



# Smart Restroom Kit



## iBox Smart Restroom Kit Datasheet

Unboxing Your Next Level IoT Adventure



# Smart Button

WS101 allows users to remotely control appliances, triggering a scene or calling for help.



## Overall Features

- Single/Double/Long Press Mode for Customized Application
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Built-in LED Indicator & Buzzer for Status Indication
- Milesight D2D with Communication Latency to <1 Sec
- Convenient Size with 5 Years Battery Life

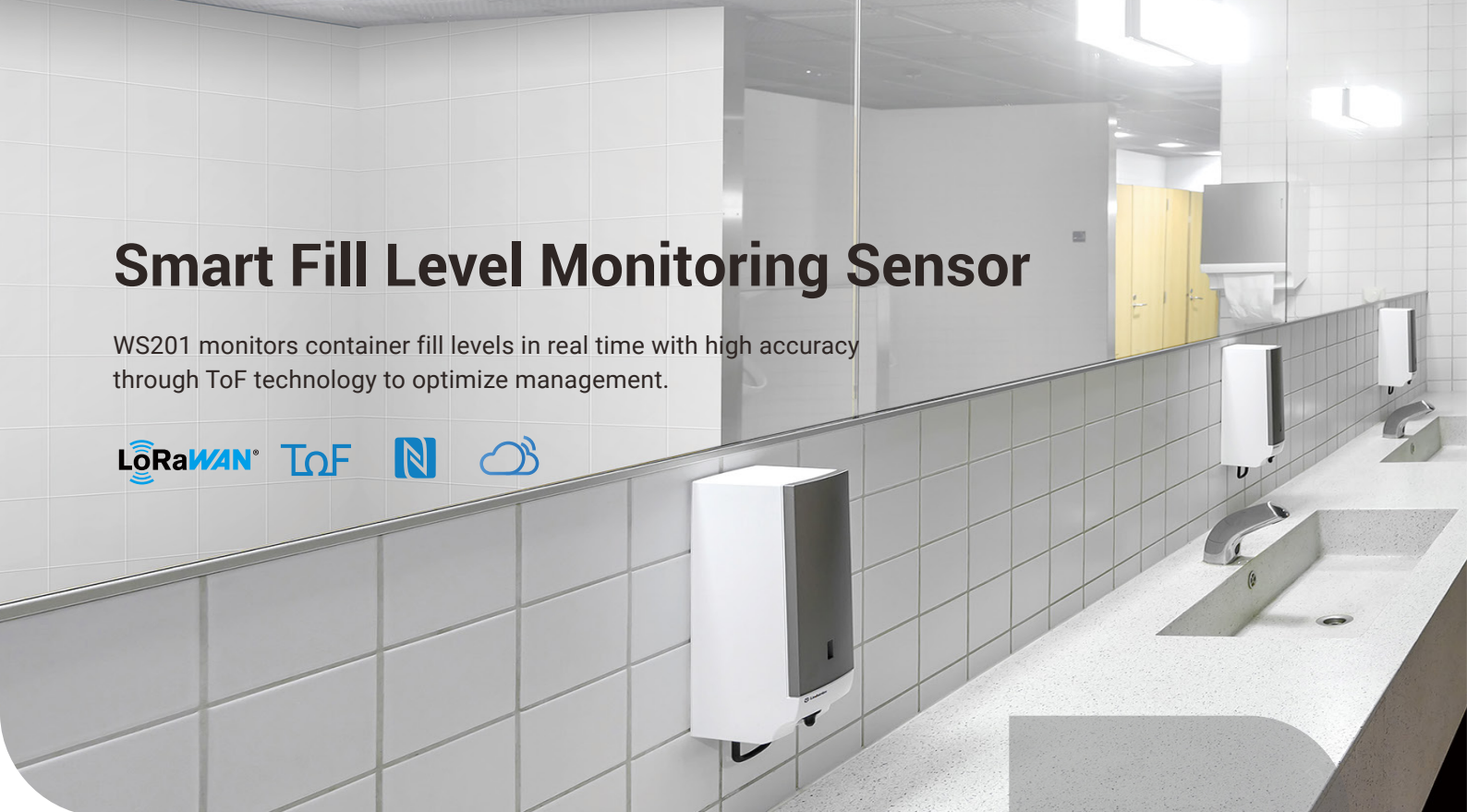


WS101

Model		WS101
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

# Smart Fill Level Monitoring Sensor

WS201 monitors container fill levels in real time with high accuracy through ToF technology to optimize management.



## Overall Features

- Detection Ranges from 1cm to 55cm
- Suitable for Diverse Toilet Paper Dispenser
- Accurate Fill Level Monitoring with ToF Technology
- Up to 2 Years Battery Life with One Coin Cell Battery
- LoRaWAN® Wireless Deployment with Low Power Consumption



Model		WS201
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

# Bathroom Odor Detector

GS301 can be applied to measure the concentration of harmful gases such as ammonia and hydrogen sulfide in real-time.



## Overall Features

- Detect NH<sub>3</sub> & H<sub>2</sub>S with Higher Accuracy
- Built-in Buzzer & Traffic Light Status Indicator for Alarming
- Up to 3 Years Battery Life for Easy Maintenance
- Support LoRaWAN® & Milesight D2D Simultaneously
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Milesight D2D with Communication Latency to <1 Sec



**GS301**

Model		GS301
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	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.

# Cubicle Occupancy Sensor

VS330 combines ToF and PIR technology for accurate detection, solving the ultimate difficulty in public toilets and bathrooms.



## Overall Features

- Combine PIR & ToF Technology with Low Power Consumption
- Detection & Report with Smart Logic Achieving 99.5% Accuracy
- Compliant with GDPR & 100% Anonymous Detection
- Real-Time Data Collection at a 10-Second Intervals for Prompt and Accurate Updates
- Conformal Coating on PCBA and Rotatable Probe for Reliable Usage



**VS330**

Model		VS330	
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	

# Modbus to LoRaWAN® IoT Controller

UC100 is used for remote control and data acquisition from Modbus RS485 devices via LoRaWAN® networks.



## Overall Features

- Modbus RS485 to LoRaWAN® Transmission
- Data Collection up to 16 Registers for Various Usage
- Compact Size with Embedded LoRa® Antenna
- Support Autonomous Operation even when the Network is Unavailable
- Built-in LED Indicator for Status Indication
- USB Type-C Port for Local Configuration & LoRa® Downlink for Remote Configuration
- Milesight D2D with Communication Latency to <1 Sec



UC100

Model		UC100
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

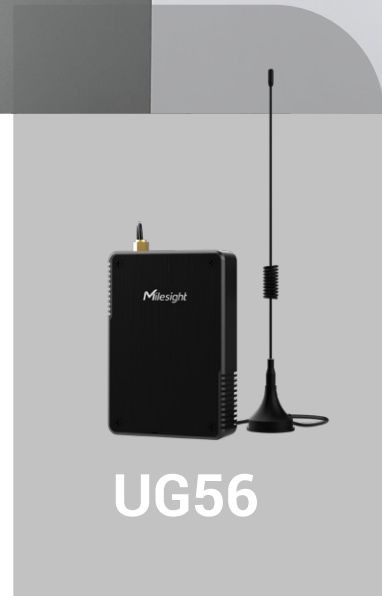
# Industrial LoRaWAN® Gateway

UG56 is a high-performance 8-channel LoRaWAN® gateway that offers reliable connectivity for industrial applications.



## Overall Features

- Industrial-Grade Design with Compact Size
- Stay Connected via Ethernet, Cellular, and Wi-Fi
- Gateway Fleet for Comprehensive Networking
- Listen Before Talk (LBT) for Downlink Data Integrity
- Semtech SX1302 Chip with High-Performance Quad-Core CPU
- Embedded Network Server Compatible with TTN, ChirpStack, Everynet, Senet, etc.
- BACnet/IP Support for Seamless Integration into Existing Building Management Systems (BMS)



UG56

Model		UG56
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
	Protocol	V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class C
Connectivity	Ethernet	1 x RJ45 PoE PD Port, 10/100 Base-T (IEEE 802.3)
	Wi-Fi	IEEE 802.11b/g/n, 2.4 GHz
	Cellular (Opt.)	1 x Mini SIM-2FF Slot, Support Global GSM/3G/4G LTE Frequency Bands
Hardware	CPU	Quad-core 1.3 GHz, 64-bit ARM Cortex-A35
	Power Supply	① 1 x 802.3af Standard PoE Input ② 5V, 2A by Type-C Port
Physical Characteristics	Ingress Protection	IP30
	Dimension	110 x 75 x 24 mm (4.33 x 2.95 x 0.94 in)
	Installation	Desktop, Wall Mounting



# Milesight IoT Cloud

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



**Emergency Response**  
One Key Alarm

**Occupancy Conditions**  
Restroom Occupancy,

**Air Quality**  
Real-Time NH<sub>3</sub>, H<sub>2</sub>S, Temperature and Humidity Monitoring

**Usage Conditions**  
Queue Monitoring, Traffic Counting and Peak Hours Detection

Intuitive People Counting Report

03 VACANT

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## You Can Always Trust Us

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.

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



- 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-A**

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

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Smart Office Solution

**iBox CoWork Kit-B**

- 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

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Smart Building Solution

**iBox Smart Building 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**

## Don't Know Where to Start? Talk with Our Experts

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