

# IoT Solutions & Products Catalogue



Make Sensing Matter

V3.5



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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



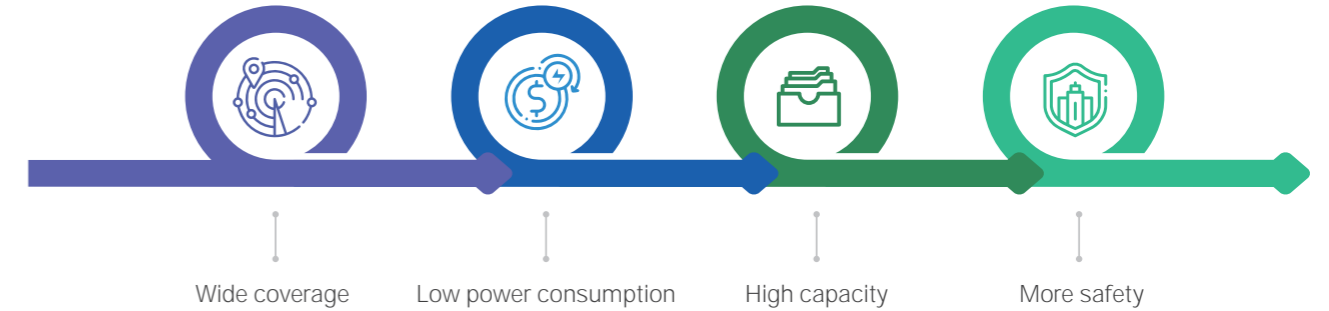
## Worldwide Coverage

- 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 Leading Technologies

By harnessing advanced technologies such as AI, ToF, and more, Milesight continuously strengthens its ability to transform data into meaningful insights and intelligent action. Through deep technical expertise and forward-looking innovation, we turn emerging technologies into practical IoT solutions that empower smarter decisions, higher efficiency, and measurable business value.

## AI

As one of the most influential technologies today, AI is accelerating the shift of IoT from simple connectivity to intelligent systems. As a foundational intelligence layer, it enhances sensing capabilities with greater accuracy, adaptability, and insight, driving the trend toward smarter and more responsive connected environments.




-  Context Awareness
-  Data Refinement
-  Rich Functionality
-  Continuous Learning Capability



## 4D ToF

As a fast-growing sensing technology, ToF is reshaping precision detection with high accuracy and privacy-first design. Powered by advanced depth perception and continuous optimization, Milesight ToF solutions deliver industry-leading performance and stability without image capture, setting a benchmark for reliable and compliant sensing.



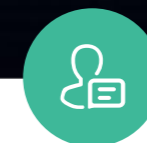
-  High Accuracy
-  Privacy by Design
-  Environmental Adaptability

# WHY Milesight? 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.



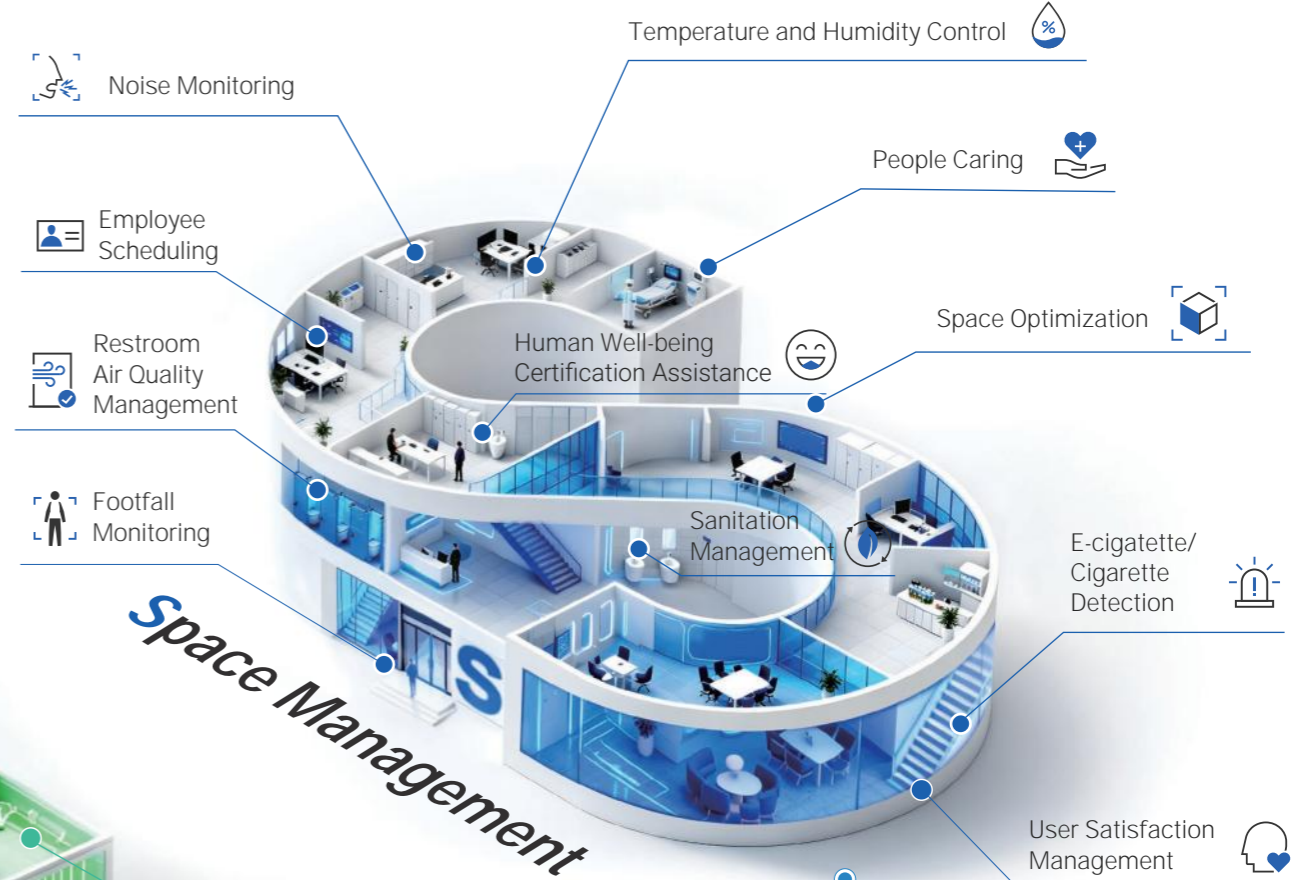
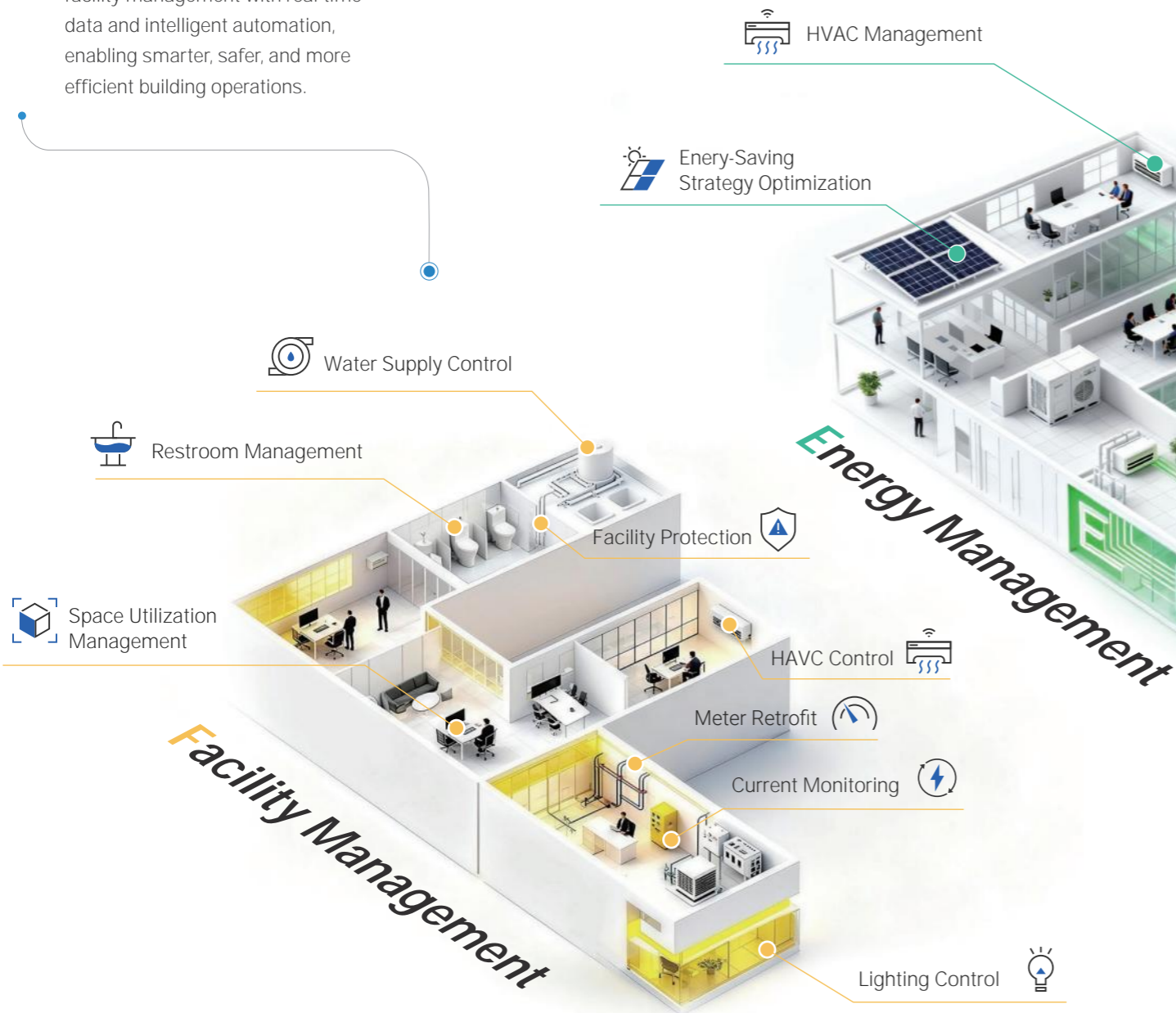
### Thriving Together with Partners Matters

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

# Deep Intelligence for Smarter, Efficient, and Sustainable Buildings

## Facility Management

Milesight IoT empowers modern facility management with real-time data and intelligent automation, enabling smarter, safer, and more efficient building operations.



## Space Management

Effective space optimization leverages IoT-driven occupancy and environmental data to enhance comfort, increase utilization, and maximize a building's operational and commercial value.

## Energy Management

IoT-powered energy management is the core of smart buildings, enabling real-time optimization that reduces costs, improves comfort, and advances sustainability.

# From Foot Traffic to Sales Growth with Smart Retail Insight

Milesight Smart Retail Solution transforms customer traffic data into actionable insights that optimize operations, improve conversion rates, drive measurable retail performance, and increase profit across diverse environments.



## Storefront Monitoring

- Store Location Traffic Analysis
- Optimize Ad Visibility and Impact
- In-Store Conversion Rate Analysis
- Evaluate Storefront Value for Rental Decisions
- Assess Advertising Space Performance and Pricing



## Entrance Analysis

- Foot Traffic Trends: Peak hours, daily/weekly flow patterns
- Customer Demographics: Shopper composition by group, gender
- Entry Rate: Outdoor traffic vs. store entries to assess store appeal
- Conversion Opportunities: In-store traffic vs. actual purchase comparison

## In-Store Insights

- Store Layout Optimization: Improve product placement and aisle design based on in-store heat map
- Store Layout Optimization: Highlight popular zones and high-interest areas
- Conversion Boosting: Turn high-dwell zones into sales opportunities
- Staff Efficiency: Align staffing with customer flow



## Checkout Monitoring

- Queue Management: Optimize checkout performance and resource use
- Staff Efficiency: Align staffing with customer flow
- Customer Experience Improvement: Prevent congestion and enhance satisfaction
- Conversion Boosting: Evaluate how checkout flow influences sales conversion

# Product Application Matrix

IoT SENSING LoRaWAN® 5G AI AIoT

**Product Series**

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

## Smart Building

People Sensing (Spatial Efficiency)	ToF VS13x-VS330	Thermopile VS351-VS341	PIR/IR Breakbeam VS340-VS350-VS360	RGB VS125-VS121-VS321	Radar VS370-VS373
Workplace Facility Management	Wireless Control WS101	Light Control WS156/WS136	Light Control WS50x	LED Monitoring WS558	LED Monitoring WS202
Energy Management	Current Monitoring CT3xx	Current Monitoring CT10x	Current Monitoring CTH01	Circuit Management & Power Collection WS51x	Circuit Management & Power Collection WS523
HVAC & TH Monitoring	Temperature Control WT401	Temperature Control WT30x	Temperature Control WT201	Temperature Control WT10x	TH Monitoring WS203
Smart Restroom	9-in-1 IAQ Monitoring AM300 Series	Fill-level & Leakage Monitoring WS201-WS303	Fill-level Monitoring EM400-TLD	Cubicle Detection VS330	
Indoor Air Quality Monitoring	3-in-1 IAQ Monitoring AM100 Series	9-in-1 IAQ Monitoring AM300 Series	Odor Detection GS301(NH <sub>3</sub> & H <sub>2</sub> S)	Odor Detection GS601	
Resource Management	Leakage Monitoring WS303	Leakage Monitoring EM300-MLD	Leakage Monitoring EM300-SLD/ZLD		
Parking Management	Ultrasonic Distance Measurement EM400-MUD	Ultrasonic Distance Measurement EM400-UDL	RGB PM3322-E		

## Logistics & Cold Chain

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

## Smart Retail

People Sensing (Spatial Efficiency)	ToF VS13x&VS330	Thermopile VS351&VS341	PIR/IR Breakbeam VS340&VS350&VS360	RGB VS121&VS321&VS125 Series&VS126	Radar VS373&VS370
Environmental Sensing	Temperature & Humidity Monitoring EM300-TH	Temperature & Humidity Monitoring EM320-TH	3-in-1 IAQ Monitoring TS201	3-in-1 IAQ Monitoring TS30x	9-in-1 IAQ Monitoring AM100 Series
				9-in-1 IAQ Monitoring AM300 Series	Odor Detection GS301 (NH <sub>3</sub> & H <sub>2</sub> S)

## Smart City

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

## Smart Agriculture

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

Industrial Environmental Sensing	Temperature Monitoring EM500-PT100	Temperature Monitoring TS30x	Facility Management	Ultrasonic Distance Measurement EM400-UDL	Magnetic Contact EM500-UDL	Industrial Signal Converter EM300-MCS	Industrial Signal Converter 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
- Building IoT Gateway EG71



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## LoRaWAN® Smart Thermostat and Radiator

Smart Heating & Cooling Controls with Milesight WT Series

- Smart Radiator Thermostat WT101/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
- 5-in-1 IAQ Sensor AM304L/AM305L
- 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

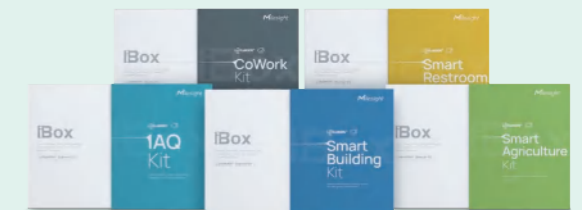


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## iBox Kit Series

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

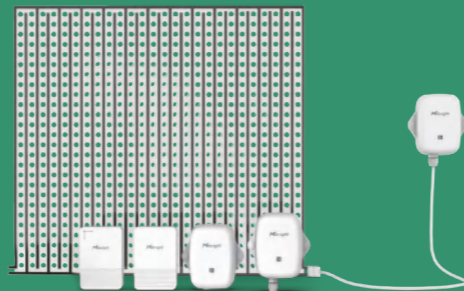


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### Indoor Gas Sensor

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 Power Monitor Hub CT10x
- Smart Power Monitor Hub CTH01
- 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)

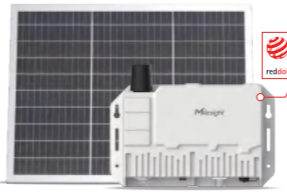
## Enable All-around Connectivity


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
		Built-in	Watchdog, RTC, Timer
	Physical Characteristics	Power Supply	① 1 x 802.3af Standard PoE Input ② 9 ~ 24 VDC by DC Male Jack Connector
Ingress Protection		IP65	
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		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
	Hardware	Cellular	1 x Nano SIM-4FF, Support Global GSM/3G/4G LTE Frequency Bands
		Processor	Dual-core 240MHz, 32-bit Xtensa® LX7
		Built-in	Watchdog, Timer
	Physical Characteristics	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
		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)
		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 12 VDC with M12 Connector	
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 x 86 x 24 mm
		Installation	Wall Screw Mounting, 86mm Square or European 60mm Round Box Mounting, Recessed installation

# Smart People Counting That Matters in Buildings & Retail

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 & Retail

Model		VS121	VS121-P	
 	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class C	
	Ethernet Transmission	Ethernet Port	1× RJ45 10/100 Mbps (PoE PD)	
		Network Protocol	MQTT(s), HTTP(s), RTSP, NTP, SSH, etc.	
	Measurement	Field of View	190° Horizontal, 112° Vertical	
		Recognition Range	4.8m x 14m at a 3m Installation Height	
		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	
	Physical Characteristics	Advanced Feature	Mapped Detection Region Customization, Filter U-Turns, Privacy Mask, Dwell Time Detection	
		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-P	
 	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.
	Measurement	ToF	FoV: 98° Horizontal, 80° Vertical Light Beam: 940nm (Invisible)
		Accuracy	±3.5cm
		Range	0.5~3.5 m
	Physical Characteristics	Configuration	Ethernet
		Power Supply	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	
	Dimension	73 x 73 x 26 mm (2.87 x 2.87 x 1.02 in) (Without PIR Cover)	
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)	

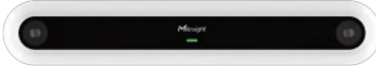
\*Tested under laboratory conditions and for guideline purposes only.

## 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	-		
	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		

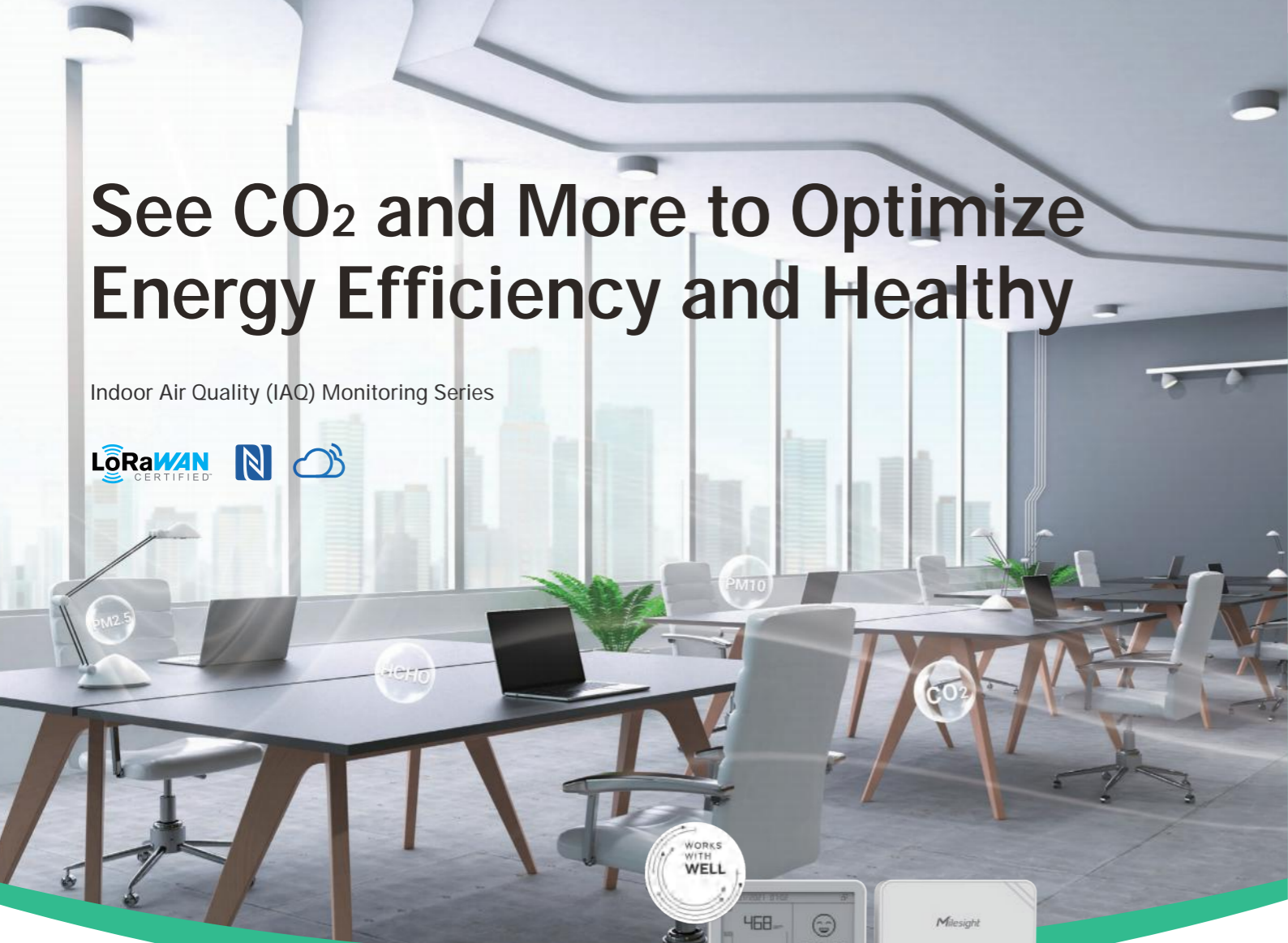
## Smart People Counting That Matters in Buildings & Retail

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 × 84 × 15 mm (4.49 × 3.3 × 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	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 × 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 × Traffic Light Status Indicator Ingress Protection: IP30 Dimension: 68 × 65 × 20.5 mm (2.68 × 2.56 × 0.81 in) Installation: Wall Screw Mounting, 3M Tape Mounting			

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

Model		AM304L	AM305L	AM307	AM308	AM319
 <b>4-in-1 IAQ Sensor</b> <b>5-in-1 IAQ Sensor</b>	Wireless Transmission	LoRaWAN®				
	Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4				
	Work Mode	OTAA/ABP Class A				OTAA/ABP Class C
 <b>7-in-1 IAQ Sensor</b>  <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: 80° Horizontal, 55° Vertical, 3m / 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: 1.Mobile App via NFC / 2.Downlink / NFC, USB Type-C Port Power Supply**: 1. 4 × 2700 mAh ER14505 Li-SOCl <sub>2</sub> Replaceable Batteries / 2. 5V/1A by Type-C Port / Around 3 Years / AM308: Around 1 Years / AM308L: Around 1.5 Years / 5V/1A by Type-C Port Ingress Protection: IP30 Dimensions: 100.8 × 114 × 22 mm (3.97 × 4.49 × 0.87 in) & 4.2-inch E-Ink Screen Installation: Wall Mounting via 3M Tape or Screws / 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.


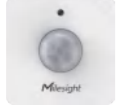
Model		WS136/WS156	
  <b>Smart Scene Panel</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
Physical Characteristics		Power Supply*	Easily Replaceable Batteries with over 3-Year Battery Life
		Ingress 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		

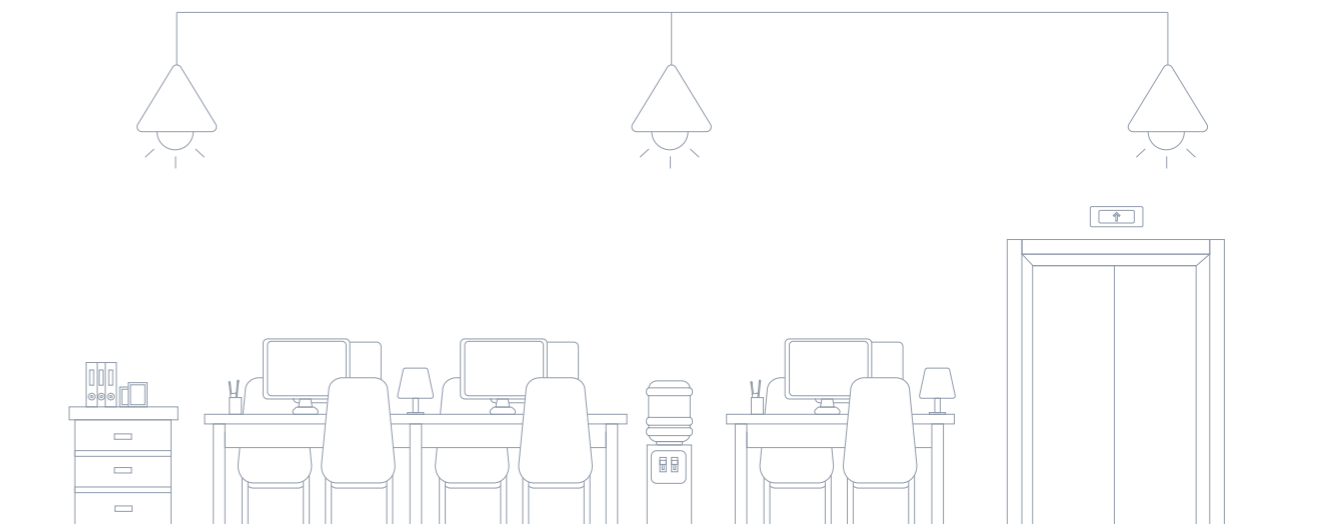
\* Tested under laboratory conditions and for guideline purposes only.

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.



# 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.



- AM319
- AM307
- AM103
- AM102L
- UG56
- Milesight IoT Cloud

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

Indoor Air Quality Solution **iBox IAQ Kit**



- VS121
- VS340
- DS3604
- UG56
- Milesight IoT Cloud

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Smart Office Solution **iBox CoWork Kit**



- WS101
- WS201
- GS301
- VS330
- UC100
- UG56
- Milesight IoT Cloud

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Smart Restroom Solution **iBox Smart Restroom Kit**



- WS101
- WS301
- AM103
- WS303
- WS558
- UC300
- UG56
- Milesight IoT Cloud

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

Smart Building Solution **iBox Smart Building Kit**



- VS121
- WS101
- WS301
- WS156
- UC100
- UG56
- Milesight IoT Cloud

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Smart Office Solution **iBox CoWork Kit**



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

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

Smart Agriculture Solution **iBox Smart Agriculture Kit**



### 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

# Professional Temperature Monitoring

TS Series



## 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

## 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
Others	Configuration	NFC	
	Advanced Feature	Data Storage, Data Retransmission, Data Retrieval, Abrupt Temperature Change Alarm	
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	
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	Ingress Protection	IP65		
	Dimension	109.35 × 75 × 20 mm (4.31 × 2.95 × 0.79 in)		
	Installation	Wall Screw Mounting, Magnetic Mounting (Opt.)		

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.)		

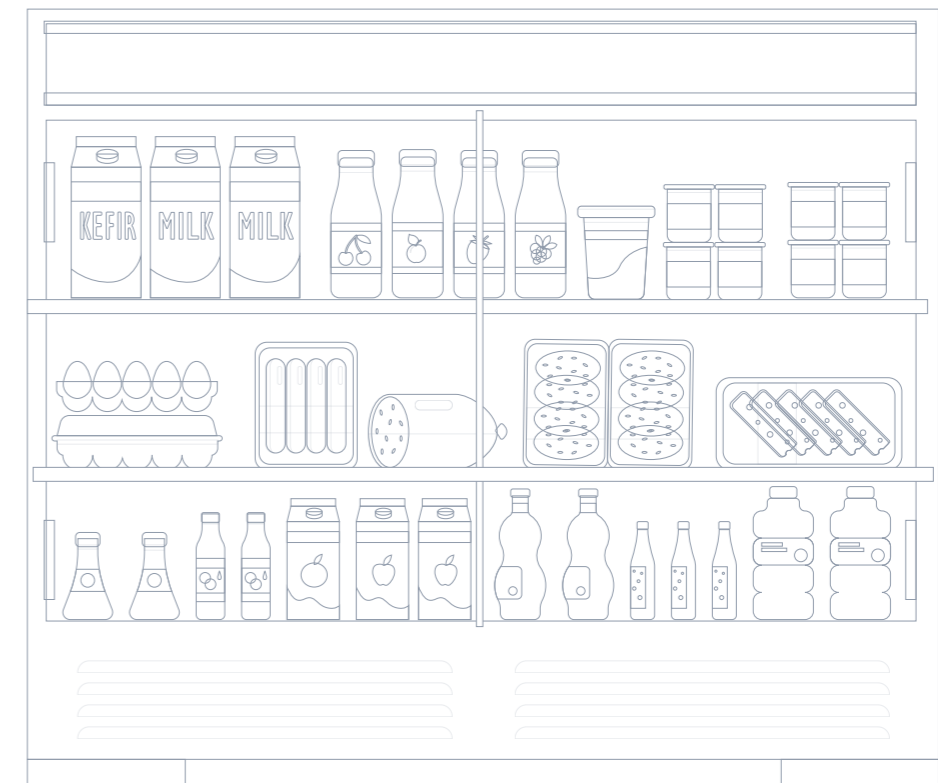
\* To be further tested and confirmed.

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), ± 0.55°C (-200°C~-175°C)	± 0.4°C (-50°C~125°C), ± 1.15°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

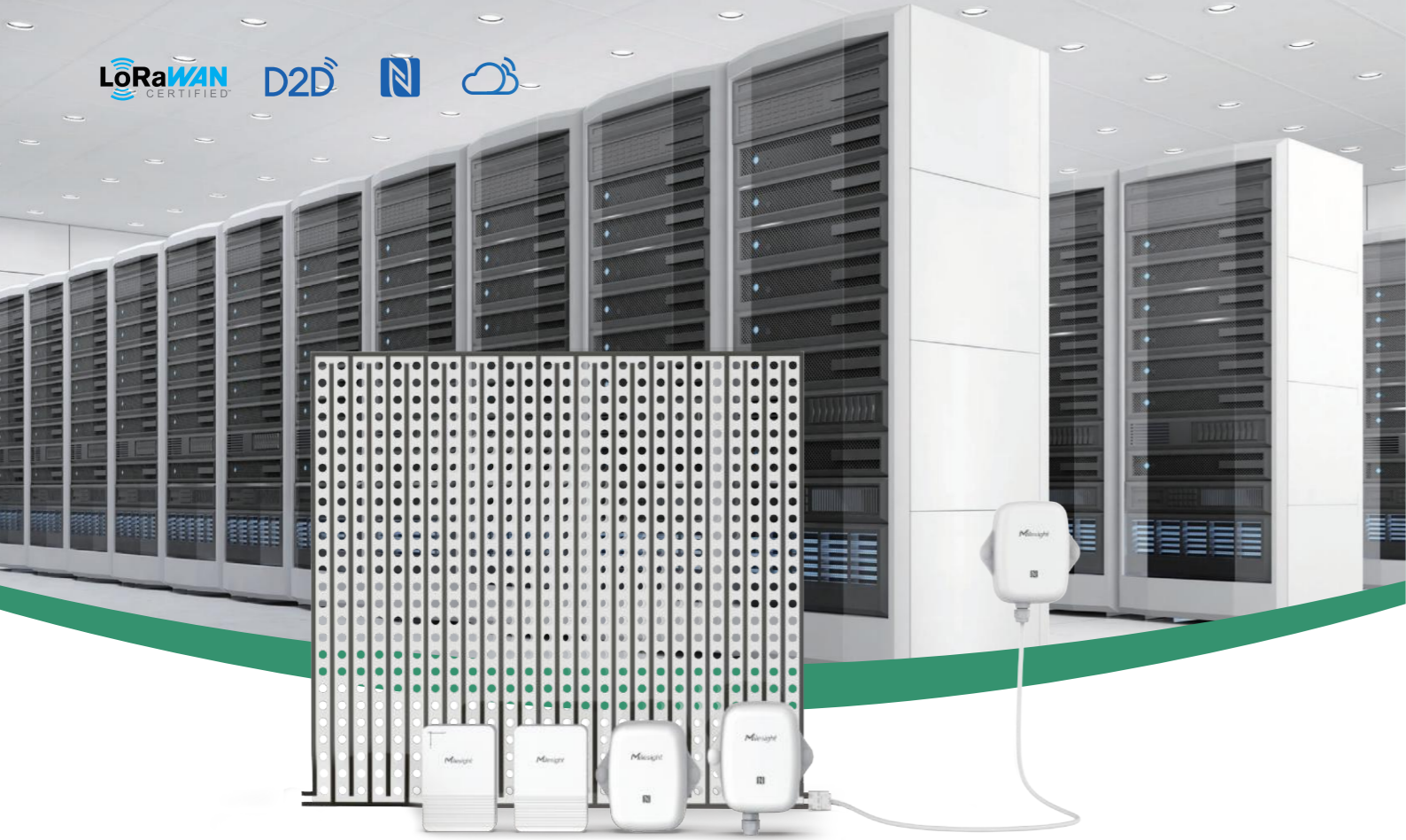
Model		GS301	
  <b>Bathroom Odor Detector</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
		Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class A
Measurement	Physical Characteristics	Ammonia (NH <sub>3</sub> )	± 5% (-40 - 35°C), 0 ~ 10 ppm
		Hydrogen Sulfide (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	
  <b>Vape Detector</b>	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4
		Mode	OTAA/ABP Class C
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	1 × Traffic Light Status Indicator + 1 × 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




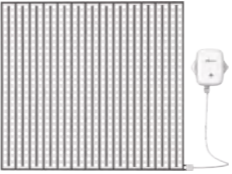


## Overall Features

- 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
  <b>Temperature &amp; Humidity 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
 <b>Temperature &amp; Humidity Sensor</b>	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)
  <b>Temperature &amp; Humidity Sensor</b>	Physical Characteristics	Configuration	NFC
		Power Supply*	Easily Replaceable Battery with up to 10-Year Battery Life
		Material	PC + ABS (Food-Grade)
		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

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




Model		EM300-MLD	EM300-SLD	EM300-ZLD	
  <b>Membrane Leakage Detection Sensor</b>	Wireless Transmission	Technology	LoRaWAN®, Milesight D2D		
		Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4		
		Mode	OTAA/ABP Class A		
 <b>EM300-SLD/ZLD Leak Detection Sensor</b>	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	
 <b>EM300-SLD/ZLD Leak Detection Sensor</b>	Physical Characteristics	Cable Length	1000 mm (Customizable)	1.5 m (Customizable)	
		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.

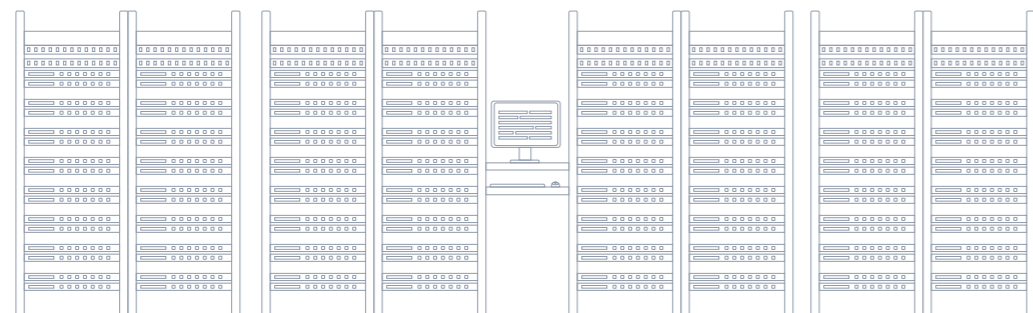
## Monitor Conditions and Optimize Controls

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
	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
	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 × 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 × 87 mm (Φ 3.98 × 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	Cat M1: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 Cat NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85		
		Mode	OTAA/ABP Class A	TCP/UDP/MQTT/AWS		
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)	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)**			
	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	Cat M1: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 Cat NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85	
		Mode	OTAA/ABP Class A	TCP/UDP/MQTT/AWS	
	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 × 65 × 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	Cat M1: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 Cat NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85		
		Mode	OTAA/ABP Class A	TCP/UDP/MQTT/AWS		
Measurement	Model	Standard	Pro	Standard	Pro	
	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)	± (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.

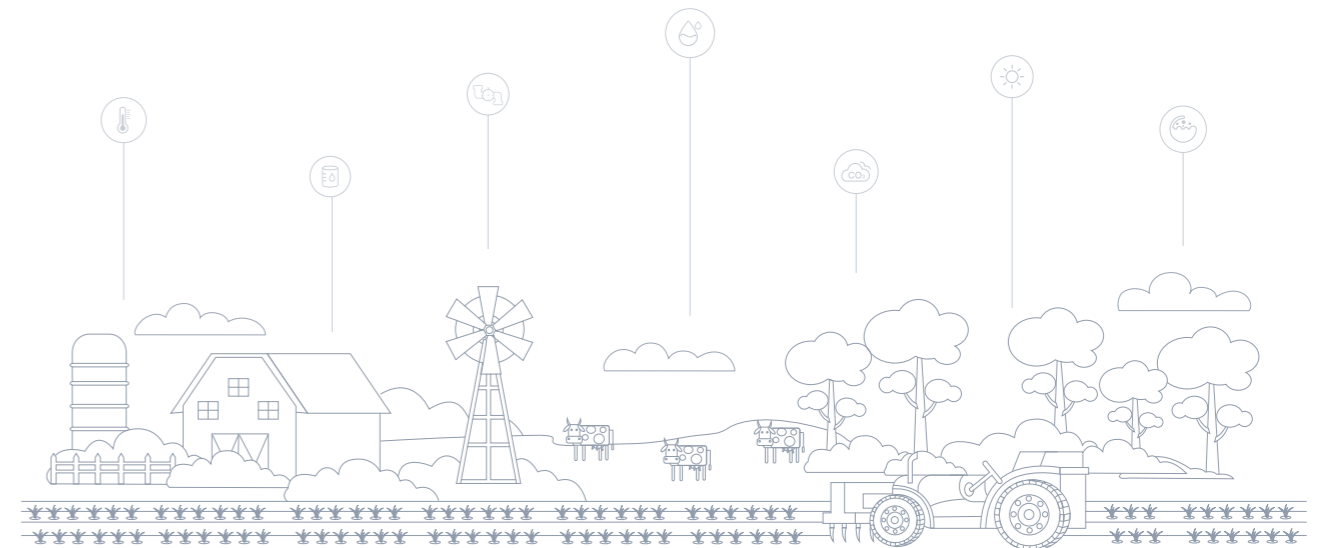
Model		EM500-UDL	EM500-SWL	
	Wireless Transmission	Technology	LoRaWAN®	
		Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
		Mode	OTAA/ABP Class A	
	Measurement	Pressure Type	-	Gauge Pressure
		Range & Accuracy	W050: 0.3 ~ 5 m, ±1% FS W100: 0.5 ~ 10 m, ±1% FS S050: 0.3 ~ 5 m (Snow Version), ±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.

## 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.






# 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	
	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		CTH01	
	Wireless Transmission	Technology	LoRaWAN®
		Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1/AS923-2/AS923-3/AS923-4
		Mode	OTAA/ABP Class C
	Measurement	Range	Voltage: 100~500VAC; Current: 100A~4000A *Compatible with Both Split-core CTs and Flexible Rogowski Coils
		Parameters	Voltage/Current/Power Factor/Active/Reactive/Apparent Power/Imported Active/Reactive Energy/Exported Active/Reactive Energy/Apparent Energy/Voltage/Current Total Harmonic Distortion (THDv/THDi)/Voltage Three-Phase Unbalance/ Temperature
		Accuracy	Voltage: 1%; Current Transformer: Class 0.5 Active Energy: 1% (according to IEC 62053-21) Reactive Energy: 2% (according to IEC 62053-23)
	Software	Advanced Feature	Data Storage (20,000 entries, 2,000 alarms), Data Retransmission, Data Retrievability, Data Analysis (12 months of energy statistics), Threshold Alarm, Out-of-Range alarm, Power Failure Alarm
		Physical Characteristics	Ingress Protection
Pollution Degree	2		
Overvoltage Category	III		
Maximum Altitude	2000 m		
Certification	ETL Listed (UL/CSA 61010-1, UL/CSA 61010-2-030), CE (RED&LVD), FCC, SRRC, RoHS		
Operating Temperature	-20°C ~ 70°C		
Flammability Rating	UL94 V-0		
Installation	DIN-35 Rail Mounting, Magnetic Mounting		


Model		CT303	CT305	CT310	
	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 %		
	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		
		Power Supply	1. Induced current power supply 2. 5V by USB Type-C Port		
	Physical Characteristics	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: 802.11b/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>Mitesight 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	
	Installation	116 × 116 × 45.5 mm (WTS Hub) 343 × 283 × 16.5 mm (Solar Panel)	
		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

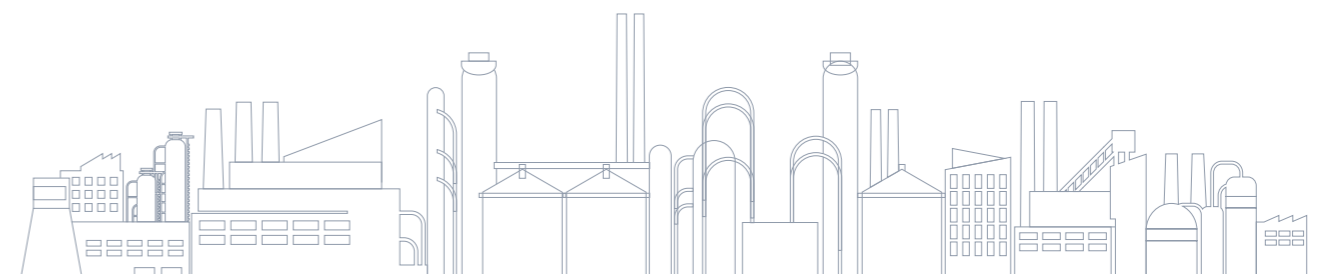
Model		UC501	UC502	
 <p><b>Multi-Interface Controller</b></p>	LoRaWAN® Model	Technology	LoRaWAN®	
		Antenna	Internal Antenna or External Antenna (Hardware Optional) External Antenna (EA) Version: 1 × 50 Ω SMA Female Connector	
		Frequency	CN470/IN865/EU868/RU864/US915/AU915/ KR920/AS923-1&2&3&4	
		Mode	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.



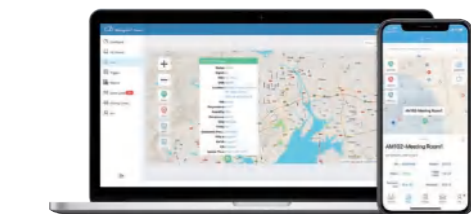
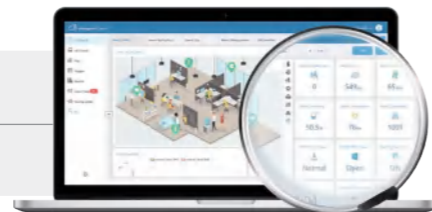
## Milesight IoT Cloud

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



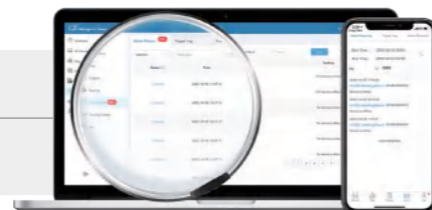
Get the **Free Trial** now and begin your data-driven future.

Transform Real-Time and Historical Data into Drag-and-Drop Widgets on Dashboard



Control Access and Monitor Projects from Anywhere

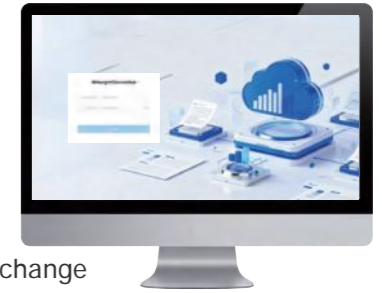
Email and Mobile Push Notifications based on Triggered Events



## 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

