

# Milesight



# iBox

## SMART BUILDING KIT

## DATASHEET



Milesight IoT Cloud



Xiamen Milesight IoT Co., Ltd.

## ◆ Introduction

Milesight iBox Smart Building Kit offers an easy-to-install LoRaWAN® smart building monitoring and control solution including a series of sensors, gateway and cloud platform. This kit can transform your environment into a smart, interconnected and comfortable space.

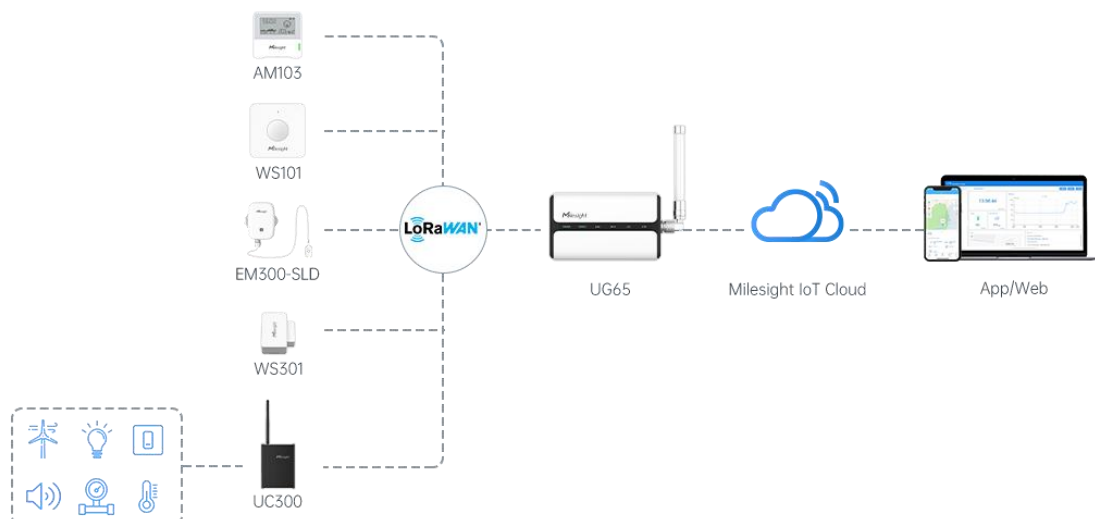
## ◆ Device List

Qty	Model	Description	LoRaWAN® Channel Plan
1	WS101	Smart Button	CN470/RU864 /IN865/EU868/AU915 /US915/KR920/AS923
1	WS301	Magnetic Contact Switch	
1	AM103	Indoor Ambience Monitoring IAQ Sensor	
1	EM300-SLD	Spot Leak Detection Sensor	
1	UC300	IoT Controller (LoRaWAN® Version)	
1	UG65	Semi-Industrial LoRaWAN® Gateway (Wi-Fi and PoE Supported)	
1 Year	Milesight IoT Cloud	Pro 1 Standard Subscription	/

## ◆ Benefits

- Compliant with legacy equipments/sensors, fully cover the smart building scenarios including environment monitoring, leak detection, asset protection and remote control
- Plug and play, set up a simple LoRaWAN® network quickly within a few steps
- Support worldwide LoRaWAN® frequency plans including 470 MHz to 928 MHz
- Support local alarms via indicators or remote email and mobile push notifications
- Customize dashboards and maps to understand the building environment status intuitively

## ◆ Application Topology



## ◆ Features

Item	Description	Applications
<p><b>WS101 Smart Button</b></p> 	<p>WS101 smart button supports sending different alerts depending on various press actions and can be used in emergency alarm system, remote control or other remote push button applications.</p>	<ul style="list-style-type: none"> <li>● Easy to be carried out by the seniors and the disabled or to be installed anywhere</li> <li>● Remote control lights or curtains in office</li> </ul>
<p><b>WS301 Magnetic Contact Switch</b></p> 	<p>WS301 sensor uses a magnet to detect the open/closed status of door/window or something has been moved. It's wire-free and can be easily mounted on the doors, panes, cabinets, etc.</p>	<ul style="list-style-type: none"> <li>● Entry/fire door monitoring</li> <li>● Asset protection in the cabinets or boxes</li> <li>● Suitable for offices, homes or factories applications</li> </ul>
<p><b>AM103 IAQ Sensor</b></p> 	<p>AM103 is a 3-in-1 ambience monitoring sensor including the measurement of temperature, humidity and CO<sub>2</sub> concentration and can display indoor status visually on the E-ink screen in real-time and transmit to network server using LoRaWAN<sup>®</sup> technology.</p>	<ul style="list-style-type: none"> <li>● Monitor temperature, humidity and CO<sub>2</sub> levels</li> <li>● Indicate CO<sub>2</sub> levels via traffic light or emoticon on the E-ink screen</li> <li>● Suitable for office or school indoor air quality monitoring</li> </ul>
<p><b>EM300-SLD Leak Detection Sensor</b></p> 	<p>EM300-SLD sensor can detect the presence of liquids by a small probe based on the conductive principle. Besides, EM300-SLD equips temperature and humidity sensors to monitor the indoor and outdoor environment.</p>	<ul style="list-style-type: none"> <li>● Pipe leak monitoring</li> <li>● Basement flooding detection</li> <li>● Machine room monitoring</li> </ul>
<p><b>UC300 IoT Controller</b></p> 	<p>UC300 IoT controller equips with multiple data interfaces including digital inputs, relay outputs, RS232, RS485, analog inputs and PT100 RTD input, which can convert legacy sensors to work with LoRaWAN<sup>®</sup> network and control devices.</p>	<ul style="list-style-type: none"> <li>● Acquire data from legacy sensors and send via LoRaWAN<sup>®</sup> networks</li> <li>● Control the on/off status via relay outputs or RS485 Modbus commands</li> </ul>

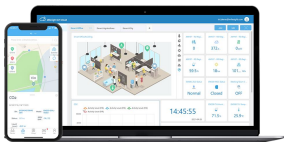
## UG65 Semi-Industrial LoRaWAN® Gateway



UG65 semi-industrial indoor LoRaWAN® gateway provides stable connectivity between sensors and mainstream network servers or Milesight IoT cloud.

- Collect data from LoRaWAN® sensors
- Forward data to Milesight IoT Cloud or mainstream network servers via Ethernet or Wi-Fi

## Milesight IoT Cloud



Milesight IoT Cloud provides unparalleled levels of vertical integration with Milesight LoRaWAN® gateways and sensors. It visualizes field data and enables user to monitor and control remote assets on an intuitive dashboard.

- Drag & Drop dashboard to display data
- Real-time alarm notifications
- Exportable historical data and generate reports
- Custom trigger conditions & actions to enable collaborative interaction among end-devices
- Android & iOS versions available

## ◆ Specifications

### ➤ Smart Building Sensors

Model	WS101	WS301	AM103	EM300-SLD
Sensor Type	Push Button	Magnetic Contact Switch	Temperature, Humidity, CO <sub>2</sub>	Temperature, Humidity, Leak
LoRa D2D	√	√	-	-
<b>Hardware Interfaces</b>				
Screen	-	-	2.13 Inch E-ink	-
LED	√	√	√	√
Buzzer	√	-	-	-
Reset Button	√	√	√	√
Tamper Button	-	√	-	-
Configuration	NFC	NFC	NFC	NFC
<b>Physical Characteristics</b>				
Power Supply	1 × 1650 mAh ER14335 Li-SOCl <sub>2</sub> Battery	1 × 1200 mAh ER14250 Li-SOCl <sub>2</sub> Battery	2 × 2700 mAh ER14505 Li-SOCl <sub>2</sub> Batteries	1 × 4000 mAh ER18505 Li-SOCl <sub>2</sub> Battery
Battery Life	Over 3 Years	Over 5 Years	Over 3 Years	Over 10 Years

Dimension	50 × 50 × 18 mm	Sensor: 50.5 × 31 × 18.5 mm Magnet: 30 × 13.5 × 10 mm	68 × 65 × 20.5 mm	105.6 × 85.3 × 27 mm
Operating Temperature	-30 to +60 °C	-20°C to +60°C	-20 to +60 °C (E-Ink Screen: 0 to +40 °C)	30°C to +70°C
Ingress Protection	IP30	IP20	IP30	IP67
Installation	On Flat Surfaces with Screws or 3M Tapes			

## ➤ UC300 IoT Controller

LoRaWAN	
Antenna Connector	1 × 50 Ω SMA Connector (Center PIN: SMA Female)
Mode	OTAA/ABP Class C
Advanced Feature	LoRa D2D Controller, LoRa D2D Agent
Hardware Interfaces	
Data Interfaces	4 × Digital Inputs 2 × Relay Outputs 1 × RS232 (Transparent) 1 × RS485 (Modbus RTU) 2 × Analog Inputs (4-20 mA) 2 × Analog Inputs (0-10 V) 2 × PT100 RTD Inputs
Console Port	1 × Type-C
LED Indicators	1 × System, 1 × ACT
Reset Button	1 × RST
Physical Characteristics	
Power Supply	5-24 VDC
Operating Temperature	-20°C to +60°C
Ingress Protection	IP30
Dimension	93 × 70 × 22 mm
Installation	Desktop, Wall Mounting, DIN Rail Mounting

Click [here](#) to get more specification details.

## ➤ UG65 Semi-Industrial LoRaWAN® Gateway

<b>LoRaWAN</b>	
Chip	SX1302
Antenna	2 × Internal Antennas + 1 × 50 Ω N-Female External Connector
Channel	8 (Half/Full-Duplex)
Package Forwarder	Semtech, Basic Station, Loriot, Chirpstack, etc.
Network Server	Support
<b>Hardware Interfaces</b>	
Ethernet Port	1 × 10/100/1000 Mbps (PoE PD)
Wi-Fi Interface	IEEE 802.11 b/g/n, 2.4 GHz, Support AP and Client Mode
Console Port	1 × Type-C
LED Indicators	1 × POWER, 1 × STATUS, 1 × LoRa, 1 × Wi-Fi, 1 × LTE, 1 × ETH
Reset Button	1 × RST
Built-in	Watchdog, RTC, Timer
<b>Physical Characteristics</b>	
Power Supply	1. DC Jack Connector for 9-24 VDC Power Supply 2. 1 × 802.3 af PoE Input
Operating Temperature	-40°C to +70°C
Ingress Protection	IP65
Dimension	180 x 110 x 56.5 mm
Installation	Desktop, Wall or Pole Mounting

Click [here](#) to get more specification details.

## ➤ Milesight IoT Cloud

Features	Free	Pro 1	Pro 2	Pro 3
<b>Manage Device</b>				
Manage numbers(gateways +sensors)	10	50	100	300
Check historical data and chart		✓		
Export historical data and chart		✓		
<b>Dashboard</b>				
Create dashboards	2		10	
Widgets per dashboard	20		50	
Add custom map and charts		✓		
Share the dashboard		✓		
Control device in dashboard		✓		
<b>Trigger</b>				
Add trigger rules	20	100	200	600
Trigger execution times monthly	1,000	5,000	10,000	30,000
<b>Report</b>				
Generate daily/weekly/monthly report	-		✓	
Send reports via Emails	-		✓	
Check and export historical report	-		✓	
<b>Event Notification</b>				
Record device status and threshold events		✓		
Send Email notifications monthly	100		1,000	
<b>Share and Transfer</b>				
Share devices to other accounts with different permissions	-		✓	
Transfer devices to other accounts		✓		

Contact Milesight sales if you need to upgrade the subscription in the kit.