



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.

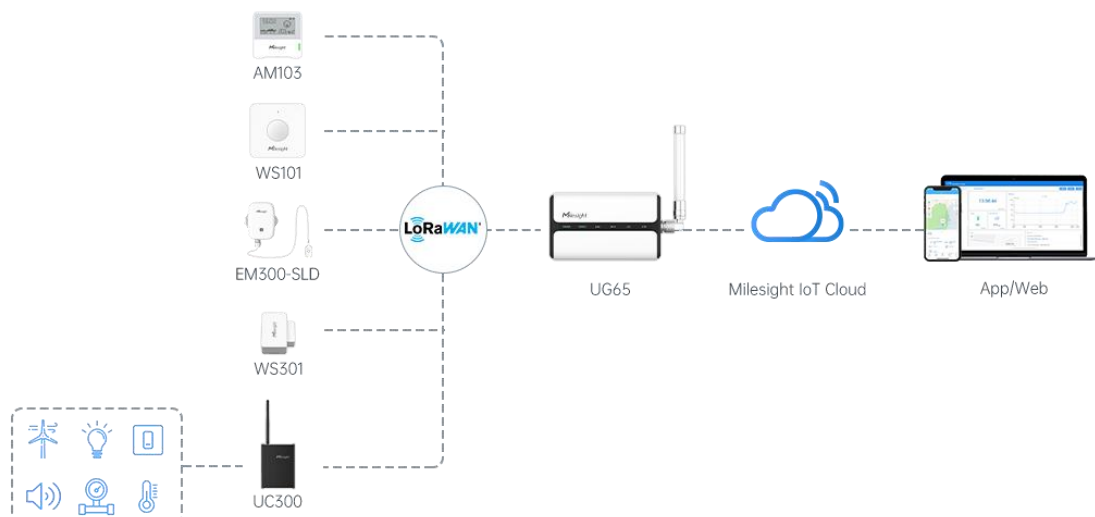
◆ Device List

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
WS101 Smart Button 	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.	● Easy to be carried out by the seniors and the disabled or to be installed anywhere ● Remote control lights or curtains in office
WS301 Magnetic Contact Switch 	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.	● Entry/fire door monitoring ● Asset protection in the cabinets or boxes ● Suitable for offices, homes or factories applications
AM103 IAQ Sensor 	AM103 is a 3-in-1 ambience monitoring sensor including the measurement of temperature, humidity and CO₂ concentration and can display indoor status visually on the E-ink screen in real-time and transmit to network server using LoRaWAN® technology.	● Monitor temperature, humidity and CO₂ levels ● Indicate CO₂ levels via traffic light or emoticon on the E-ink screen ● Suitable for office or school indoor air quality monitoring
EM300-SLD Leak Detection Sensor 	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.	● Pipe leak monitoring ● Basement flooding detection ● Machine room monitoring
UC300 IoT Controller 	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® network and control devices.	● Acquire data from legacy sensors and send via LoRaWAN® networks ● Control the on/off status via relay outputs or RS485 Modbus commands

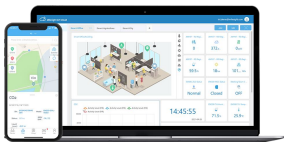
UG65 Semi-Industrial LoRaWAN® Gateway



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 ₂	Temperature, Humidity, Leak
LoRa D2D	√	√	-	-
Hardware Interfaces				
Screen	-	-	2.13 Inch E-ink	-
LED	√	√	√	√
Buzzer	√	-	-	-
Reset Button	√	√	√	√
Tamper Button	-	√	-	-
Configuration	NFC	NFC	NFC	NFC
Physical Characteristics				
Power Supply	1 × 1650 mAh ER14335 Li-SOCl ₂ Battery	1 × 1200 mAh ER14250 Li-SOCl ₂ Battery	2 × 2700 mAh ER14505 Li-SOCl ₂ Batteries	1 × 4000 mAh ER18505 Li-SOCl ₂ 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

LoRaWAN	
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
Hardware Interfaces	
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
Physical Characteristics	
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
Manage Device				
Manage numbers(gateways +sensors)	10	50	100	300
Check historical data and chart		✓		
Export historical data and chart		✓		
Dashboard				
Create dashboards	2		10	
Widgets per dashboard	20		50	
Add custom map and charts		✓		
Share the dashboard		✓		
Control device in dashboard		✓		
Trigger				
Add trigger rules	20	100	200	600
Trigger execution times monthly	1,000	5,000	10,000	30,000
Report				
Generate daily/weekly/monthly report	-		✓	
Send reports via Emails	-		✓	
Check and export historical report	-		✓	
Event Notification				
Record device status and threshold events		✓		
Send Email notifications monthly	100		1,000	
Share and Transfer				
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.

