (Invisible)	
		Accuracy	±3.5cm	
		Range	0.5~3.5 m	
 <b>AI ToF People Counting Sensor</b>	Physical Characteristics	Configuration	Wi-Fi	Ethernet
		Power Supply	12VDC / 2A	802.3 at PoE+
		Operation Temperature	-20°C ~ +50°C	
		Ingress Protection	IP40	
Installation	Ceiling Mounting, Extended Ceiling Mounting & Lintel Mounting (with Optional Multifunctional Bracket)			

## Smart People Counting That Matters in Buildings & Retail

Model		VS330	
  <b>Restroom Occupancy Sensor</b>	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/IN865/RU864/EU868/US915/AU915 /KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
Measurement	ToF	ToF FoV	27°
		Detection Accuracy and Range	±2cm, 0.040 ~ 3.500m
	PIR	Detection Area	80°
		Detection Distance	Maximum 2.5m
	Others	Sensor Adjustable Angle	0°, 15°, 30°, 45°, 60°, 75°
Physical Characteristics	Configuration	Mobile App via NFC	
	Power Supply*	Easily Replaceable Batteries with up to 4-Year Battery Life	
	Button	1 × Power/Reset Button	
	Ingress Protection	IP30	
	Dimension	Φ100 x 24 mm (Φ3.94 x 0.95 in)	
	Installation	Ceiling Mount or Wall Mount via Screws or 3M tapes	

Model		VS340	VS341
  <b>Desk &amp; Seat Occupancy Sensor</b>	Occupancy Detection	Technology	PIR
		Recognition Rate	Up to 95%
		PIR Detection Area	107° Horizontal, 107° Vertical
		PIR Detection Distance	Within 1m
 <b>Desk &amp; Seat Occupancy Sensor</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
Physical Characteristics	Power Supply	1 x 4000 mAh ER18505 Li-SOCL <sub>2</sub> Battery	
	Battery Life**	Around 5 Years (100 Triggers per Day, 25°C)	
	Configuration	NFC Configuration via Mobile App	
	Operating Temperature*	-20°C ~ +60°C	
	Installation	3M Tape Mounting, Wall Screw Mounting	

\* The temperature range of thermopile to reach best recognition rate is +10°C to +30°C.  
 \*\* Tested under laboratory conditions and for guideline purposes only.

## Smart People Counting That Matters in Buildings & Retail

Model		VS350	
  <b>Passage People Counter</b>	People Counting	Technology	Dual PIR
		Installation Height	Ceiling Mount: ≤ 3.0m, Wall Mount: 1.2m~1.3m
		Detection Range	Bi-directional People Counting Ceiling Mount: Passage Width = 2.8 m (At the height of 3m) Wall Mount: Passage Width < 2.3 m
Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
	Frequency	CN470/IN865/EU868/RU864/US915/AU915 /KR920/AS923-1&2&3&4	
	Mode	OTAA/ABP Class A	
Physical Characteristics	Power Supply	2 x 2700 mAh ER14505 Li-SOCL <sub>2</sub> Replaceable Batteries	
	Battery Life*	Around 4 Years (10-min Interval, 25°C, 1000 People per Day)	
	Operating Temperature	-20°C ~ +60°C	
	Dimension	100 x 70 x 21 mm ( 3.94 x 2.76 x 0.83 in)	
	Installation	Ceiling Mount, Wall Mount	

\* Tested under laboratory conditions and for guideline purposes only.

Model		VS135-P	VS135-L08EU	VS135-HL-868M/915M	VS135-868M/915M/470M
   <b>Ultra ToF People Counter</b>	People Counting	ToF FoV	Standard Version: 98° Horizontal, 80° Vertical / High Ceiling Mount Version: 60° Horizontal, 45° Vertical		
		ToF Light Beam	940nm (Invisible)		
		ToF Lighting Mode	Auto/Always On		
		Measuring Accuracy	Standard Version: ±3.5m High Ceiling Mount Version: ±6.5m		
		Installation Height	Standard Version: Up to 3.5m High Ceiling Mount Version: Up to 6.5m		
Advanced Feature	Multi-Devices Stitching, Group Counting, Heat Map, Dwell Time Detection, Regional People Counting, Staff Detection, Children/Adults Differentiation, Filter U-turns	Group Counting, Dwell Time Detection, Regional People Counting, Staff Detection, Children/Adults Differentiation, Filter U-turns			
		Wi-Fi		IEEE 802.11 b/g/n, 2.4GHz (AP Mode for configuration)	
Wireless Transmission	Technology		LTE Cat 4	Wi-Fi HaLow	LoRaWAN®
	Frequency/Band		LTE-FDD: B1/B3/B7/B8/B20/ B28 WCDMA: B1/B8 GSM/EDGE: B3/B8	915/868MHz	N470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
	Power Supply	802.3at PoE+ or DC12V	DC12V		
Physical Characteristics	Ingress Protection	IP65			
	Color	White/Black			
	Installation	Ceiling Mounting, Extended Ceiling Mounting & Lintel Mounting (with Optional VB01 Multifunctional Bracket)			

## Smart People Counting That Matters in Buildings & Retail

Model		VS125-P	VS125-LOBEU	VS125-LW-P	VS125-LW-LOEGL	
 <p><b>AI Stereo Vision People Counter</b></p>	Measurement	Sensor	2 x 4MP Sensor (2688 x 1520)		2x5MP Sensor(2592x1944)	
		Installation Height	2.2 ~ 6m		1.9-3.5m	
		Required Illumination	0 lux with iR illuminators On			
	Advanced function	Bi-Directional People Counting	Up to 4 detection lines for bi-directional people counting			
		U-turn Filtering	Filter redundant counting of people wandering in the bi-directional people counting areas			
		Regional People Counting & Dwell Time Detection	Up to 4 detection areas (up to 10 decagon for each area) for regional people counting and dwell time detection			
		Children/Adult Differentiation	Support			
		Gender Recognition	Support			
		Staff Detection	Support			
		Group Counting	Support			
		Motion/Dwell Heatmap	Support			
		Auto Height Detection	Support			
		Data Retransmission	Support 8 x 50,000 data retransmission packets			
		Multi-Device Stitching	Support up to 16 devices stitching to expand coverage			
		Data transmission	Ethernet Port	1 x RJ45 10/100 Mbps (PoE PD)	1 x RJ45 10/100 Mbps(Only used for Multi-Device stitching)	1 x RJ45 10/100 Mbps (PoE PD)
Network Protocol	MQTT(s), HTTP(s), 802.1x, SSH, NTP, etc.		MQTT(s), HTTP(s), SSH, NTP, etc.	MQTT(s), HTTP(s), 802.1x, SSH, NTP, etc.	MQTT(s), HTTP(s), SSH, NTP, etc.	
Frequency Band	-		B1/B3/B5/B7/B8/B20/B28 for EMEA+ Australia/ New Zealand	-	LTE-FDD: B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 18/ 19/ 20/ 25/ 26/ 28/ 66 LTE-TDD: B34/ 38/ 39/ 40/ 41	
Others	DI/DO	1*DI 2*DO				
	Wi-Fi	IEEE 802.11 b/g/n 2.4GHz (AP for Device Configuration)				
Physical Characteristics	Power Supply	802.3af PD or DC 12V/1A	DC 12V/1A	802.3af PD or DC 12V/1A	DC 12V/1A	
	Local Storage	Store up to one million data records				
	Installation	Ceiling Mounting, Extended Ceiling Mounting & Lintel Mounting (with Optional Multifunctional Bracket)				

## Smart People Counting That Matters in Buildings & Retail

Model		VS125-LW Outdoor		VS125 Outdoor		
Specification		VS125-LW-O-P	VS125-LW-O-LOEGL	VS125-O-P	VS125-O-LOBEU	
 <p><b>Outdoor AI Stereo Vision People Counter</b></p>	Measurement	Sensor	2x5MP Sensor(2592x1944)		2x4MP Sensor(2688x1520)	
		Installation Height	1.9-3.5m		2.2-6m	
		Required Illumination	0 lux with iR illuminators On			
		FoV	130°Horizontal,117°Vertical		101°Horizontal,70°Vertical	
	Advanced function	Bi-Directional People Counting	Support			
		U-turn Filtering	Support			
		Regional People Counting & Dwell Time Detection	4 Customized Multi-rule Regions			
		Children/Adult Differentiation	Support			
		Gender Recognition	Support			
		Multi-Detection Lines	4 Customized Multi-rule Lines			
		Staff Detection	Support			
		Group Counting	Support			
		Motion/Dwell Heatmap	Support			
		Auto Height Detection	Support			
		Data Retransmission	Support 8 x 50000 data retransmission packets			
Multi-Device Stitching	Support up to 16 devices stitching to expand coverage					
Data transmission	Ethernet Port	1 x 10/100 Mbps RJ45		1 x 10/100 Mbps RJ45 (Only used for Multi-Device stitching)		
	Network Protocol			LTE CAT1		
	Frequency Band	-		LTE-FDD: B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 18/ 19/ 20/ 25/ 26/ 28/ 66 LTE-TDD: B34/ 38/ 39/ 40/ 41		
Others	DI/DO	1*DI 2*DO				
	Wi-Fi	IEEE 802.11 b/g/n, 2.4GHz (AP Mode for configuration)				
Physical Characteristics	Power Supply	802.3af PoE PD 12V DC	12V DC	802.3af PoE PD 12V DC	12V DC	
	Ingress Protection	IP67				
	Operating Temperature	-30°C ~ 65°C				
	Relative Humidity	0 ~ 95%(non-condensing)				
	Local Storage	Store up to one million data records				
	Installation	Ceiling Mount Extended Ceiling Mount & Lintel Mount				

## Smart People Counting That Matters in Buildings & Retail

Model		VS351	
  Type-C Version   Wireless Battery Version  <b>Mini AI Thermopile People Counter</b>	Measurement	Technology	Radar (Battery Version Only) & Thermopile
		Sensor Adjustable Angle	0°~90°
		Range	-30°C ~ 70°C
		Advanced Features	U-Turn Filtering, Bi-directional People Counting, Side by Side Differentiation
	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/RU864/EU868/US915/AU915 /KR920/AS923-1&2&3&4
	Others	Advanced Feature	Data Storage, Data Retransmission, Data Retrievability, Milesight D2D Controller
		Configuration	NFC
	Physical Characteristics	Power Supply	1. 5V/1A by Type-C Port (Both Versions) 2. 4x9000 mAh ER26500 Li-SOCl <sub>2</sub> Replaceable Batteries (Battery Version Only)
		Battery Life	Around 1.6 Years (30-min Interval, 25°C, 1000 People per Day )
Installation		Ceiling Mounting, Lintel Mounting	

Model		VS321	
    <b>Wireless AI Occupancy Sensor</b>	Measurement	Technology	AI, PIR, RGB
		Field of View	129 ° Horizontal, 93 ° Vertical
		Installation Height	2.4m ~ 4m
		PIR Measuring Angle & Area	115°, Radius: 4 m (15°C, 3m Installation Height)
		Required Illumination	50 Lux
		Advanced Feature	Milesight D2D Controller, Data Storage (2045 entries), Data Retransmission, Data Retrievability, Threshold Alarm, Hibernate Mode
	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/ KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
	Temperature Sensor	Measuring Range & Accuracy	-40 °C~125 °C, ±1°C
		Resolution	0.1 °C
	Humidity Sensor	Measuring Range & Accuracy	0~100 %RH, ± 2.5 %RH
		Resolution	0.5 %RH
	Light Sensor	Operating Principle	Photodiode
		Status	Bright/Dim
	Physical Characteristics	Power Supply	4 × 2700 mAh ER14505 Li-SOCl <sub>2</sub> Replaceable Batteries
Battery Life*		Around 11.3 Years (SF7, EU868) Around 10.8 Years (SF7, US915) Around 7.5 Years (SF10, EU868 & US915) Note: Working 8h per day, 5-min detection and report interval, 25 °C	
Ingress Protection		IP30	
Dimension		100 × 100 × 26 mm (3.94 × 3.94 × 1.02 in)	
Installation		Ceiling Mounting (Screws or Adhesive Backed Fixed)	

\*Tested under laboratory conditions and for guideline purposes only.

## Smart People Counting That Matters in Buildings & Retail

Model		VS360	
    <b>IR Breakbeam People Counter</b>	Measurement	Technology	IR Breakbeam
		Installation Height	0.7m ~ 1.2m
		Bi-directional Counting	Support
	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/EU868/RU864/US915/ AU915/KR920/AS923-1&2&3&4
		Sensitivity	-137dBm
	Others	Advanced Feature	Data Storage, Data Retransmission, Data Retrievability, Milesight D2D Controller
		Screen	1 × OLED Screen for Master Device
	Physical Characteristics	Power Supply	NFC Configuration via Mobile App
		Operating Temperature*	2 × 2700 mAh ER14505 Li-SOCl <sub>2</sub> Replaceable Batteries for per device
Battery Life		Around 3 Years (10-min Interval, 2000 People per Day )	
Installation		Wall Mount	

Model		VS370	
    <b>Radar Human Presence Sensor</b>	Measurement	Technology	Millimeter Wave Radar & PIR
		Recognition Rate	Up to 99%
		Radar Detection Angle	150°
		Radar Detection Range	Movement: 7.5m, Slight Movement: 4.8m
		PIR Detection Area	110°
		PIR Detection Range	Within 7m
		Light Status	Bright/Dim
		Advance Feature	Milesight D2D Controller, Hibernate Time Setting, Sensitivity Setting, FUOTA
	Wireless Transmission	Protocol	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/EU868/RU864/US915/ AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
	Physical Characteristics	Power Supply	2 × 2700 mAh ER14505 Li-SOCl <sub>2</sub> Replaceable Batteries
		Battery Life	Around 6.7 Years (SF7, EU868 & US915) Around 5.3 Years (SF10, EU868) Around 4.6 Years (SF10, US915)
		Ingress Protection	IP30
Dimension		Φ 70 × 48.5 mm (Φ 2.76 × 1.91 in)	
Installation	Wall Mounting via Magnetic Bracket		

## Smart People Counting That Matters in Buildings & Retail

Model		VS126-P	VS126-L0EGL
 <p><b>AI Ultra High-Mount People Counter</b></p>	Measurement	Sensor	2x5MP Sensor(2704x2104)
		Installation Height	6-15m
		Required Illumination	0 lux with iR illuminators On
	Advanced function	Bi-Directional People Counting	Support
		U-turn Filtering	Support
		Regional People Counting & Dwell Time Detection	4 Customized Multi-rule Regions
		Multi-detection Lines	4 Customized Multi-rule Lines
		Group Counting	Support
		Motion/ Dwell Heatmap	Support
		Auto Height Detection	Support
		Multi-Device Stitching	16 units
		Data Retransmission	8x50,000
Data transmission	Ethernet Port	1 x 10/100 Mbps RJ45 (PoE PD)	1 x 10/100 Mbps RJ45 (Only used for Multi-Device stitching)
	Network Protocol	-	LTE CAT1
	Frequency Band	-	LTE-FDD: B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 18/ 19/ 20/ 25/ 26/ 28/ 66 LTE-TDD: B34/ 38/ 39/ 40/ 41
Others	DI/DO	1*DI 2*DO	
	Wi-Fi	IEEE 802.11 b/g/n 2.4GHz (AP for Device Configuration)	
Physical Characteristics	Power Supply	802.3af PoE PD 12V DC	12V DC
	Local Storage	Store up to one million data records	
	Installation	Ceiling Mount Extended Ceiling Mount & Lintel Mount	

## Smart People Counting That Matters in Buildings & Retail

Model		VS373	
 <p><b>Radar Fall Detection Sensor</b></p>	Fall Detection	Technology	Millimeter Wave Radar
		Installation Height	2.3m~3m
		Radar Detection Range	2m*2m~4m*5m (Within the Installation Height)
		Radar FoV	70 ° Horizontal, 140 ° Vertical
		Advance Feature	Milesight D2D Controller & Agent, Dwell Detection, Lying Alarm, Motionless Detection, Data Storage (1,000 entries), Data Transmission, Data Retrievability, Multi-bed Presence Detection, Breathing Detection
Wireless Transmission	Technology	LoRaWAN®, Milesight D2D, 2.4G WIFI	
	Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4	
	Mode	OTAA/ABP Class C	
Physical Characteristics	Power Supply	DC 5V/ 3A by Type-C Cable	
	Ingress Protection	IP65	
	Dimension	114 x 84 x 15 mm (4.49 x 3.3 x 0.59 in)	
	Installation	Ceiling Mounting	



# See CO<sub>2</sub> and More to Optimize Energy Efficiency and Healthy

Indoor Air Quality (IAQ) Monitoring Series



## Overall Features

- Multi-Sensor in One for Various Scenarios
- Wireless Installation with Anti-theft Protection
- Support Data Storage and Retransmission
- Powered via USB Type-C (AM319)
- Multi-years Battery Life (AM102/AM103/AM307/AM308)
- Traffic Light Status Indicator for Direct Notification (AM102/AM103/AM307/AM308/AM319)
- Support Smart Screen Mode (AM102/AM103/AM307/AM308)
- Hibernation Mode for Ultra-Low Power Consumption (AM102/AM103)

See CO<sub>2</sub> and More to Optimize Energy Efficiency and Healthy

Model		AM102	AM102L	AM103	AM103L	
 <b>2-in-1 IAQ Sensor</b>	Wireless Transmission	Technology	LoRaWAN®			
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4			
		Mode	OTAA/ABP Class A			
 <b>3-in-1 IAQ Sensor</b>	Measurement	Temperature	± 0.2°C (-20°C ~ 60°C)			
		Humidity	± 2% RH (0% RH~ 100% RH)			
		Carbon Dioxide (CO <sub>2</sub> )	-	± (30 ppm + 3% of Reading), 400 to 5000 ppm		
Physical Characteristics	Configuration	NFC				
	Power Supply*	2 x 2700 mAh ER14505 Li-SOCl <sub>2</sub> Replaceable Batteries				
	Battery Life*	Over 7 Years	Over 9 Years	Up to 3 Years	Up to 4 Years	
	Display	2.13-inch Black & White E-Ink Screen	-	2.13-inch Black & White E-Ink Screen	-	
	Alarm System	1 x Traffic Light Status Indicator				
	Ingress Protection	IP30				
	Dimension	68 x 65 x 20.5 mm (2.68 x 2.56 x 0.81 in)				
	Installation	Wall Screw Mounting, 3M Tape Mounting				

\* Tested under laboratory conditions and for guideline purposes only.

Model		AM307	AM308	AM319	
 <b>7-in-1 IAQ Sensor</b>	Wireless Transmission	Technology	LoRaWAN®		
		Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4		
		Work Mode	OTAA/ABP Class A	OTAA/ABP Class A	OTAA/ABP Class C
 <b>8-in-1 IAQ Sensor</b>  <b>9-in-1 IAQ Sensor</b>	Measurement	Temperature	± 0.2°C (-20°C - 60°C)		
		Humidity	±2%RH (0% ~ 100%RH)		
		Motion	Vacant/Occupied (Status)		
		Light	0-60000 Lux (Determine as 6 Levels, 0-5)		
		TVOC (IAQ Rating)	1.00 - 5.00, ±1 Accuracy		
		Barometric Pressure	±0.5 hPa (260 ~ 1260 hPa)		
		Carbon Dioxide (CO <sub>2</sub> )	± (30 ppm + 3% of Reading), 400 ~ 5000 ppm	± (50 ppm + 5% of Reading), 400 ~ 2000 ppm	
		PM2.5 & PM10	-	±10µg/m <sup>3</sup> (0-100 µg/m <sup>3</sup> ), ±10% (100 ~ 1000µg/m <sup>3</sup> )	
		Formaldehyd(HCHO)*	-	±10% (0 - 1.25 mg/m <sup>3</sup> )	
Ozone (O <sub>3</sub> )*	-	±5% FS (0 - 10 ppm)			
Physical Characteristics	Configuration	NFC, USB Type-C Port			
	Power Supply**	Around 3 Years	AM308: Around 1 Years AM308L: Around 1.5 Years	5V/1A by Type-C Port	
	Ingress Protection	IP30			
	Dimensions	100.8 x 114 x 22 mm (3.97 x 4.49 x 0.87 in) & 4.2-inch E-Ink Screen			
	Installation	3M Tape Mounting, Wall Screw Mounting, 86 Box Mounting			

\* HCHO or O<sub>3</sub> sensor is alternative option and both support replacement.  
 \*\* Tested under laboratory conditions and for guideline purposes only.

# The Workplace of the Future - Safer and Smarter

CoWork Series



## Overall Features

- Suitable for Workplace Utilization and Power Consumption Management
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Support Multicast, Overcurrent Protection, Remote and Local Control (WS50x/WS51x/WS523/WS558)
- Unique Milesight D2D for Easy Communication
- Long Battery Life and Wireless Installation for Easy Deployment (Except WS50x/WS51x/WS558)

## The Workplace of the Future - Safer and Smarter

Model		WS101	
  <b>Smart Button</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
Physical Characteristics		Power Supply*	Easily Replaceable Battery with over 5-year Battery Life
		Ingress Protection	IP30
		Dimensions	50 × 50 × 18 mm (1.97 × 1.97 × 0.71 in) Button: Φ20 mm (Φ0.79 in)
		Installation	On the Flat Surfaces with Screws or 3M Tapes, Lanyard
Others		Configuration	NFC
		Button	1 × External Button + 1 × Reset Button (Internal)
		Advanced Feature	Milesight D2D Controller

\* Tested under laboratory conditions and for guideline purposes only.

Model		WS136/WS156	
  <b>Smart Scene Panel</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
Physical Characteristics		Power Supply*	Easily Replaceable Batteries with over 3-Year Battery Life
		Ingress Protection	IP30
		Dimensions	86 × 86 × 14 mm (3.39 × 3.39 × 0.55 in)
		Display	2.9-Inch Black & White E-Ink Screen (WS156 Only)
Others		Installation	Desktop, 3M Tape Mounting, 86 Box Mounting
		Configuration	NFC
		Button	6 Scene Buttons (Blue Light) & 1 Reset Button (Internal)
		Advanced Feature	Milesight D2D Controller, Screen Display Customization

\* Tested under laboratory conditions and for guideline purposes only.

Model		WS201	
  <b>Smart Fill Level Monitoring Sensor</b>	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/ IN865/RU864/EU868/US915/AU915/KR920/AS923- 1&2&3&4
		Mode	OTAA/ABP Class A
Measurement		ToF FoV	25°(Accuracy± 5°)
		Range&Accuracy	1 ~ 55 cm (Accuracy: ± 1 cm)
		Resolution	1mm (1.0 ≤X ≤15.0cm) 2mm (15.0<X≤ 35.0cm) 3mm (35.0<X≤55.0cm) X = Detection Distance
Physical Characteristics		Dimension	66 × 38 × 12 mm (2.60 × 1.50 × 0.47 in)
		Configuration	NFC
		Power Supply*	Easily Replaceable Battery with 2-Year Battery Life
		Operation Temperature	-10°C ~ +60°C
		Ingress Protection	IP30
Installation	On the Flat Surface with 3M Tapes		

\* Tested under laboratory conditions and for guideline purposes only.

## The Workplace of the Future - Safer and Smarter

Model		WS202		
   <b>PIR &amp; Light Sensor</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923	
		Mode	OTAA/ABP Class A	
	Measurement	PIR	120° Horizontal, 100° Vertical, Maximum 8 m	
		Light Status	Bright/Dark (Determine 1-60000 lux as Bright or Dark According to Custom Threshold)	
	Physical Characteristics	Power Supply*	Easily Replaceable Battery with up to 4-Year Battery Life	
		Ingress Protection	IP30	
		Dimension	50 × 50 × 23.8 mm (1.97 × 1.97 × 0.94 in)	
		Installation	On the Flat Surfaces with Screws or 3M Tapes	
	Others	Configuration	NFC	
Advanced Feature		Milesight D2D Controller		

\* Tested under laboratory conditions and for guideline purposes only.

Model		WS203		
   <b>Motion &amp; TH Sensor</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class A	
	Measurement	PIR	120° Horizontal, 100° Vertical; Detection Area: Maximum 6 m (Distance)	
		Temperature	±0.2°C (-20°C ~ 60°C)	
		Humidity	±2% RH (0% RH~ 100% RH)	
	Others	Configuration	NFC	
		Advanced Feature	Milesight D2D Controller, Data Storage, Data Retransmission	
	Physical Characteristics	Power Supply	1 × 4000 mAh ER18505 Li-SOCl <sub>2</sub> Battery	
		Battery Life*	Up to 5 years	
Ingress Protection		IP30		
Dimension		73 × 73 × 26 mm (2.87 × 2.87 × 1.02 in) (Without PIR Cover)		
Installation	Wall Screw Mounting, 3M Tape Mounting			

\* Tested under laboratory conditions and for guideline purposes only.

Model		WS301		
   <b>Magnetic Contact Switch</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923	
		Mode	OTAA/ABP Class A	
	Measurement	Detection Distance	10-15 mm	
	Physical Characteristics	Power Supply*	Easily Replaceable Battery with over 5-year Battery Life	
		Ingress Protection	IP20	
		Dimension	Sensor: 50.5 × 31 × 18.5 mm (1.99 × 1.22 × 0.73 in) Magnet: 30 × 13.5 × 10 mm (1.18 × 0.53 × 0.39 in)	
		Installation	On the Flat Surfaces with Screws or 3M Tapes	
	Others	Configuration	NFC	
		Button	1 × Reset Button (Internal), 1 × Tampering Button	
Alarms		Open/Close Status, Tamper		
Advanced Feature		Milesight D2D Controller		

\* Tested under laboratory conditions and for guideline purposes only.

## The Workplace of the Future - Safer and Smarter

Model		WS302		
   <b>Sound Level Sensor</b>	Wireless Transmission	Technology	LoRaWAN®	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class A	
	Measurement	Sound Level	± 3 dB (0°C to +45°C), 30 dBA to 120 dBA, 35 dBC to 120 dBC	
		Frequency Range	30 Hz to 8 kHz	
		Weighting	A and C Fast Weighting	
		Measurement Unit	SPL Actual, Leq, Lmax	
	Physical Characteristics	Power Supply*	Easily Replaceable Batteries with over 4-Year Battery Life (Fast Time Weighting Disabled) And over 1.5 Years (Fast Time Weighting Enabled)	
		Ingress Protection	IP30	
		Dimension	68 × 65 × 20.5 mm (2.68 × 2.56 × 0.81 in)	
Installation		On the Flat Surfaces with Screws or 3M Tapes		
Others	Configuration	NFC		
	Button	1 × Power/Reset Button		

\* Tested under laboratory conditions and for guideline purposes only.

Model		WS303		
   <b>Mini Leak Detection Sensor</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class A	
	Measurement	Trigger Condition	Conductive Liquid When Liquid Level Reaches 0.5 mm	
	Physical Characteristics	Configuration	NFC	
		Power Supply*	Easily Replaceable Battery with 5-Year Battery Life	
		Operation Temperature	-10°C to +60°C	
		Ingress Protection	IP67	
		Dimension	63 × 63 × 14 mm	
		Installation	3M Tape Mounting, Desktop	

\* Tested under laboratory conditions and for guideline purposes only.

Model		WS50x		
   <b>Smart Wall Switch</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class C	
	Electrical	Circuit Type	3-Wire	2-Wire
		Maximum Current	Inductive: 5 A per Gang, Total 10 A Resistive: 10 A per Gang, Total 10 A	
		Rated Load	Max 1000 W per Gang, total 0 ~ 2000 W	Max 1000 W per Gang, total 38 ~ 2000 W
		Measurement	Voltage (VAC), Current (mA), Power Factor (%), Power (W), Power Consumption (kWh)	-
	Physical Characteristics	Dimensions	86 Type: 86 × 86 × 40 mm (3.39 × 3.39 × 1.57 in) 120 Type: 118 × 72 × 46.9 mm (4.65 × 2.83 × 1.85 in)	
		Ingress Protection	IP20	
	Operation	Configuration	NFC	
Switch Control		Local Press or Remote Control		
Advanced Features		Schedule Switch, Switch Lock, Overcurrent Protection, Multicast, D2D Controller, Milesight D2D Agent		

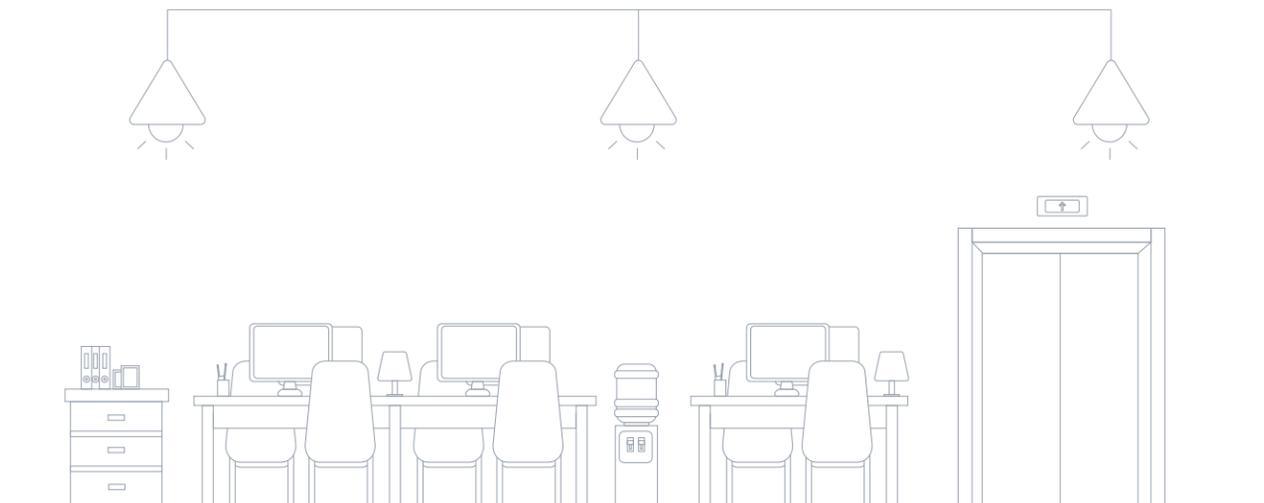
\* Tested under laboratory conditions and for guideline purposes only.

Model		WS523		
  <b>Smart Portable Socket</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class C	
	Measurement	Socket & Plug Type	US/EU/AU/UK/CN, etc.	
		Operating Voltage	100 ~ 250 VAC, 50 ~ 60 Hz	
		Max Load Capacity	10 A ~ 16 A (Optional), 250 VAC	
		Measurement	Voltage (VAC), Current (mA), Power Factor (%), Power (W), Power Consumption (kWh), ±1 % Accuracy	
	Physical Characteristics	Dimensions	110 × 62.3 × 34.6 mm (4.33 × 2.45 × 1.36 in)	
		Ingress Protection	IP30	
	Others	Configuration	NFC or Downlink	
		Switch Control	Button or Remote Control	
		Button	ON/OFF, Reset	
Advanced Features		Schedule Switch, Button Lock, Overcurrent Protection/Alarm, Multicast, Power Outage Alert, Milesight D2D Agent		

Model		WS558-LN	WS558-Switch	
  <b>Smart Light Controller</b>	Electrical	Input Voltage	100~240 VAC, 50~60 Hz	
		Output	8 Active Outputs	8 Passive Switches
		Capacitive & Inductive Load	Maximum 5A per Output, Total 16A	Maximum 5A per Switch
		Resistive Load	Maximum 10A per Output, Total 16A	Maximum 10A per Switch
		Electrical Measurement	Voltage (VAC), Current (mA), Power Factor (%), Power (W), Power Consumption (kW-h)	-
		Switch Control	Local Press or Remote Control	
	Wireless Transmission	Protocol	LoRaWAN®, Milesight D2D	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class C	
	Physical Characteristics	Dimensions	145 × 90 × 40 mm (5.7 × 3.54 × 1.57 in)	
		Installation	Wall Mounting, DIN Rail Mounting	
	Others	Configuration	NFC, USB Type-C or Downlink	
Advanced Features		Multicast, Remote Schedule Switch, Overcurrent Protection, Milesight D2D Agent		

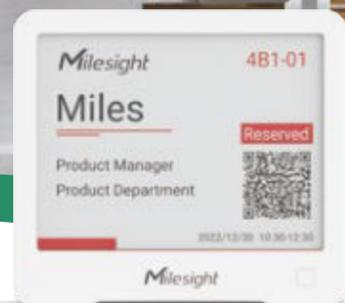
Model		WS51x		
  <b>Smart Wall Socket</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
		Frequency	IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class C	
	Electrical	Socket Type	EU: Type F, with Safety Door FR: Type E, with Safety Door	
		Input Voltage	100~250 VAC, 50~60 Hz	
		Rated Current	16A (Max)	
		Measurement	Voltage (VAC), Current (mA), Power Factor (%), Power (W), Power Consumption (kWh)	
	Software	Configuration	NFC or Downlink	
		Power Control	Local Press Button or Remote Control	
		Advanced Features	Delay Switch, Button Lock, Overcurrent Protection/Alarm, Multicast, Milesight D2D Agent	
	Physical Characteristics	Ingress Protection	IP20	
		Dimensions	Type F: 86.3 × 86.3 × 45.8 mm (3.4 × 3.4 × 1.8 in) Type E: 86.3 × 86.3 × 43.3 mm (3.4 × 3.4 × 1.7 in)	

\* Tested under laboratory conditions and for guideline purposes only.



# IoT E-ink Display

DS3604 with high-definition e-ink display is great for flexible content presentation in retail, warehouse and logistics management, smart production lines and more.



## Overall Features

- Bigger E-ink Screen Featuring Red/White/Black Color Display
- Customized Templates in Multiple Modules and Languages
- Low Power Consumption with up to 5 Years Battery Life
- Open API and a LoRaWAN® Button Enable Various Applications
- Support Local and Remote Control for Bulk Deployment
- LoRaWAN® Wireless Deployment with Low Power Consumption

Model		DS3604		
   <b>IoT E-ink Display</b>	Wireless Transmission	Technology	LoRaWAN®	
		Frequency	CN470/ IN865/RU864/EU868/US915/AU915/ KR920/AS923- 1&2&3&4	
		Mode	OTAA/ABP Class A/Class B (Default OTAA Class B)	
	Display	E-Ink Screen	4.2-inch Black & White & Red E-Ink Screen	
		Resolution	400 x 300 Pixels	
		Refresh Rate	16s (10 - 40°C)	
	Physical Characteristics	Configuration	NFC	
		Battery Life*	Around 5 Years (Class A Mode + 1 Screen Refresh per Day) Around 1 Year (Class B Mode + 12 Screen Refreshes per Day)	
		Operation Temperature	0°C ~ +40°C	
Dimension		99 x 87 x 10.5 mm (3.90 x 3.43 x 0.41 in)		
Installation		3M Tape Mounting, Wall Screw Mounting		

\* Tested under laboratory conditions and for guideline purposes only.

# iBox Kit Series

Milesight iBox Kit is designed for users to quickly evaluate the LoRaWAN® 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

<ul style="list-style-type: none"> <li>• AM319</li> <li>• AM103</li> <li>• UG56</li> <li>• Milesight IoT Cloud</li> </ul> <p>*Enjoy free cloud services for a specified period of time</p> <p>Indoor Air Quality Solution <b>iBox IAQ Kit</b></p>	<ul style="list-style-type: none"> <li>• WS101</li> <li>• WS558</li> <li>• UG56</li> <li>• Milesight IoT Cloud</li> </ul> <p>*Enjoy free cloud services for a specified period of time</p> <p>Smart Building Solution <b>iBox Smart Building Kit</b></p>
<ul style="list-style-type: none"> <li>• VS121</li> <li>• DS3604</li> <li>• Milesight IoT Cloud</li> </ul> <p>*Enjoy free cloud services for a specified period of time</p> <p>Smart Office Solution <b>iBox CoWork Kit</b></p>	<ul style="list-style-type: none"> <li>• WS301</li> <li>• WS156</li> <li>• UC100</li> <li>• UG56</li> <li>• Milesight IoT Cloud</li> </ul> <p>*Enjoy free cloud services for a specified period of time</p> <p>Smart Office Solution <b>iBox CoWork Kit</b></p>
<ul style="list-style-type: none"> <li>• WS101</li> <li>• GS301</li> <li>• UC100</li> <li>• UG56</li> <li>• Milesight IoT Cloud</li> </ul> <p>*Enjoy free cloud services for a specified period of time</p> <p>Smart Restroom Solution <b>iBox Smart Restroom Kit</b></p>	<ul style="list-style-type: none"> <li>• EM500-SMTC</li> <li>• UC511</li> <li>• UG56</li> <li>• Milesight IoT Cloud</li> </ul> <p>*Enjoy free cloud services for a specified period of time</p> <p>Smart Agriculture Solution <b>iBox Smart Agriculture Kit</b></p>



# Professional Temperature Monitoring

TS Series



## Professional Temperature Monitoring

Model		TS201	
	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/ IN865/RU864/EU868/US915/AU915/ KR920/AS923- 1&2&3&4
		Mode	OTAA/ABP Class A
	Sensor	Measuring Range	-40°C ~ 125°C
		Accuracy	± 0.5°C(-10°C ~ 85°C), ± 2°C(-40°C ~ -10°C, 85°C ~ 125°C)
		Resolution	0.1°C
		Cable Length	1.5 m
<b>Cost-Effective Temperature Sensor</b>	Others	Configuration	NFC
		Advanced Feature	Data Storage, Data Retransmission, Data Retrieval, Abrupt Temperature Change Alarm
Physical Characteristics	Physical Characteristics	Battery Life	Around 3 Years (25°C, 10 min Interval, SF10) Around 9 Years (25°C, 10 min Interval, SF7)
		Operating Temperature	TS201 Device: -30°C ~ 55°C (-22°F ~ 131°F) Sensor Cable: -40°C ~ 125°C (-40°F ~ 257°F)
		Ingress Protection	IP67
		Installation	Wall Screw Mounting, Cable-tie Mounting, Magnetic Mounting (Opt.)

Model		TS301	TS302
	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/ KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
	Sensor Connector	Connector Type	5-pin M12 A-Coded Male Connector
		Connector Number	TS301: 1 × Connector for PT100 Probe or Magnet Switch Sensor TS302: 2 × Connectors for two PT100 Probes or PT100 + Magnet Switch Sensor
<b>LoRaWAN® Temperature Sensor</b>	Others	Configuration	Mobile App (via NFC) or PC software (via USB Type-C)
		Data Logging	10,000 Measurements and Supports to Export as CSV or PDF File
Physical Characteristics	Physical Characteristics	Ingress Protection	IP65
		Dimension	109.35 × 75 × 20 mm (4.31 × 2.95 × 0.79 in)
		Installation	Wall Screw Mounting, Magnetic Mounting (Opt.)

### Overall Features

- Industrial-grade Design
- Easy Configuration via NFC
- Highly-Accurate Temperature Monitoring
- Support Data Storage and Retransmission
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Food-Grade Enclosure and Probe (TS101)
- Compliance with HACCP and 21 CFR Part 11B (TS30x)
- Certified for EN12830 Standard (TS201 & TS30x)
- Compatible with Probes to Measure Inside Temperature Against Air Temperature Fluctuation

PT100 Probes*			
Model	B05-125-200	AF10-125-150	A05-500-150
Measurement	± 0.5°C (-40°C~40°C), ± 1°C (40°C~125°C)	± 0.4°C (-40°C~125°C)	±0.4°C (-50°C~125°C) ±1.2°C (125°C~500°C)
Cable Length	2m	1.5m	1.5m

\* Please contact us for customized probe options according to your specific requirements.

Magnet Switch Sensor	
Detection Distance	20-30 mm
Cable Length	1.5 m (Customizable)
Dimension	32 × 15 × 8 mm (1.25 × 0.59 × 0.31 in)

Model		TS601	TS602	
 <p><b>Temperature and Humidity Sensor</b></p>	Wireless Transmission	Technology	LTE Cat.1	
		Frequency	LTE - FDD: B1/B3/B5/B7/B8/B20/B28	
		Mode	TCP/UDP/MQTT/AWS/Milesight Development Platform	
		Advanced Features	Threshold Alarm, Data Storage (5,000 entries), Data Retransmission	
	Sensor Connector	Connector Type	-	5-pin M12 A-Coded Male Connector
		Connector Number	-	1 × Connector for TH/DS18B20/PT100 Sensor
	Temperature Sensor	Range	-40°C to + 125°C	Refer to Optional Sensor
		Accuracy	± 0.3°C (-40°C to 0°C) ± 0.2°C (0°C to 65°C) ± 0.5°C (65°C to 125°C)	
	Humidity Sensor	Range	0% to 100% RH	Refer to Optional Sensor
		Accuracy	± 2% RH	
	Light Sensor	Range	0 - 600 Lux	
		Status	Light/Dark	
	Device Position	Status	Normal/Tilt	
	Base Station Positioning	Parameters	Longitude/Latitude	
		Battery Life	Around 3 Years*	
	Physical Characteristics	Operating Temperature	-35°C -70°C	
		Relative Humidity	0% - 95% (non-condensing)	
		Ingress Protection	IP67	
Housing & Color		ABS+PC (food-grade), White		
Dimension		112 × 72 × 29mm		
Installation		Wall Screw Mounting, Cable-tie Mounting, 3M Tape Mounting, Magnetic Mounting (Opt.)		

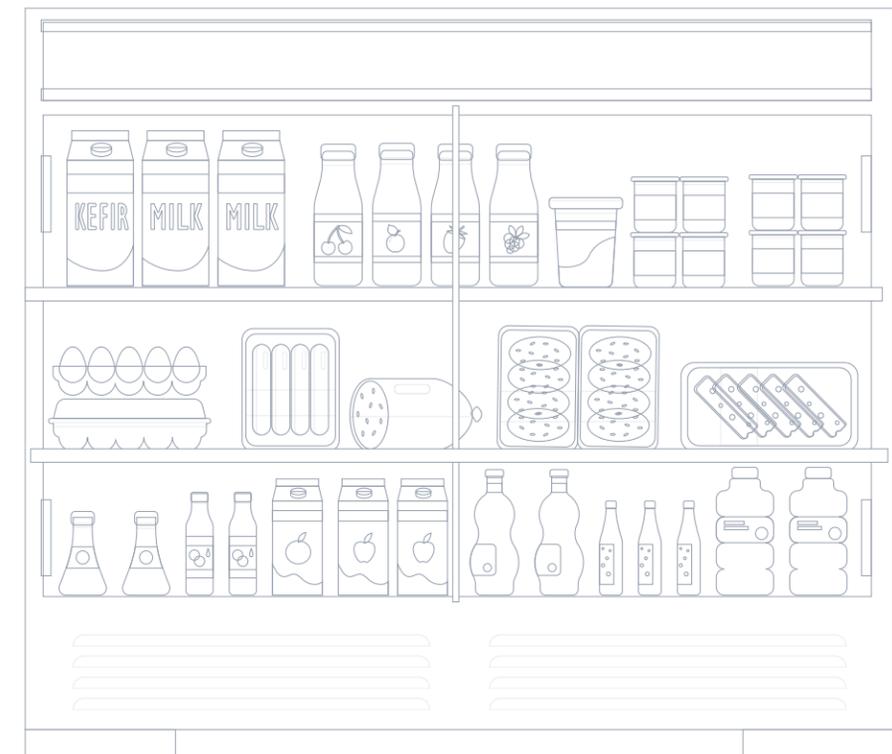
\* To be further tested and confirmed.

PT100				
Model	SP11-B05-125-200	SP11-AF10-125-150	SP11-A03-050-150	SP11-A05-500-150
Measurement	-40 °C ~ 125 °C	-40 °C ~ 125 °C	-200 °C ~ 50 °C	-50 °C ~ 500 °C
Accuracy	± 0.5°C (-40°C~40°C), ± 1°C (40°C~125°C)	± 0.4°C	± 0.5°C (-175°C~50°C), ± 0.6°C (200°C~175°C)	± 0.4°C (-50°C~125°C), ± 1.2°C (125°C~500°C)
Cable Length	2m	1.5m	1.5m	1.5m

Other Probes	DS18B20 Sensor	TH Sensor
Model	SP12-125-150	SP13-125-150
Measurement	-40 °C ~ 125 °C	Temperature: -40 °C ~ 125 °C Humidity: 0% RH ~ 100% RH
Accuracy	± 0.5°C (-10°C~85°C), ± 2°C (-40°C~-10°C, 85°C ~125°C),	Temperature: ± 0.3°C (-40°C~0°C), ± 0.2°C (0°C~65°C), ± 0.5°C (65°C~125°C) Humidity: ± 2% RH
Cable Length	1.5 m	1.5 m

Model		TS101	
 <p><b>Insertion Temperature Sensor</b></p>	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/ IN865/RU864/EU868/US915/AU915/ KR920/AS923- 1&2&3&4
		Mode	OTAA/ABP Class A
Measurement	Range	-30°C ~ +70°C (Accuracy: ±0.5°C)	
	Resolution	0.1°C	
Physical Characteristics	Configuration	NFC	
	Power Supply*	Easily Replaceable Battery with 10-Year Battery Life	
	Material	Transceiver: ABS + PC Sensor Probe: 316 Stainless Steel (Food-Grade, Phosphine & Corrosion Resistant)	
	Ingress Protection	IP67	
	Impact Protection	IK10(Transceiver)	
	Dimension	Transceiver: Φ 92 × 92 × 26 mm (Φ 3.62 × 3.62 × 1.02 in) Sensor Probe: Φ 7 × 400 mm (Φ 0.28 × 15.75 in)	
	Installation	Insert Installation	

\* Tested under laboratory conditions and for guideline purposes only.



# Sense the Invisible Danger

GS Series



## Overall Features

- Highly-Accurate Monitoring
- Easy Configuration via NFC
- Built-in LED Indicator & Buzzer for Status Indication and Alarming
- LoRaWAN® Wireless Deployment with Low Power Consumption
- High Detection Accuracy
- Real-Time Status Alerts
- Simple and Quick Installation
- Resilient Against Environmental Interference

## Sense the Invisible Danger

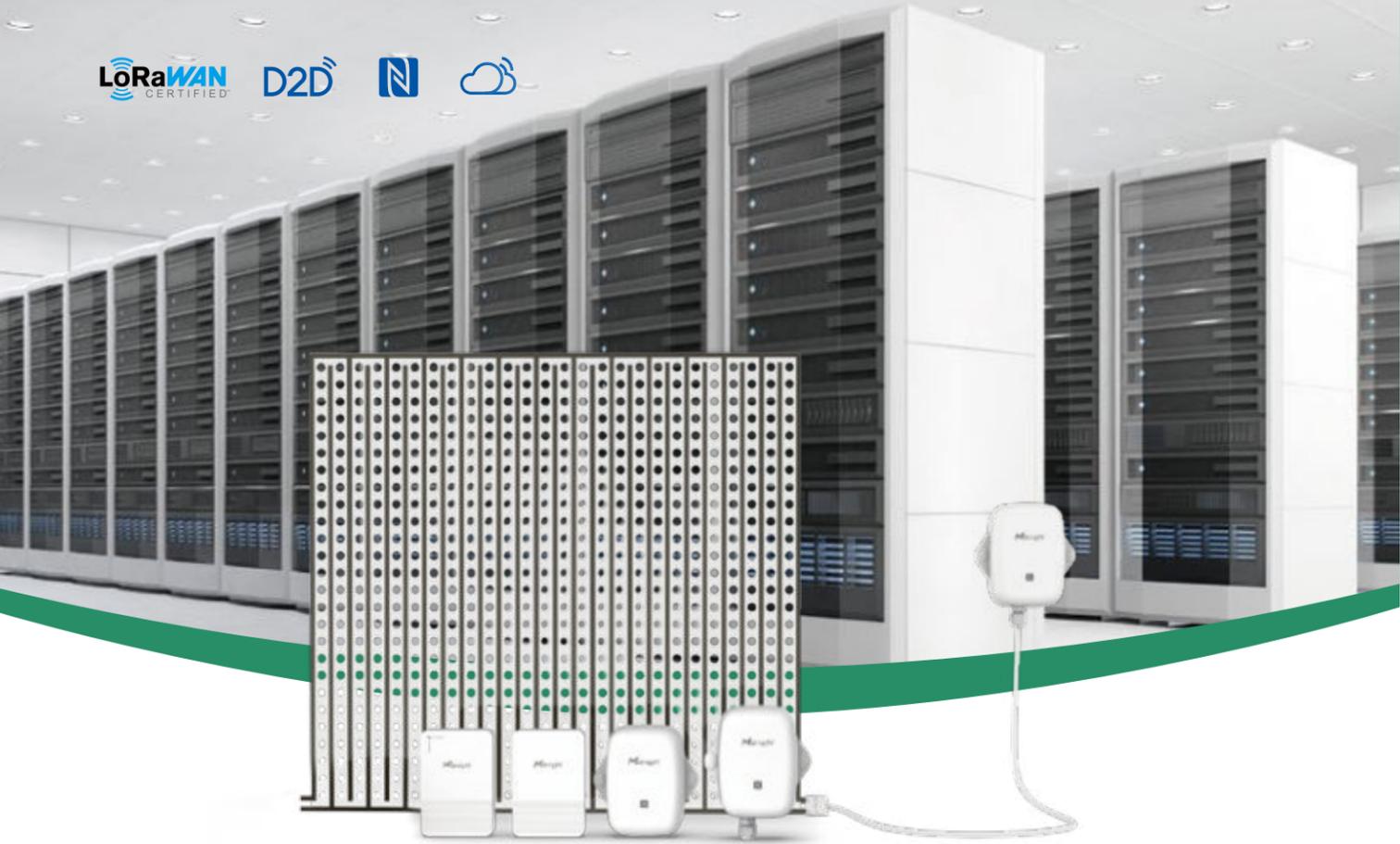
Model		GS301	
	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
<p><b>Bathroom Odor Detector</b></p>	Measurement	Ammonia (NH <sub>3</sub> )	± 5% (-40 - 35°C), 0 ~ 10 ppm
		Hydrogen Sulfide (H <sub>2</sub> S)	± 5% (-40 - 35°C), 0 ~ 5 ppm
		Temperature	± 0.2°C (-40 - 85°C)
		Humidity	± 2%RH (0 - 100%)
Physical Characteristics		Configuration	NFC
		Power Supply*	Easily Replaceable Batteries with up to 3-Year Battery Life
		Ingress Protection	IP30
		Dimension	120 × 85 × 32.5 mm (4.72 × 3.35 × 1.28 in)
		Alarm System	1 × Status/Alarm Indicator + 1 × Buzzer
		Installation	Wall Mounting

\* Tested under laboratory conditions and for guideline purposes only.

Model		GS601	
	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class C
<p><b>Vape Detector</b></p>	Sensor	Sensor Type & Range	Temperature, -20°C ~ 60°C Humidity, 0% ~ 100% RH Vape Index, 0 ~ 100 TVOC, 0 ~ 2000 µg/m <sup>3</sup> PM1.0 & PM2.5 & PM10, 0 ~ 1000 µg/m <sup>3</sup>
		Others	LED & Buzzer
Physical Characteristics		Power Supply	5V/1A by Type-C Port
		Operating Temperature	-20°C ~ 60°C
		Ingress Protection	IP30
		Dimension	Φ 128 × 40 mm (Φ 5.04 × 1.57 in)
		Installation	Ceiling Mounting

# Monitor Conditions and Optimize Controls

EM300 Series - Environment Monitoring Sensor



## Overall Features

- Rated at IP67
- Industrial-grade Design
- Battery Life up to 5 Years
- Easy Configuration via NFC
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Support Extra Temperature and Humidity Detection (Except UDL&TILT&MLD)

## Monitor Conditions and Optimize Controls

Model		EM300-TH	EM320-TH
 <p>Temperature &amp; Humidity Sensor</p>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
 <p>Temperature &amp; Humidity Sensor</p>	Measurement	Temperature	±0.3°C (0°C ~ 70°C), ±0.6°C (-30°C ~ 0°C)
		Humidity	±3%RH (10%RH ~ 90%RH), ±5%RH (below 10%RH and above 90%RH)
 <p>Temperature &amp; Humidity Sensor</p>	Physical Characteristics	Configuration	NFC
		Power Supply*	Easily Replaceable Battery with up to 10-Year Battery Life
		Material	-
		Operation Temperature	-30°C ~ 70°C
		Ingress Protection	IP67
		Dimension	88.5 × 85.3 × 27 mm (3.48 × 3.36 × 1.06 in)
		Installation	Wall Mounting
			Easily Replaceable Batteries with over 5-year Battery Life
			PC + ABS (Food-Grade)
			-30°C ~ 60°C
			Wall or Pole Mounting (Standard Version) Magnetic Adsorption (Magnet Version)

\* Tested under laboratory conditions and for guideline purposes only.

Model		EM300-MLD	EM300-SLD	EM300-ZLD	
 <p>Membrane Leakage Detection Sensor</p>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D		
		Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4		
		Mode	OTAA/ABP Class A		
 <p>EM300-SLD/ZLD Leak Detection Sensor</p>	Measurement Leakage Detection	Liquid Type	Conductive Liquid (Water, Weak Acid, Weak Base, etc.)	-	
		Trigger Media	400 × 400 × 0.25 mm Printed Leakage-Detecting Film (The size can be customizable)	-	-
		Temperature	-	±0.3°C (0°C ~ 70°C), ±0.6°C (-30°C ~ 0°C)	-
		Humidity	-	±3%RH (10%RH ~ 90%RH), ±5%RH (below 10%RH and above 90%RH)	-
		Trigger Condition	When the Sensing Film Contact Conductive Liquid	When Conducting Liquid Level Reaches 5 mm	-
		Cable Length	1000 mm (Customizable)	1.5 m (Customizable)   3 m (Customizable)	
 <p>EM300-SLD/ZLD Leak Detection Sensor</p>	Physical Characteristics	Configuration	NFC		
		Power Supply*	1 × 4000 mAh ER18505 Li-SOCL <sub>2</sub> Battery (Extendable to 2 Batteries)		
		Battery Life*	Up to 10 Years (One hour Leakage per Day, 25°C)		
		Color & Material	White Flame, ABS + PC (Retardant)		
		Operation Temperature	-30°C ~ 70°C		
		Ingress Protection	IP67		
		Dimension	105.6 × 85.3 × 27 mm (4.16 × 3.36 × 1.06 in)		
Installation	Wall Screw Mounting, 3M Tape Mounting, Cable-Tie Mounting	Wall Mounting			

\* Tested under laboratory conditions and for guideline purposes only.

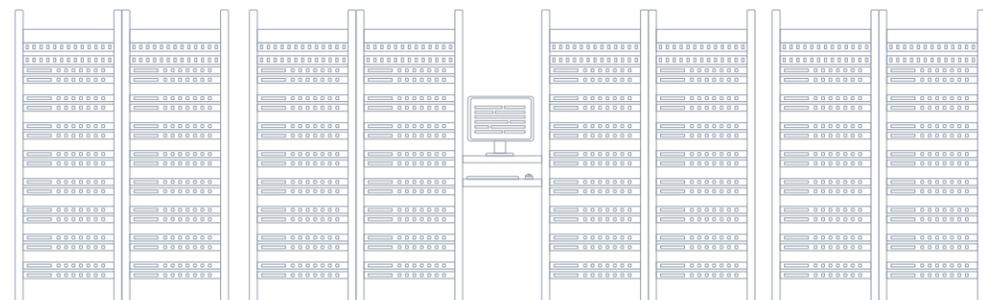
## Monitor Conditions and Optimize Controls

Model		EM300-DI	
	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
 Pulse Counter	Measurement	GPIO	1 x GPIO Interface, Work as Pulse Counter
		Temperature	±0.3°C (0°C ~ 70°C), ±0.6°C (-30°C ~ 0°C)
		Humidity	±3%RH (10%RH ~ 90%RH), ±5%RH (below 10%RH and above 90%RH)
Physical Characteristics		Configuration	NFC
		Power Supply*	Easily Replaceable Battery with up to 5-Year Battery Life
		Operation Temperature	-30°C ~ 70°C
		Ingress Protection	IP67
		Dimension	105.6 × 85.2 × 27 mm (4.15 × 3.35 × 1.06 in)
		Installation	Screw Mounting, 3M Tape Mounting, Cable-Tie Mounting

\* Tested under laboratory conditions and for guideline purposes only.

Model		EM300-MCS	
	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
 Magnetic Contact Switch	Measurement Door Magnet	Detection Distance	20-30 mm
		Cable Length	1.5 m
		Temperature	±0.3°C (0°C ~ 70°C), ±0.6°C (-30°C ~ 0°C)
Physical Characteristics		Humidity	±3%RH (10%RH ~ 90%RH), ±5%RH (below 10%RH and above 90%RH)
		Configuration	NFC
		Power Supply*	Easily Replaceable Battery with up to 10-year Battery Life
		Operation Temperature	-30°C ~ 70°C
		Ingress Protection	IP67
		Dimension	Transceiver: 105.6 × 85.3 × 27 mm (4.16 × 3.36 × 1.06 in) Magnet: 32 × 15 × 8 mm (1.25 × 0.59 × 0.31 in)
Installation	Wall Mounting		

\* Tested under laboratory conditions and for guideline purposes only.



# Revolutionizing Measurement and Monitoring

EM400 Series Distance/Level Measurement Sensor

LoRaWAN® NB-IoT Cat M

### Overall Features

- IP67 Rated for Harsh Environment
- LoRaWAN® & NB-IoT & CAT-M Versions Available
- 3-Axis Accelerometer for Asset Status Management
- Embedded NTC Thermistor for Fire Alarms
- Replaceable Battery Life up to 10 Years
- Easy Configuration via NFC
- Support Pre-set Modes (TLD/MUD)
- Positioning Function Enabled by GNSS Modules (NB-IoT Version)

Model		EM410-RDL (LoRaWAN® Version)	EM410-RDL (Cellular Version)	EM411-RDL (LoRaWAN® Version)
  <p><b>Radar Distance/Level Sensor</b></p>	Distance Measurement	Technology Millimeter Wave Radar		
		Installation Height 2.3m ~ 3m		
		Detection Angle 8°		
		Radar Detection Range 0.3m ~ 12m		
		Recognition Rate Up to ± 2mm*		
		Resolution 1mm		
	Advance Feature Distance Threshold Alarm, Distance Change Alarm, Blind Zone Alarm, Radar-echo Curve, Diagnostic, Data Storage (2,000 entries), Data Retrievability (LoRaWAN® Version), Data Retransmission, Device Tilt and Motion Status Detection			
Wireless Transmission	Technology	LoRaWAN®	Cellular LTE-CAT.1	LoRaWAN®
	Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4	LTE (CAT 1): B1/B3/B5/B7/B8/B20/B28 for EMEA/Australia/New Zealand	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
	Mode	OTAA/ABP Class A	TCP/UDP/MQTT/AWS/IOT Cloud/Milesight Development Platform	OTAA/ABP Class A
Physical Characteristics	Power Supply	1 x 19000 mAh ER34615 Li-SOCL <sub>2</sub> Battery		
	Battery Life **	Around 7 Years (15-min collection Interval+ 1440-report interval, 25°C)	Around 5 Years (15-min collection Interval+ 1440-report interval, 25°C)	Around 7 Years (15-min collection Interval+ 1440-report interval, 25°C)
	Operating Temperature	-40°C ~ +70°C	-35°C ~ +70°C	-20°C ~ +60°C
	Operating Humidity	0 ~ 100% (Non-condensing)		
	Flammability Rating	UL94 V0		
	Ingress Protection	IP68 (1m underwater, 48 hours)	IP68 (1m underwater, 48 hours), ATEX(Zone 0)Explosion Proof Certification	
	Dimension	Φ 101 x 87 mm (Φ 3.98 x 3.43 in)		
	Installation	Mounting options: bracket mounting, threaded mounting, or screw mounting (with perforated top cover).		

\*Perfectly smooth flat-surfaced solid, or still liquid surface.  
\*\*Tested under laboratory conditions and for guideline purposes only.

Model		EM400-TLD				
  <p><b>ToF Laser Distance Sensor</b></p>	Wireless Transmission	Technology LoRaWAN®		NB-IoT/Cat M		
		Frequency CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4				
		Mode OTAA/ABP Class A				
	Measurement	ToF FoV 27°				
		Range&Accuracy Range: 2 ~ 350 cm Accuracy: ±2 cm (-20°C~70°C) Resolution:1 mm				
		Temperature -40°C ~ 125°C				
		Position Normal/Tilt				
Location - Longitude & Latitude (GNSS)						
Physical Characteristics	Configuration NFC					
	Battery Life*		Around 10 years (Standard Mode -10min Interval, Bin Mode -20min Interval, 25°C)			
	Ingress Protection IP67					
	Installation On the Flat Surface with Screws					

\*Tested under laboratory conditions and for guideline purposes only.  
\*\*PSM is required for SIM card and will be impacted by cellular base station signals.

Model		EM400-MUD				
  <p><b>Multifunctional Ultrasonic Distance Sensor</b></p>	Wireless Transmission	Technology LoRaWAN®		NB-IoT/Cat M		
		Frequency CN470/ IN865/RU864/EU868/US915/AU915/KR920/AS923- 1&2&3&4				
		Mode OTAA/ABP Class A				
	Measurement	Detection Range 3 ~ 450 cm				
Detection Accuracy ± (1+0.3%*S) cm (-15°C ~ 60°C), S=distance						
Temperature -40°C ~ 125°C						
Position Normal/Tilt						
Physical Characteristics	Location - Longitude & Latitude (GNSS)					
	Configuration NFC					
	Battery Life*		Standard Mode: >10 years (10min Interval, 25°C) Bin Mode: >10 years (20min Interval, 25°C) Parking Lot Mode: 5 years (12 Triggers Per Day, 25°C)		TCP/UDP—Around 10 Years MQTT/AWS—Around 5 Years (4 Times Report Per Day, Per Report Includes 12 Packages with 30-min Collection Interval, 25°C)**	
	Operation Temperature -30°C ~ +70°C					
	Ingress Protection IP67					
	Dimension 118 x 65 x 32.5 mm					
	Installation On the Flat Surface with Screws					

\*Tested under laboratory conditions and for guideline purposes only.  
\*\*PSM is required for SIM card and will be impacted by cellular base station signals.

Model		EM400-UDL				
  <p><b>Ultrasonic Distance Sensor</b></p>	Wireless Transmission	Technology LoRaWAN®		NB-IoT/Cat M		
		Frequency CN470/ IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4				
		Mode OTAA/ABP Class A				
	Measurement	Model		Standard	Pro	Standard
Detection Range		C050: 25 ~ 500 cm C100: 25 ~ 1000 cm	W050: 30 ~ 500 cm W100: 50 ~ 1000 cm	C050: 25 ~ 500 cm C100: 25 ~ 1000 cm	W050: 30 ~ 500 cm W100: 50 ~ 1000 cm	
Detection Accuracy		± (1+0.3%*S) cm, S=distance (-15°C ~ 60°C)*		± 1% FS (-30°C ~ 65°C)		
Temperature -40°C ~ +125°C						
Position Normal/Tilt						
Location - Longitude & Latitude (GNSS)						
Configuration NFC						
Physical Characteristics	Battery Life**		> 10 Years (10min Interval, 25°C)		TCP/UDP—Around 10 Years MQTT/AWS—Around 5 Years (4 Times Report Per Day, Per Report Includes 12 Packages with 30-min Collection Interval, 25°C)***	
	Operation Temperature -30°C ~ 70°C					
	Ingress Protection IP67					
	Installation On the Flat Surface with Screws					

\*This accuracy is applicable to the measuring range of 25~800cm.  
\*\*Tested under laboratory conditions and for guideline purposes only.  
\*\*\*PSM is required for SIM card and will be impacted by cellular base station signals.

# Reliable Data Collection for Long-term Remote Operation

EM500 Series - Outdoor Environment Monitoring Sensor



## Overall Features

- IP67 Rated and UV Resistance
- Replaceable Battery Life up to 10 Years
- Easy Configuration via NFC
- Wide Measuring Range with Higher Accuracy
- LoRaWAN® Wireless Deployment with Low Power Consumption

## Reliable Data Collection for Long-term Remote Operation

Model		EM500-CO <sub>2</sub>	
  <b>CO<sub>2</sub> Sensor (4 in 1)</b>	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
Measurement		Carbon Dioxide (CO <sub>2</sub> )	± (30 ppm + 3% of reading), 400 - 5000 ppm (0°C ~ 50°C, 0~85%RH)
		Temperature	±0.3°C (0°C ~ 70°C), ±0.6°C (-30°C ~ 0°C)
		Humidity	±3%RH (10%RH ~ 90%RH), ±5%RH (below 10%RH and above 90%RH)
		Barometric Pressure	±1 hPa, 300 ~ 1100 hPa (-40°C ~ 85°C)
Physical Characteristics		Configuration	NFC, USB Type-C Port
		Power Supply*	Built-in 19000 mAh Can be Used for up to 10 Years
		Operation Temperature	-30°C ~ 70°C
		Ingress Protection	IP65
		Dimensions	147.9 × 71 × 69.5 mm (5.8 × 2.8 × 2.7 in)
		Installation	Pole, Wall or DIN Rail Mounting

\* Tested under laboratory conditions and for guideline purposes only.

Model		EM500-LGT	
  <b>Light Sensor</b>	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
Measurement		Light	0 ~ 100000 lux
		Accuracy	±3%
Physical Characteristics		Configuration	NFC, USB Type-C Port
		Power Supply*	Built-in 19000 mAh Can be Used for up to 10 Years
		Operation Temperature	-30°C ~ 60°C
		Ingress Protection	IP67 (Transceiver)/IP65 (Light Sensor)
		Dimension	Transceiver: 105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in) Light Sensor: 64 × 58 × 34 mm (2.5 × 2.3 × 1.3 in) Cable Length: 3 m
		Installation	Pole, Wall or DIN Rail Mounting

\* Tested under laboratory conditions and for guideline purposes only.

Model		EM500-PP	
  <b>Pipe Pressure Sensor</b>	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
Measurement		Pressure Type	Gauge Pressure
		Range	± 0.5% FS, 0 - 1600 kPa (16 Bar)
		Overload	150% FS
		Long-term Stability	± 0.3% FS/year
Physical Characteristics		Configuration	NFC, USB Type-C Port
		Power Supply*	Built-in 19000 mAh Can be Used for up to 10 Years
		Operation Temperature	-30°C ~ 70°C (Transceiver)/ -10°C ~ 70°C (Pipe Pressure Sensor)
		Ingress Protection	IP67 (Transceiver)/IP65 (Pipe Pressure Sensor)
		Dimension	Transceiver: 105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in) Pipe Sensor: 67.5 × Φ27 mm (2.7 × Φ1.1 in) Cable Length: 1.5 m
		Installation	Pole, Wall or DIN Rail Mounting

\* Tested under laboratory conditions and for guideline purposes only.

## Reliable Data Collection for Long-term Remote Operation

Model		EM500-PT100	
	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
	Measurement	Connection Type	3-wire connection
		Range	T050: -200°C ~ 50°C, T500: -50°C ~ 500°C T200: -50°C ~ 200°C, T800: -50°C ~ 800°C (Customizable from -200°C ~ 800°C)
		Accuracy	T050: ±0.5°C (-40°C~40°C), ±1°C (-140°C~50°C), ±1.5°C (-200°C~140°C) T200: ±0.6°C (-50°C~200°C) T500: ±0.5°C (-50°C~170°C), ±1.2°C (170°C~500°C) T800: ±0.5°C (-50°C~170°C), ±1°C (170°C~420°C), ±2°C (420°C~800°C)
<b>Industrial Temperature Sensor</b>	Physical Characteristics	Configuration	NFC, USB Type-C Port
		Power Supply*	Built-in 19000 mAh Can be Used for up to 10 Years
		Operation Temperature	-30°C ~ 70°C
		Ingress Protection	Transceiver: IP67, Sensor: Differ Based on Temperature Ranges
		Dimension	105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in)
		Probe Type	Straight Tube (Customizable)
		Cable Length	1.5 m (Customizable)

\* Tested under laboratory conditions and for guideline purposes only.

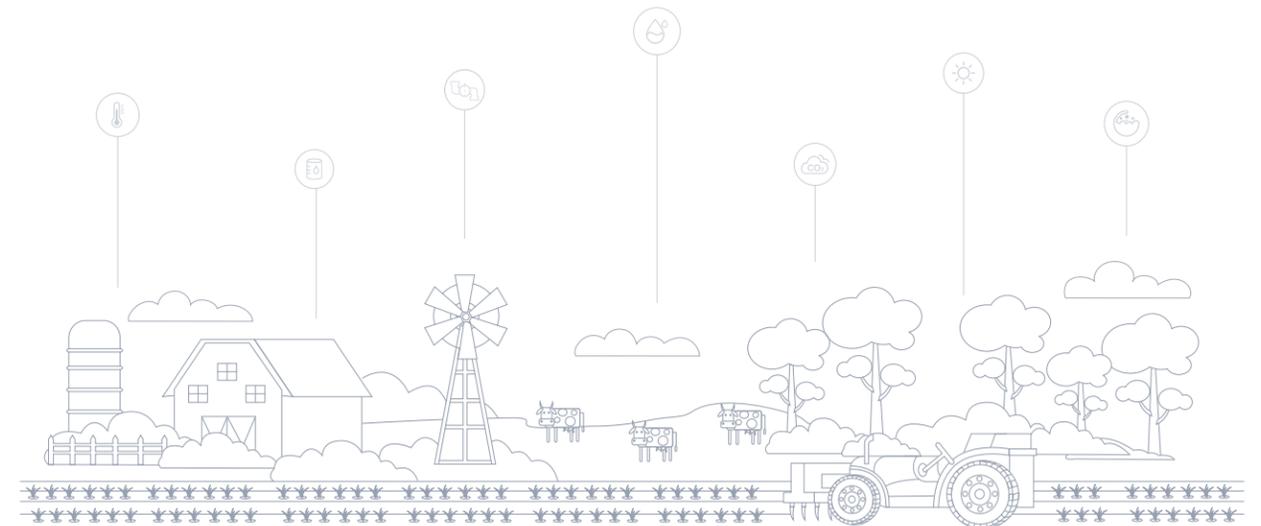
## Reliable Data Collection for Long-term Remote Operation

Model		EM500-SMTC	
	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/ IN865/RU864/EU868/US915/AU915/ KR920/AS923- 1&2&3&4
		Mode	OTAA/ABP Class A
	Measurement	Moisture	Range: 0% ~ 100% RH Accuracy: ±2%(0~50%), ± 3%(50%~100%) Resolution: 0.01%
		Temperature	Range: -40°C ~ 80°C Accuracy: ±0.5°C Resolution: 0.1°C
		Conductivity	Range: 0~20000 µs/cm Accuracy: ±3%(0~10000 µs/cm), ±5%(10000~20000 µs/cm) Resolution: 1 µs/cm
<b>Soil Moisture, Temperature and Electrical Conductivity Sensor</b>	Physical Characteristics	Configuration	NFC, USB Type-C Port
		Battery Life*	Built-in 19000 mAh Can be Used for up to 10 Years
		Operation Temperature	-30°C to +70°C
		Cable Length	2m
		Ingress Protection	IP67 (Transceiver)/IP68(Soil Sensor)
		Installation	Pole, wall or DIN Rail Mounting

\* Tested under laboratory conditions and for guideline purposes only.

Model		EM500-UDL	EM500-SWL	
	Wireless Transmission	Technology	LoRaWAN®	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class A	
	Measurement	Pressure Type	- Gauge Pressure	
		Range & Accuracy	W050: 0.3 ~ 5 m, ±1% FS W100: 0.5 ~ 10 m, ±1% FS S050: 0.3 ~ 5 m (Snow Version), ±1% FS C050: 0.25 ~ 5 m, ± (1+0.3%*S) cm, S=Distance C100: 0.25 ~ 8 m, ± (1+0.3%*S) cm, S=Distance	± 0.5% FS, (0 ~ 3m/5m/10m (H2O)) (Customizable up to 200 m and for Other Liquids)
		Long-term Stability	-	≤ ± 0.3% FS/Year
	Physical Characteristics	Configuration	NFC, USB Type-C Port	
		Power Supply*	Built-in 19000 mAh Can be Used for up to 10 Years	
		Operation Temperature	W050/W100/S050: -30°C ~ 65°C C050/C100: -15°C ~ 60°C	-30°C ~ 70°C (Transceiver) -10°C ~ 70°C (Level Sensor)
		Ingress Protection	IP67	IP67 (Transceiver)/ IP68 (Level Sensor)
		Dimension	156.1 × 71 × 69.5 mm (6.1 × 2.8 × 2.7 in)	Transceiver: 105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in) Level Sensor: 140 × φ28 mm (5.5 × φ1.1 in) Cable Length: At Least 1 ~ 1.5 m Longer than Measuring Range
		Installation	Pole, Wall or DIN Rail Mounting	

\* Tested under laboratory conditions and for guideline purposes only.



# Smart Current Transformer

CT Series



## Overall Features

- Powered by the Circuit under Test, No Batteries Required
- Non-intrusive and Quick Installation without Damaging Circuits or Shutting Down the Power Supply
- Support Sampling Frequencies up to 3.3khz for More Accurate Current Measurements
- Determines the General Direction of Energy Consumption and Automatically Calculates Cumulative Ampere-Hour Values Once per Second
- Compact Design Makes It Easy to Install Even in Tight Quarters

Model		CT101	CT103	CT105	
  <b>Smart Current Transformer</b>	Wireless Transmission	Technology	LoRaWAN®		
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4		
		Mode	OTAA/ABP Class A		
	Measurement	Detection Parameter	RMS Current		
		Rated Primary Current	100 A <sub>rms</sub>	250 A <sub>rms</sub>	500 A <sub>rms</sub>
		Rated Secondary Current	100 A <sub>rms</sub>	125 A <sub>rms</sub>	150 A <sub>rms</sub>
	Physical Characteristics	Power Supply	1. Induced current power supply 2. 5V by USB Type-C Port		
		Ingress Protection	IP30		
		Installation	Transceiver: Cable-tie Mounting (under integrated mode) CT Clamp: Suspended on the Testing Conductor		
		Operating Temperature	-20°C~70°C (-4°F~158°F)		
		Flammability Rating	UL94-V0		
		Storage Temperature	-25°C~80°C (-13°F~176°F)		

\* Tested under laboratory conditions and for guideline purposes only.

Model		CT303	CT305	CT310	
  <b>Smart Current Transformer</b>	Measurement	Detection Parameter	RMS Current		
		Rated Primary Current	300 A <sub>rms</sub>	500 A <sub>rms</sub>	1000 A <sub>rms</sub>
		Rated Secondary Current	150 mA <sub>rms</sub>		
		Accuracy	±1 %		
		Sampling Frequency	3.3 kHz		
Wireless Transmission	Technology	LoRaWAN®			
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4			
	Mode	OTAA/ABP Class A			
Temperature Sensor	Sensor Type	1 × NTC Sensor			
	Measuring Range	-20°C ~ 100°C			
	Measuring Accuracy	±1 %			
Others	Configuration	USB Type-C or Downlink			
Physical Characteristics	Power Supply	1. Induced current power supply 2. 5V by USB Type-C Port			
	Ingress Protection	IP30			
	Operating Temperature	Transceiver: -20°C~70°C (-4°F~158°F) CT Clamp: -40°C~55°C (-40°F~131°F)			
	Storage Temperature	Transceiver: -25°C~80°C (-13°F~176°F) CT Clamp: -40°C~55°C (-40°F~131°F)			
	Installation	Transceiver: Cable-tie Mounting (under integrated mode) CT Clamp: Suspended on the Testing Conductor			

\* Tested under laboratory conditions and for guideline purposes only.



## Protect and Manage Critical Assets at All Times

- Highly-Accurate GNSS Positioning
- Cooperate with Wi-Fi Positioning
- Support Geofencing
- IP67 Rated & IK09 Rated
- Provide Motion/Periodic/Timing Modes
- Easy Configuration via NFC or Bluetooth
- Support Data Storage and Retransmission
- Embedded 3-Axis Accelerometer & NTC Thermistor

Model		AT101	
 <p><b>Outdoor Asset Tracker</b></p>	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/ IN865/RU864/EU868/US915/AU915 /KR920/AS923- 1&2&3&4
		Mode	OTAA/ABP Class A
	Measurement	Positioning	GNSS Resolution: 0.000001 (Longitude/Latitude) Accuracy: 5.0m (Direct Line of Sight)
			Wi-Fi Wi-Fi Parameters: BSSID, RSSI Wi-Fi Standard: 802.11 b/g/n 2.4GHz
		Motion	Normal/Tilt
		Temperature	-40°C ~ 125°C
	Others	Configuration	NFC, Bluetooth® 5.3
		Physical Characteristics	Battery Life*
	Ingress Protection		IP67
Impact Protection	IK09		
Installation	Wall Screw Mounting, 3M Tape Mounting, Cable-tie Mounting		

## High Capacity, Long Endurance, Plug and Play

- Capacity up to 12000mAh & IP67 Rated & IK08 Rated
- Data Protection & Plug and Play
- Equip with Heating Film for Protecting Battery in Low-Temperature Environment
- Up to 32 Hours' Supplement

Model		Type-C Version	M12 Version	
 <p><b>Uninterruptible Power Supply</b></p>	Power	Power Input	9~20V-2A	
		Input Connector	DC Jack Female Connector	
		Power Output	5V-4A	6~8.4V-1.5A
		Output Connector	Type-C	4-Pin M12 A-Coded Female
		Battery Capacity	4 x 3000mAh Lithium-ion Rechargeable Batteries	
		Battery Supply Time*	6 ~ 32h	

\* Tested under laboratory conditions and for guideline purposes only.

## Overall Features

- Long-lasting Battery Life
- 5.72 Inch Full HD Touch Screen
- Full Frequency Band Testing Capability
- Real-Time Network Signal Testing and Analysis
- Records Signal Test Results with GPS Location
- Seamless Report Export and Data Analysis

Model		FT101	
 <p><b>Milesight Field Tester</b></p>	LoRaWAN®	Antenna Connector	1 x 50 Ω SMA Female Connector
		Frequency	CN470/ IN865/RU864/EU868/US915/AU915 /KR920/AS923- 1&2&3&4
		Sensitivity	-137dBm@125kHz, SF=12
		Max Output Power	19dBm (470 MHz) /16dBm (868 MHz)/22dBm (915 MHz)
		Configurable Parameter	Frequency Channel, ADR, Spreading Factor, Tx Power
	Hardware	CPU	Octa-core MTK6762, 2 GHz
		Screen	5.72-inch TP LCD Touch Screen
		Memory	4GB RAM + 64GB ROM
		Operating System	Android 12.0
	Interfaces	NFC	Support ISO/IEC 14443A Protocol, Reading Distance: 1-3cm
Extendable Storage		1 x Micro SD Slot Support up to 256G	
Wi-Fi		IEEE 802.11 b/g/n, 2.4 GHz IEEE 802.11 a/n/ac, 5 GHz	
Bluetooth		Bluetooth 4.0 (BLE)	
Physical Characteristics	GNSS	GPS/Glonass/Beidou/Galileo	
	USB	1 x USB 3.0 Type-C Port for Power & OTG	
	Power Supply	1. Built-in 4.3V/4300mAh Lithium-iron Chargeable Battery 2. 5V- 2A by USB Type-C	

Model		SCT01		
 <p><b>Sensor Configuration Tool</b></p>	Interfaces	Bluetooth	Bluetooth 4.0 (BLE) for Tool Configuration Distance: 1.5 m	
		NFC	Support ISO/IEC 14443A Protocol, Reading Distance: 1-3cm	
		Slide Switch	1 x Power On/Off Switch	
		Button	7 x Buttons for Sensor Power On/Off, Configuration, Upgrade, etc.	
		USB	1 x USB 2.0 Type-C Port for: Sensor Configuration Tool Power & Charge, Sensor Power	
	Hardware	Power Supply*	1. Built-in 2000 mAh Chargeable Battery 2. 5V by USB Type-C	
		Battery Life* (25°C)	Around 6 Hours (Standby Mode: Around 1 Month)	
		Ingress Protection	IP30	
		Dimension	160 x 60 x 26.5 mm (6.3 x 2.36 x 1.04 in)	
		Color & Material	White, Plastic (HB Flame-retardant)	

\* Tested under laboratory conditions and for guideline purposes only.

# Measure Atmospheric Conditions Precisely

IoT Weather Station



## Overall Features

- IP65 Rated for WTS Sensors & IP67 Rated for WTS Hub
- Research-Grade Measurement
- Solar-Powered & Chargeable Batteries Backup for Better Operation
- Support Normal Work for 7 Days without Sunlight
- Support Retransmission for Reliable Communication
- Store Capacity with 19,000 Sets of Historical Data Records

Model		WTS506	
 <p><b>IoT Weather Station</b></p>	WTS Sensors	Temperature	±0.3°C, (-40°C ~ 85°C)
		Humidity	±3% RH (0% ~ 100%)
		Wind Direction	±3° (0° ~ 360°), 1°
		Wind Speed	±0.3 m/s or ±3% (0 ~ 60 m/s)
		Barometric Pressure	±0.5 hPa (500 ~ 1100 hPa)
		Rainfall	±0.5 mm (< 10 mm), ±5% (>10 mm)
WTS Hub	LoRaWAN® Frequency	CN470/RU864/IN865/EU868/US915/ AU915/KR920/AS923-1&2&3&4	
	LoRaWAN® Work Mode	OTAA/ABP Class A	
Solar Panel	Open-Circuit Voltage	18 V (± 0.3 V)	
	Rated Voltage	15 V (±0.3 V)	
	Maximum Power	15 W (±5%)	
Physical Characteristics	Configuration	NFC, USB Type-C Port	
	Power Supply	Solar Powered (15 W, 1 A) & 2 × 2550 mAh Replaceable Batteries Backup	
	Ingress Protection	IP65 (WTS Sensors), IP67 (WTS Hub)	
	Dimension	φ160 x 263 x φ73 mm	
		116 × 116 × 45.5 mm (WTS Hub) 343 × 283 × 16.5 mm (Solar Panel)	
Installation	Pole Mounting (WTS Sensor, Solar Panel) Screw Mounting (WTS Hub)		

# Bring Data Acquisition & Remote Control with Ease

IoT Controller



## Overall Features

- Wide Measuring Range with Higher Accuracy
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Integrated Rich Interfaces (UC300/UC50x/UC51x)
- Data Collection up to 16 Registers for Various Usage (UC100/UC300)
- Autonomous Operation when the Network is Unavailable (UC100/UC300)
- Milesight D2D with Communication Latency to <1 Sec (UC100/UC300/UC51x)
- Solar Powered and Built-In Batteries for Flexible Power Supply Options (UC50x/UC51x)
- IP67 Rated and UV Resistance Enclosure with M12 Connectors (UC50x/UC51x)

## Bring Data Acquisition & Remote Control with Ease

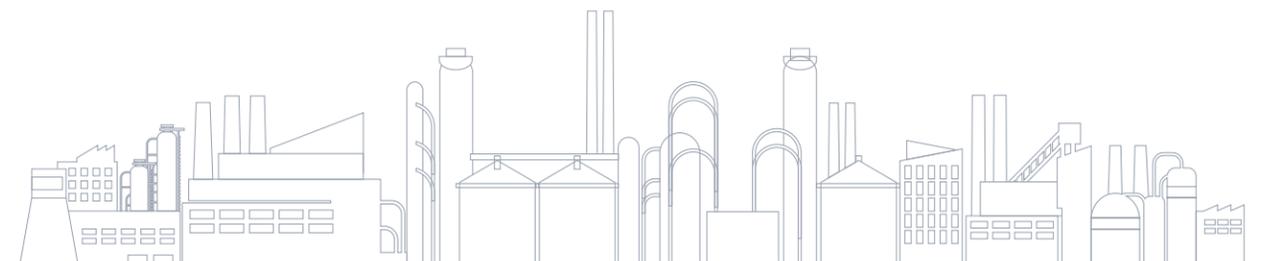
Model		UC501	UC502	
 <p><b>Multi-Interface Controller</b></p>	LoRaWAN® Model	Technology	LoRaWAN®	
		Antenna	Internal Antenna or External Antenna (Hardware Optional) External Antenna (EA) Version: 1 × 50 Ω SMA Female Connector	
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/ KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class A, Class C	OTAA/ABP Class A
	Cellular Model	Technology	NB-IoT/Cat. M	
		Antenna	Internal Antenna	
		Application Mode	TCP/UDP/MQTT/AWS	
	Data Interfaces	Interface Type	M12 A-Coded Male	
		IO Port	2 × GPIO	
		Serial Ports	1 × RS232 or RS485 (Switchable) (Transparent/Modbus RTU)	
		Analog Input	2 × 4 ~ 20 mA (or 0 ~ 10 V) (Switchable)	
		SDI-12	1 × SDI-12 (V1.4)	
Power Output		2 × 3.3 V@Max 100mA, 2 × 5/9/12 V@Max 100 mA (Switchable)		
Physical Characteristics	Configuration	NFC		
	Power Supply	① 2 × Chargeable Batteries ② Solar Powered (6 V, 1.7 W) ③ 5 ~ 24 VDC	① 3 × 9000 mAh Replaceable Batteries ② 5 ~ 24 VDC	
	Operation Temperature	-20°C ~ +60°C		
	Ingress Protection	IP67		
	Dimension	116 × 116 × 45.5 mm (4.56 × 4.56 × 1.79 in)		
	Installation	Wall or Pole Mounting		

Model		UC511	UC512	
 <p><b>LoRaWAN® Solenoid Valve Controller</b></p>	Wireless Transmission	Technology	LoRaWAN®	
		Antenna	Internal Antenna or External Antenna (Hardware Optional) External Antenna (EA) Version: 1 × 50 Ω SMA Female Connector	
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/ KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class A, Class B, Class C, Class C to B	OTAA/ABP Class A, Class B
	Data Interfaces	Interface Type	M12 A-Coded Male	
		Solenoid Interface	2 × Solenoid Interfaces, 12 VDC Switchable	
		GPIO Interface	2 × GPIO Interfaces (Digital Input, Pulse Counter)	
	Physical Characteristics	Configuration	NFC, USB Type-C Port	
		Power Supply	① Solar Powered (6V, 1.7W) ② 2 × Chargeable Batteries ③ 5-24 VDC (EA Version Only)	3 × 9000 mAh Replaceable Batteries
		Operation Temperature	-20°C ~ +60°C	
		Ingress Protection	IP67	
		Dimension	116 × 116 × 45.5 mm (4.56 × 4.56 × 1.79 in)	
Installation		Wall or Pole Mounting		

## Bring Data Acquisition & Remote Control with Ease

Model		UC100	
 <p><b>Modbus to LoRaWAN® IoT Controller</b></p>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/ KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class C
		Advanced Feature	Milesight D2D Controller/Agent
Data Interfaces	Connector	3.5 mm Terminal Block Connector	
	Port	1 × RS485	
	Protocol	Modbus RTU, Support Reading 16 Register Values	
Physical Characteristics	Configuration	USB Type-C Port	
	Power Supply	① 5 ~ 24 VDC by Terminal Block ② 5 VDC by Type-C Port	
	Power Consumption	< 0.5 W	
	Ingress Protection	IP30	
	Dimension	70 × 45 × 13 mm (2.75 × 1.77 × 0.51 in)	
	Installation	Desktop, Wall Mounting	

Model		UC300	
 <p><b>LoRaWAN®/4G IoT Controller</b></p>	LoRaWAN® Model (Option A)	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/ KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class C
		Advanced Feature	Milesight D2D Controller/Agent
	Cellular Model (Option B)	Network	4G LTE/3G/2G
		Application Mode	TCP/UDP/MQTT/AWS/Milesight IoT Cloud/SMS
	Data Interfaces	Interface Type	3.5 mm Terminal Block
		IO	4 × DI + 2 × DO
		Serial Port	1 × RS232(Transparent) + 1 × RS485(Transparent, Modbus RTU)
		Analog Input	2 × 4 ~ 20 mA, 2 × 0 ~ 10 V, 2 × PT100 RTD Input
	Physical Characteristics	Configuration Port	USB Type-C port
		Built-in	Watchdog, Timer
Power Supply		5 ~ 24 VDC	
Ingress Protection		IP30	
Dimension		93 × 70 × 22 mm (3.66 × 2.76 × 0.87 in)	
Installation		Desktop, Wall Mounting, DIN Rail Mounting	



# Remote Management Platform

Centralized IoT platforms for seamless monitoring, control, and management.



## Milesight IoT Cloud

-  Built on AWS to Provide Confidential and Reliable Infrastructure
-  Licensing with Ease: Just Copy & Paste and Upgrade Is Done



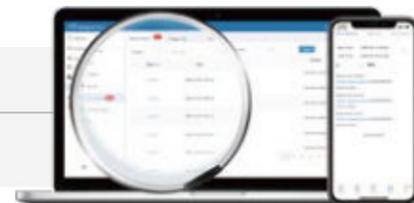
Get the **Free Trial** now and begin your data-driven future.

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



## Milesight Development Platform

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

- Device Auto Provisioning and Bulk Configuration
- Remote Access and Device Sharing
- Over-the-air Updates
- Open API and Webhooks for External Integrations and Data Exchange



## 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



## 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 1,000+ Connected Devices

