



Better Inside, More in Sight



ErreUno srl

+39 0521 694 164

info@erre1.it

www.erre1.it www.syby.it

Via Novella 13, 43058 Sorbolo Mezzani (PR) Italy

Milesight

# Erreuno Product Catalogue

5G, AI & Sensing Technology



# CONTENTS

P05

## LoRaWAN® Gateway

Enable All-Round Connectivity

- Mini LoRaWAN® Gateway UG63
- Industrial LoRaWAN® Gateway UG56
- Semi-Industrial LoRaWAN® Gateway UG65
- Outdoor LoRaWAN® Gateway UG67



P09

## Occupancy & People Counting Sensor

Get Informed with 100% Anonymity

- AI Workplace Occupancy Sensor
- VS121 3D ToF People Counting Sensor
- VS132 Bathroom Occupancy Sensor VS330



P12

## iBox Kit Series

Kick off IoT PoCs with LoRaWAN® Demo Kits

- iBox IAQ Kit
- iBox CoWork Kit
- iBox Smart Building Kit



P13

## Smart Office CoWork Series

Explore the Potential of Workplace

- Smart Button WS101
- Smart Scene Panel WS136 & WS156
- PIR & Light Sensor WS202
- Wire-Free Magnetic Contact Switch
- WS301 Sound Level Sensor WS302
- Smart Wall Switch WS50x
- Smart Portable Socket WS523
- Smart Light Controller WS558



P21

## Indoor Gas Sensor

Detect NH3 and More Accurately

- Gas Detector GS101
- Bathroom Odor Detector GS301



P23

## Indoor Air Quality (IAQ) Sensor

See CO2 and More Directly

- 3-in-1 IAQ Sensor AM103/AM103L
- 7-in-1 IAQ Sensor AM104/AM107
- 9-in-1 IAQ Sensor AM307/AM308/AM319



P26

## IoT Display

Integrate Connectivity and Applications in One

- IoT Display DS7610





# CONTENTS

P27

## Building & Urban Environment Monitoring Sensor

Develop Smart Cities with Milesight EM300 Series

- Pulse Counter EM300-DI
- Magnetic Contact Switch EM300-MCS
- Temperature & Humidity Sensor EM300-TH
- Leak Detection Sensor EM300-SLD/ZLD
- Tilt Sensor EM310-TILT
- Ultrasonic Distance/Level Sensor EM310-UDL
- FDA Apporved Temperature & Humidity Sensor EM320-TH



P34

## Industrial & Suburban Environment Monitoring Sensor

Build Smart World with Milesight EM500 Series

- CO2 Sensor (4 in 1) EM500-CO2
- 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/SMT
- Submersible Water Level Sensor EM500-SWL



P41

## 5G Series

Ultra-Fast and Futuristic Applications

- 5G Dongle UF31
- 5G CPE UF51
- 5G AIoT Camera
- Ultra Series 5G Industrial Router UR75



P54

## IoT Weather Station

Measure Atmospheric Conditions Precisely

- IoT Weather Station Standard Version
- WTS305 IoT Weather Station Pro Version WTS50x



P45

## 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



P49

## Industrial Cellular Router & Switches

Rugged and Reliable Communications

- Mini Series UR41
- Lite Series UR32L
- Pro Series UR32 & UR35
- Ultra Series 5G Industrial Router
- UR75 Industrial PoE Switch



P55

## Milesight IoT Cloud

User-Friendly and Effortless Management

- Milesight IoT Cloud



P56

## Connectivity Suite

Remote and Bulk Management

- DeviceHub
- Milesight VPN

# Mini LoRaWAN® Gateway

UG63 is a mini-sized indoor LoRaWAN gateway that fits the LoRaWAN® network coverage for blind spots and standalone deployment.



## Overall Features

- Mini Size for Flexible Installation
- Gateway Fleet for Better Blind Spot Coverage
- Listen Before Talk (LBT) for Downlink Data Integrity
- Semtech SX1302 Chip for Standalone Deployment
- Embedded Network Server Compatible with TTN, ChirpStack, Everynet, Senet, etc.

UG63

Model		UG63
LoRaWAN®	Chipset	SX1302, 8 Channels (Half/Full-duplex)
	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 Supported), 10/100 Base-T (IEEE 802.3)
Hardware	CPU	
	Built-in	Watchdog, RTC, Timer
	Power Supply	1 x 802.3af Standard PoE Input 5V by Type-C Port
Physical Characteristics	Ingress Protection	IP30
	Dimension	
	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	
	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, 10/100/1000 Base-T (IEEE 802.3)
	Wi-Fi	IEEE 802.11b/g/n, 2.4 GHz
	Cellular (Opt.)	1 x Mini SIM-2FF, Support Global GSM/3G/4G LTE Frequency Bands
Hardware	CPU	
	Power Supply	1 x 802.3af Standard PoE Input 5V 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



# Semi-Industrial LoRaWAN® Gateway

UG65 is a robust 8-channel LoRaWAN gateway that is ideally suited to smart office, smart building and many other indoor applications.



## Overall Features

- IP65 Rated and UV Resistance
- 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 Actility, AWS,
- TTN, ChirpStack, Everynet, Senet, etc.
- BACnet/IP Support for Seamless Integration into Existing Building Management Systems (BMS)

UG65

Model		UG65
LoRaWAN®	Chipset	SX1302, 8 Channels (Half/Full-duplex)
	Antenna	
	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, 10/100/1000 Base-T (IEEE 802.3)
	Wi-Fi	IEEE 802.11b/g/n, 2.4 GHz
	Cellular (Opt.)	1 x Mini SIM-2FF, Support Global GSM/3G/4G LTE Frequency Bands
	GPS	Support (Internal Antenna)
Hardware	Processor	
	Built-in	Watchdog, RTC, Timer
	Power Supply	1 × 802.3 af Standard PoE Input 9 ~ 24 VDC by DC Male Jack Connector
Physical Characteristics	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

# Outdoor LoRaWAN® Gateway

UG67 is a robust 8-channel LoRaWAN gateway that is well-matched to smart agriculture, smart metering and many other outdoor applications.



## Overall Features

- IP67 Rated and UV Resistance
- 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 Actility, AWS,
- TTN, ChirpStack, Everynet, Senet, etc.
- BACnet/IP Support for Seamless Integration into Existing Building Management Systems (BMS)

UG67

Model		UG67
LoRaWAN®	Chipset	SX1302, 8 Channels (Half/Full-duplex)
	Antenna	
	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, 10/100/1000 Base-T (IEEE 802.3)
	Wi-Fi	IEEE 802.11b/g/n, 2.4 GHz
	Cellular (Opt.)	1 x Mini SIM-2FF, Support Global GSM/3G/4G LTE Frequency Bands
	GPS	Support (Internal Antenna)
Hardware	Processor	
	Built-in	Watchdog, RTC, Timer
	Power Supply	1 × 802.3 af Standard PoE Input 12 VDC with M12 Connector
Physical Characteristics	Ingress Protection	IP67
	Dimension	240 x 164 x 90.9 mm (9.45 x 6.46 x 3.58 in)
	Installation	Wall or Pole Mounting

# AI Workplace Occupancy Sensor

VS121 delivers curated insights by real-time occupancy data to unleash potential, especially for workplace and buildings.



## Overall Features

- Embedded AI Algorithm Realizes Up to 98% Accuracy Counting
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Compliant with GDPR & 100% Anonymous Detection
- 78m2 Large Detection Area with 16 Custom Detection Regions
- Bi-Directional People Counting via In/Out Counting
- Milesight D2D with Communication Latency to <1 Sec

VS121

Model		VS121
Wireless Transmission	Technology	LoRaWAN® , Milesight D2D
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923
	Mode	OTAA/ABP Class C
People Counting	Field of View	190 ° Horizontal, 112 ° Vertical
	Recognition Range	Based on a Radius of 5 Meters (At the Height of 3M)
	Recognition Rate	Region counting: 95% Line crossing counting: 98%
	Advanced Custom Setting	Up to 16 Mapped Regions for Detection, D2D Controller
Physical Characteristics	Configuration	1 x Wi-Fi Interface (IEEE 802.11 b/g/n, 2.4GHz)
	Power Supply	5V /1.5A by Type-C Port
	Dimension	85 × 85 × 20 mm (3.35 × 3.35 × 0.79 in)
	Power Input	1 × Type-C
	Installation	Ceiling Mounting

# 3D ToF People Counting Sensor

VS132 offers bi-directional line crossing people counting data in real-time to get precise and valuable statistics for facility operators.



## Overall Features

- 3D ToF Technology with 99.5% Ultra-High Accuracy
- ToF Light Source for Complete Darkness
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Compliant with GDPR & 100% Anonymous Detection
- Smart U-Turn Detection Suitable for Real World Scenarios Bi-directional People Counting via In/Out Counting
- High-Capacity of Storing a Million Data Locally
- User-Friendly Management on DeviceHub

VS132

Model		VS132
Wireless Transmission	Technology	LoRaWAN®
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
	Mode	OTAA/ABP Class C
People Counting	ToF FoV	92.5 ° Horizontal, 67 ° Vertical, Accuracy: 99.5%
	Detection Range	
	Local Storage	1, 000, 000 Data Records
Physical Characteristics	Configuration	1 x Wi-Fi Interface (IEEE 802.11 b/g/n, 2.4GHz )
	Power Supply	12 VDC, 2A by Terminal Block 1 × 802.3 at PoE Input
	Operating Temperature	
	Dimension	140 × 50 × 50 mm (5.51 × 1.97 × 1.97 in)
	Ethernet Port	
	Installation	Ceiling Mounting, Wall Mounting, Embedded Mounting



# Bathroom 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 FoV	27°
	ToF	
	Detetion Accuracy and Range	±2cm, 0.040 ~ 3.500m
	Detection Area	80°
	PIR	Detection Distance Maximum 2.5m
Physical Characteristics	OthersSensor Adjustable Angle	0°, 15°, 30°, 45°, 60°, 75°
	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	
	Installation	Ceiling Mount or Wall Mount via Screws or 3M tapes

# iBox Kit Series

Milesight iBox Kit is designed for users to quickly evaluate the LoRaWAN® technology with testified devices and services. Going comprehensively digital transformation with more certainty, these solutions are the one step before users to scale connected device deployments securely with high reliability.



## Overall Features

- Starters Enjoy It for Putting PoCs into Action with Reduced Time & Cost
- Operators Need It for New Projects and Potential Market Demands
- Deployers Love It for Easy to Deploy and Integrate with Multiple NS Platforms

Kick off IoT PoCs with LoRaWAN® Demo Kits

- AM319
- AM307
- AM103
- AM103L
- UG63
- Milesight IoT Cloud
- \*Pro1 Valid for One Year



Indoor Air Quality Solution

iBox IAQ Kit

- VS121
- WS156
- UG63
- WS101
- WS202
- WS301
- Milesight IoT Cloud
- \*Pro1 Valid for One Yea



Smart Office Solution

iBox CoWork Kit

- UC300
- UG65
- EM300
- WS101
- WS301
- AM103
- Milesight IoT Cloud
- \*Pro1 Valid for One Yea



Smart Building Solution

iBox Smart Building Kit



# 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
- Mulesight D2D with Communication Latency to <1 Sec
- Convenient Size with 5 Years Battery Life

WS101

Model		WS101
Wireless Transmission	Technology	LoRaWAN®, Mulesight 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 5-year Battery Life
	Ingress Protection	IP30
	Dimensions	50 × 50 × 18 mm (1.97 × 1.97 × 0.71 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	Mulesight D2D Controller

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

# Smart Scene Panel

WS136/WS156 offers occupant with predefine 6 scenes with different surrounding ambiances which can be fast changed by pressing the button.



## Overall Features

- 100% Wire-Free with Multiple Scenes Control
- Customizable Display/Stickers Suitable for Various Scenarios
- Control Multiple Devices Simultaneously with One Command
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Mulesight D2D with Communication Latency to <1 Sec

WS136  
WS156

Model		WS136/WS156
Wireless Transmission	Technology	LoRaWAN®, Mulesight D2D
	Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923
	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)
	Installation	Desktop, 3M Tape Mounting, 86 Box Mounting
Others	Configuration	NFC
	Button	6 Scene Buttons (Blue Light) & 1 Reset Button (Internal)
	Advanced Feature	Mulesight D2D Controller, Screen Display Customization

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



# PIR & Light Sensor

WS202 provides PIR motion detection and brightness measurement, providing reliable supports for automatic lighting control system.



## Overall Features

- PIR & Light Sensor for Occupancy/Motion Detection
- Wide Detection Range up to 8m in Distance
- Customizable Bright/Dark Conditions Threshold
- Milesight D2D with Communication Latency to <1 Sec
- Convenient Size with 5 Years Battery Life

WS202

Model		WS202
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 (Distance)
	Light Status	Bright/Dark (Determine 1-60000 lux as Bright or Dark According to Custom Threshold)
	Power Supply*	Easily Replaceable Battery with up to 4-Year Battery Life
Physical Characteristics	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
	Configuration	NFC
Others	Advanced Feature	Milesight D2D Controller

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

# Magnetic Contact Switch

WS301 detects the opening or closing event, sending alarms accordingly. The minimal magnet is placed inside the portable part, while the sensor is inside the fixed part on door, window or other projects.



## Overall Features

- 100% Wire-Free with Double Sided Tape/Screw Real-
- Time Tamper Detection & Report
- Built-in LED Indicator for Status Indication
- Milesight D2D with Communication Latency to <1 Sec
- Convenient Size with 5 Years Battery Life

WS301

Model		WS301
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
	Configuration	NFC
Others	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.

# Sound Level Sensor

WS302 can not only measure noise levels and generate various values via LoRaWAN® network, but also supports multiple weighting measurements for different application scenarios.



## Overall Features

- Accurate Sound Level Measurement in Decibels (dB)
- Support A, C and Fast Time Weighting
- Built-in LED Indicator for Status Indication
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Convenient Size with 5 Years Battery Life

WS302

Model		WS302
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	
	Frequency Range	30 Hz to 8 kHz (A and C Weighting)
	Time Weighting	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.

# Smart Wall Switch

WS50x is designed for the local and remote control of lights and electrical appliances. It adopts two standard sizes for most of international wall switch types, which can replace the traditional wall switches directly.



## Overall Features

- Time-Delay, Schedule, Remote and Scene-Based Control
- Support 1/2-Gang with 3-Wire/2-Wire Circuit Design
- Built-in LED Indicator for Status Indication
- Multicast for Remote Control in Bulk
- Milesight D2D with Communication Latency to <1 Sec

WS50x

Model		WS50x	
Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
	Mode	OTAA/ABP Class COTAA/ABP Class B, Class C to B, 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 WMax 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	
	Configuration	NFC	
Operation	Configuration	Local Press or Remote Control	
	Switch Control	Schedule Switch, Switch Lock, Overcurrent Protection, Multicast, D2D Controller, Milesight D2D Agent	
	Advanced Features		



# Smart Portable Socket

WS523 is designed for the remote scheduled on/off control of electronic applications as well as power consumption measurement.



## Overall Features

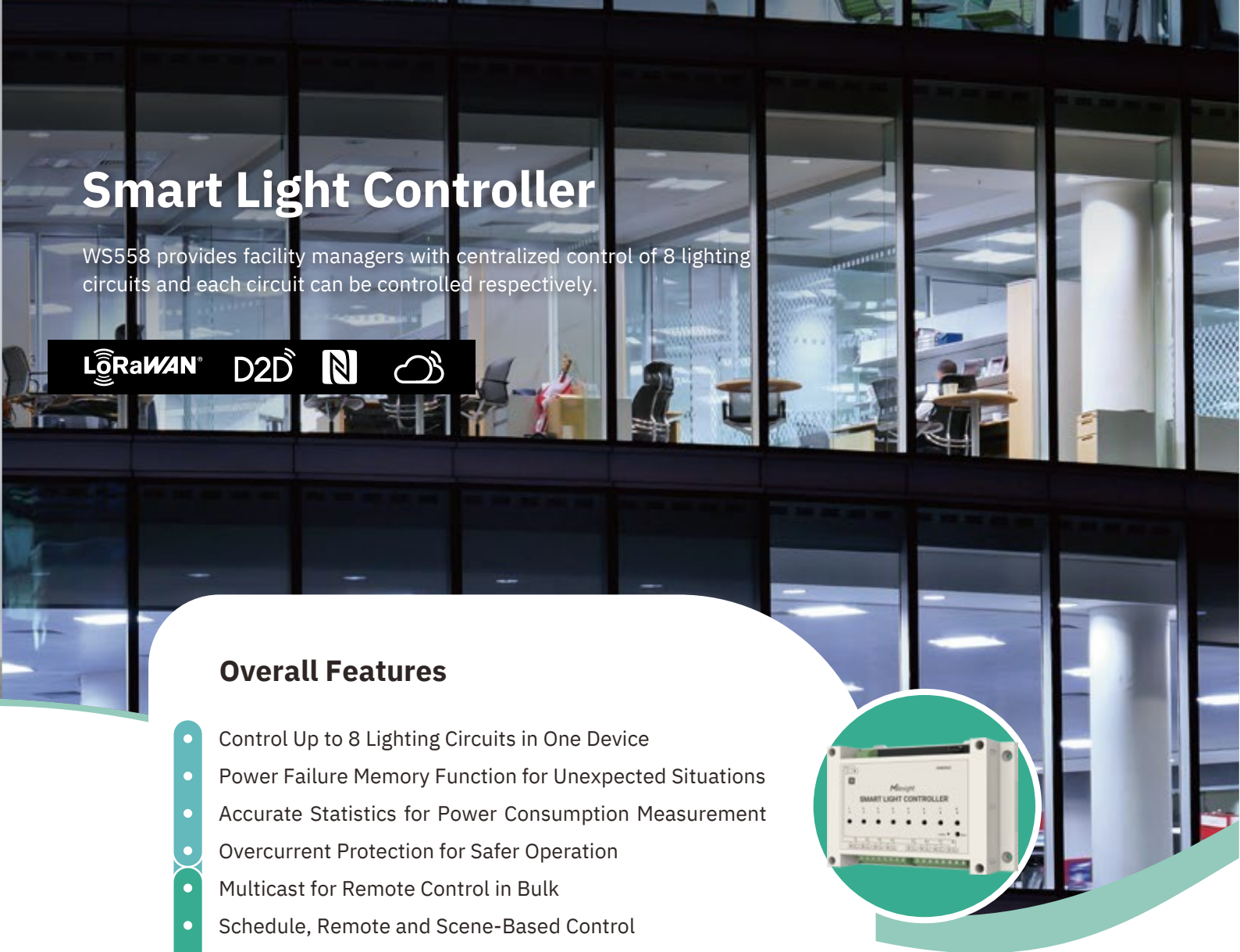
- Schedule, Remote and Scene-Based Control
- Accurate Statistics for Power Consumption Measurement
- Overcurrent Protection/Alarm for Safer Operation
- Multicast for Remote Control in Bulk
- Milesight D2D with Communication Latency to <1 Sec

WS523

Model		WS523
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), ±3 % 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

# Smart Light Controller

WS558 provides facility managers with centralized control of 8 lighting circuits and each circuit can be controlled respectively.



## Overall Features

- Control Up to 8 Lighting Circuits in One Device
- Power Failure Memory Function for Unexpected Situations
- Accurate Statistics for Power Consumption Measurement
- Overcurrent Protection for Safer Operation
- Multicast for Remote Control in Bulk
- Schedule, Remote and Scene-Based Control
- Milesight D2D with Communication Latency to <1 Sec

WS558

Model		WS558-LN	WS558-Switch
Electrical	Circuit Type	LN Type	Switch Type
	Input Voltage	100~240 VAC, 50~60 Hz	
	Output	8 Active Outputs8 Passive Switches	
	Capacitive & Inductive Load	Maximum 5A per Output, Total 16AMaximum 5A per Switch Maximum 10A per Output,	
	Resistive Load	Total 16AMaximum 10A per Switch	
	Electrical Measurement	Voltage (VAC), Current (mA), Power Factor (%), Power (W), - Power Consumption (kW-h)	
	Switch Control Protocol	Local Press or Remote Control	
Wireless Transmission	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
	Mode	OTAA/ABP Class C	
	Dimensions	145 × 90 × 40 mm (5.7 × 3.54 × 1.57 in)	
Physical Characteristics	Installation	Wall Mounting, DIN Rail Mounting	
	Configuration	NFC, USB Type-C or Downlink	
Others	Advanced Features	Multicast, Remote Schedule Switch, Overcurrent Protection, Milesight D2D Agent	

# Gas Detector

GS101 detects methane (CH) leakage in residential space such ass houses, apartments, hotels, etc., features a gas alarm threshold as low as 8% Lower Explosive Limit (LEL) that quickly alerts residents to an emergency.



## Overall Features

- Detect CH4 with Higher Accuracy
- Event Trigger via Relay Output/Solenoid Valve Output
- Built-in Self-Test Function for Safer Operation
- Built-in LED Indicator & Buzzer for Status Indication
- Support Retransmission for Reliable Communication
- Store Capacity with 800 Sets of Historical Data Records
- LoRaWAN® Wireless Deployment with Low Power Consumption

GS101

Model		GS101
Wireless Transmission	Technology	LoRaWAN®
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
	Mode	OTAA/ABP Class C
Measurement	Detecting Gas	Methane (CH4)
	Historical Records Storage	Alarm Records, Alarm Dismissed Records, Device Fault Records, Device Fault Recovered Records, Device Power on Records, Device Power off Records, Device Invalid Records
Physical Characteristics	Configuration	NFC
	Power Supply	12VDC, 1A through DC Jack Connector
	Ingress Protection	IP30
	Dimension	120 × 85 × 32.5 mm (4.72 × 3.35 × 1.28 in)
	Alarm System	Sound (8% LEL), LED Indicators
	Installation	Wall Mounting

# 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 NH3 & H2S 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 (NH3)	± 5% (-40 - 35°C), 0 ~ 10 ppm (0.01ppm)
	Hydrogen Sulfide (H2S)	± 5% (-40 - 35°C), 0 ~ 5 ppm (0.01ppm)
	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.



# 3-in-1 Indoor Air Quality Sensor

AM103/AM103L is a compact IAQ sensor for detecting CO concentration, humidity and temperature accurately and economically.



## Overall Features

- Traffic Light Status Indicator for Direct Notification
- Wireless Installation with Anti-theft Protection
- Smart Screen Mode for Low Power Consumption
- Support Data Storage and Retransmission
- 2.13 -Inch E-Ink Screen with Vivid Emoticon Indication (AM103)
- Light/Dark Color Theme with Multiple Display Styles (AM103)
- Battery Life up to 3 Years (AM103) / 4 Years (AM103L)

AM103  
AM103L

Model		AM103 AM103L	
Wireless Transmission	Technology	LoRaWAN®	
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
	Mode	OTAA/ABP Class A	
Measurement	Temperature		
	Humidity	± 2% RH (0% ~ 100%)	
	Carbon Dioxide (CO2)	± (30 ppm + 3 % of Reading), 400 to 5000 ppm	
Physical Characteristics	Configuration	NFC	
	Display	2.13-inch Black & White E-Ink Screen -	
	Alarm System	1 × Traffic Light Status Indicator	
	Power Supply*	Easily Replaceable Battery with	Easily Replaceable Battery with
	Ingress Protection	IP30	
	Dimension	68 × 65 × 20.5 mm (2.68 × 2.56 × 0.81 in)	
	Installation	Wall Mounting	

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

# 7-in-1 Indoor Air Quality Sensor

AM104/AM107 is a well-qualified IAQ sensor for monitoring CO concentration, temperature, humidity, light, TVOC, barometric pressure and motion in indoor scenarios.



## Overall Features

- 2.13-Inch E-Ink Screen with Intuitive Display
- Smart Screen Mode for Low Power Consumption
- Powered via USB Type-C for Stable Power Supply
- Battery Life up to 1.5 Years (AM104) /1 Year (AM107)

AM104  
AM107

Model		AM104	AM107
Wireless Transmission	Technology	LoRaWAN®	
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
	Mode	OTAA/ABP Class A	
Measurement	Temperature		
	Humidity	± 3%RH (10% ~ 90%), ± 5%RH (0%~10%,10% ~ 90%)	
	PIR	94 ° Horizontal, 82 ° Vertical, 5 m (Distance)	
	Light	±30%, 60000 lux (Visible + IR, IR)	
	Carbon Dioxide (CO2)		± (30 ppm + 3 % of Reading), 400 ~ 5000 ppm
	TVOC	~±15% (0 ~ 60000 ppb)	
	Barometric Pressure	~±1 hPa, 300 ~ 1100 hPa (-40°C ~ 85°C)	
Physical Characteristics	Configuration	NFC, USB Type-C Port	
	Power Supply*	Easily Replaceable Batteries with	Easily Replaceable Battery with
	Ingress Protection	IP30	
	Dimensions	105 × 70.4 × 21.2 mm (4.1 × 2.8 × 0.8 in) & 2.13-inch E-Ink Screen	
	Installation	Wall Mounting	

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

# 9-in-1 Indoor Air Quality Sensor

AM307/AM308/AM319 is a comprehensive IAQ sensor for detecting CO concentration, temperature, humidity, light, HCHO/O3 level, TVOC, barometric pressure, PM2.5, PM10 and motion.



## Overall

### Features

- 4.2 -Inch E-ink Screen with Vivid Emoticon Indication
- Main Light Status Indicator and Built-In Buzzer for Alarm
- Flexible Installation with Anti-theft Protection
- Support Retransmission for Reliable Communication
- Store Capacity with 18,000 Sets of Historical Data Records
- Smart Screen Mode for Low Power Consumption
- Powered via USB Type-C for Stable Power Supply
- Battery Life up to 3 Years (AM307) / 1 Year (AM308)

AM307  
AM308  
AM319

Model		AM307 AM308 AM319	
Wireless Transmission	Technology	LoRaWAN®	
	Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4	
	Work Mode	OTAA/ABP Class A OTAA/ABP Class A OTAA/ABP Class C	
Measurement	Temperature		
	Humidity	± 2% (0% ~ 100%)	
	Motion	5m (80 ° Horizontal, 55 ° Vertical), Vacant/Occupied (Status)	
	Light	0-60000 Lux (Determine as 6 Levels, 0-5)	
	TVOC	1.00 - 5.00 (IAQ Rating), ±1 Accuracy	
	Barometric Pressure	±0.5 hPa (260 ~ 1260 hPa)	
	Carbon Dioxide (CO2)	± (30 ppm + 3 % of Reading) 400 ~ 5000 ppm± (50 ppm + 5 % of Reading) 400 ~ 2000 ppm	
	PM2.5 & PM10	-33)	
	Formaldehyd(HCHO)2	- ±10 % (0 - 1.25 mg/m3)	
Physical Characteristics	Ozone (O3)2	-±5 % FS (0 - 10 ppm)	
	Configuration	NFC, USB Type-C Port	
	Power Supply*	Easily Replaceable Battery with up to 1 Year Battery Life	
		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	3M Tape Mounting, Wall Screw Mounting, 86 Box Mounting	

\* HCHO or O3 sensor is alternative option and both support replacement.  
\*\* Tested under laboratory conditions and for guideline purposes only.

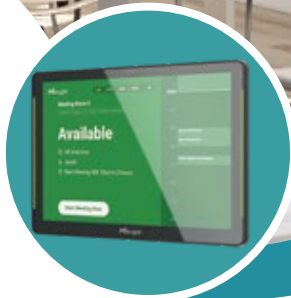
# IoT Display

DS7610 brings customers simplicity and a user-friendly experience in managing rooms' conditions with one tap.



## Overall Features

- Built-in LoRaWAN® Gateway for AIoT Insights
- Quad-Core Industrial Processor with Big Memory
- 10.1-inch Capacitive Touch Screen with RGB LED Indicators
- Powerful SDK Capabilities for Secondary Developer
- Support Third-party Android Applications
- More User-Friendly with NFC Enabled Applications
- Smart Screen Mode for Low Power Consumption
- Optional Docking Station with Flexible Connection Options



DS7610

Model		DS7610
Display	LCD Screen	10.1-inch TFT LCD Touch Screen (STB 74.88%)
	Resolution	1280 x 800 Pixels
	Indicators	RGB Side LED Indicators, Stepless Adjustment
Sensors & NFC	Proximity Sensor	Detection Distance: 1 m (Max.)
	Light Sensor	5 Brightness Level Adjustment
	NFC	13.56 MHz
Wireless Transmission	LoRaWAN® Channel	Single Channel
	LoRaWAN® Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
	LoRaWAN® Protocol	V1.0.3 Class A/Class C
	Wi-Fi	IEEE 802.11 b/g/n, 2.4 GHz, IEEE 802.11 a/n/ac, 5 GHz
	Bluetooth	Bluetooth 5.0
Physical Characteristics	Ethernet	1 x RJ45 10/100/1000 Mbps Ethernet Port (PoE PD Supported)
	Processor	Quad-core ARM Cortex-A55
	Operating System	Android 11.0
	Power Supply	802.3af PoE 12V/1A by DC Jack Connector 5V/2A by Type-C Port
	Ingress Protection	IP30
Physical Characteristics	Installation	Wall Mounting, 3M Tape Mounting



# Pulse Counter

EM300-DI is a LoRaWAN® pulse counter which transforms traditional water meters into wireless intelligent meters at ease.



## Overall Features

- IP67 Rated for Harsh Environment
- Support Digital Filtering for More Accurate Counters
- Embedded Pulse/Digital Signals & Temp & Humidity
- Support Retransmission for Reliable Communication
- Store Capacity with 1,000 Sets of Historical Data Records
- Up to 5 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

### EM300-DI

- IP67
- Pulse Counting
- 5-Year Battery Life

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	Pulse Counter, Digital Input (1 x GPIO Interface, Dry Contact)
	Temperature	
	Humidity	±3%RH (10% ~ 90%), ±3%RH (below 10% and above 90%)
Physical Characteristics	Configuration	NFC
	Power Supply*	Easily Replaceable Batteries 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

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

# Magnetic Contact Switch

EM300-MCS can be mounted to any doors or windows to detect an opening or closing event. It adds physical security monitoring to your location by alarming for intrusion or unauthorized entry.



## Overall Features

- IP67 Rated and UV Resistance
- Detect Temperature, Humidity and Door/Window Status
- High Sensitivity with 20 to 30 mm Open/Close Sensing Distance
- Customized Alarm Reporting Interval/Times for Various Usage
- Support Retransmission for Reliable Communication
- Store Capacity with 2,800 Sets of Historical Data Records
- Up to 5 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

### EM300-MCS

Model		EM300-MCS
Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923
	Mode	OTAA/ABP Class A
Measurement Door Magnet	Detection Distance	20-30 mm
	Cable Length	1.5 m
	Temperature	
Physical Characteristics	Humidity	+ 3% (10% ~ 90%), + 5% (below 10% and above 90%)
	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	Watt Mounting

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



# Temperature & Humidity Sensor

EM300-TH is suitable for indoor and outdoor temperature and humidity monitoring. It can be widely used in office areas, greenhouses and other environments



## Overall Features

- IP67 Rated and UV Resistance
- Detect Temperature and Humidity with Higher Accuracy
- Support Retransmission for Reliable Communication
- Store Capacity with 2,800 Sets of Historical Data Records
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

EM300-TH

Model		EM300-TH
Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923
	Mode	OTAA/ABP Class A
Measurement	GPIO	
	Temperature	+ 3% (10% ~ 90%), + 5% (below 10% and above 90%)
Physical Characteristics	Configuration	NFC
	Power Supply*	Easily Replaceable Battery with up to 10-Year Battery Life
	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.

# Leak Detection Sensor

EM300-SLD/ZLD is suitable for detecting presence of water or other liquids and remotely alerting users the potential water leak accordingly.



## Overall Features

- IP67 Rated and UV Resistance
- Conductive Liquids Leak Detection with 5mm to Trigger Alert
- Embedded Temperature & Humidity Sensors with High Accuracy
- Customized Alarm Reporting Interval/Times for Various Usage
- Support Retransmission for Reliable Communication
- Store Capacity with 2,800 Sets of Historical Data Records
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

EM300-SLD  
EM300-ZLD

Model		EM300-SLD	EM300-ZLD
Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923	
	Mode	OTAA/ABP Class A	
Measurement Leakage Detection	Trigger Condition	When Liquid Level Reaches 5 mm	
	Cable Length	1.5 m (Customizable)	3 m (Customizable)
	Temperature	± 0.3°C (0°C ~ 70°C), ± 0.6°C (-30°C ~ 0°C)	
	Humidity	± 3% (10% ~ 90%), ± 5% (below 10% and above 90%)	
Physical Characteristics	Configuration	NFC	
	Power Supply*	Easily Replaceable Battery with up to 10-Year Battery Life	
	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 Mounting	

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



# Tilt Sensor

EM310-TILT is suitable for angle measurement and asset movement based on angle changes and send threshold alarms.



## Overall Features

- IP67 Rated for Harsh Environment
- 3-Axis Accelerometer for Accurate Detection
- Built-in Zero Adjustment for Smart Measurement
- 36 Customized Trigger Rules for Various Applications
- Up to 5 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

EM310-TILT

Model		EM310-TILT
Wireless Transmission	Technology	LoRaWAN®
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
	Mode	OTAA/ABP Class A
Measurement	Axis	X, Y, Z
	Range	± 1°, (- 90° ~ +90°)
	Resolution	0.01°
Physical Characteristics	Configuration	NFC
	Power Supply*	Easily Replaceable Batteries with over 5-Year Battery Life
	Operation Temperature	-30°C ~ 70°C
	Ingress Protection	IP67
	Dimension	111 × 62 × 33 mm (4.37 × 2.44 × 1.30 in)
	Installation	On the Flat Surfaces with Screws

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

# Ultrasonic Distance/Level Sensor

EM310-UDL features short blind zone and broad range distance measurement. It is suitable for various applications such as smart parking, smart waste bin and so on.



## Overall Features

- IP67 Rated for Harsh Environment
- Non-Contact Distance Detection with 3-450cm Measurement Range
- 3-Axis Accelerometer for Accurate Measurement
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

EM310-UDL

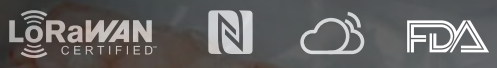
Model		EM310-UDL
Wireless Transmission	Technology	LoRaWAN®
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923
	Mode	OTAA/ABP Class A
Measurement	Distance Range	± (1+0.3%*S) cm, S=distance (3 ~ 450 cm)
	Distance Resolution	1 mm
	Device Position	Normal/Tilt (Status)
Physical Characteristics	Configuration	NFC
	Power Supply*	Easily Replaceable Batteries with over 10-year Battery Life
	Operation Temperature	-15°C ~ 60°C
	Ingress Protection	IP67
	Dimension	111 × 62 × 40 mm (4.37 × 2.44 × 1.57 in)
	Installation	On the Flat Surfaces with Screws

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



# Temperature & Humidity Sensor

EM320-TH is suitable for indoor and outdoor temperature and humidity monitoring. It can be widely used in cold chain.



## Overall Features

- IP67 Rated for Harsh Environment
- FDA-Approved Food Contact Materials
- Support Subtle Changes Monitoring with Higher Accuracy
- Standard & Magnetic Version for Practical Usage
- Support Retransmission for Reliable Communication
- Store Capacity with 3,000 Sets of Historical Data Records
- Up to 5 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

### EM320-TH

Model		EM320-TH
Wireless Transmission	Technology	LoRaWAN®
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
	Mode	OTAA/ABP Class A
Measurement	Temperature	± (1+0.3%*S) cm, S=distance (3 ~ 450 cm)
	Humidity	
Physical Characteristics	Configuration	± 0.2%, 0% to 100%RH
	Power Supply*	Easily Replaceable Batteries with over 5-year Battery Life
	Material	PC + ABS (Food-Grade)
	Operation Temperature	-30°C ~ 60°C
	Ingress Protection	IP67
	Dimension	85 × 58 × 18 mm (3.34 × 2.28 × 0.70 in)
	Installation	Wall Mounting (Standard Version)
		Magnetic Adsorption (Magnet Version)

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

# CO2 Sensor (4 in 1)

EM500-CO is designed for monitoring CO concentration, temperature, humidity and barometric pressure in outdoor scenarios.



## Overall Features

- IP65 Rated for Harsh Environment
- 4 Sensors in 1 for Various Outdoor Usage
- Measuring Ranges from 400 ppm to 5,000 ppm
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

### EM500-CO

Model		EM500-CO
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)	
	Temperature	
	Humidity	+ 3% (10% ~ 90%), + 5% (below 10% and above 90%)
	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.



# Light Sensor

EM500-LGT can accurately monitor changes in the surrounding light intensity.



## Overall Features

- IP67 Rated and UV Resistance
- Measuring Ranges from 0 lux to 100,000 lux
- Fast 1-Sec Response for Accurate Monitoring
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption



EM500-LGT

Model		EM500-LGT
Wireless Transmission	Technology	LoRaWAN®
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923
	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.

# Pipe Pressure Sensor

EM500-PP is designed for the pressure monitoring of tank level or leakage in pipes.



## Overall Features

- IP67 Rated and UV Resistance
- Measuring Ranges from 0 kPa to 1,600 kPa
- Shock & Vibration & Corrosion Resistant
- ±0.5% FS Measuring Accuracy to Prevent Leakage Danger
- Temperature Compensation for Correcting Temperature Changes
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption



EM500-PP

Model		EM500-PP
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 × 27 mm (2.7 × 1.1 in) Cable Length: 1.5 m
	Installation	Pole, Wall or DIN Rail Mounting

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



# Industrial Temperature Sensor

EM500-PT100 equips a highly accurate temperature sensor PT100, platinum resistance temperature detector, to provide temperature measurement from -200°C to 800°C.



## Overall Features

- IP67 Rated and UV Resistance
- Measuring Ranges from -200°C to 800°C
- Support Various Terminal Heads including Straight Tube, Armored, SMT, Threaded and Magnet
- 3-Wire Circuit Design for Stable Connection
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption



## EM500-PT100

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 °CT500: -50 °C ~ 500 °C T200: -50 °C ~ 200 °CT800: -50 °C ~ 800 °C (Customizable from -200 °C ~ 800 °C)
	Accuracy	±0.5°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	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.

# Ultrasonic Distance/Level Sensor

EM500-UDL provides highly accurate distance measurement for a variety of applications in harsh environment.



## Overall Features

- IP67 Rated and UV Resistance
- Measurements in Small Containers or Openings
- Measuring Ranges from 0.3m to 10 m
- Range is Customizable for Snow Level Detection Usage
- Support Detection of Corrosive Liquid, Chemicals or Combustibles with Non-Contact Design
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption



## EM500-UDL

Model		EM500-UDL
Wireless Transmission	Technology	LoRaWAN®
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
	Mode	OTAA/ABP Class A
Measurement	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
Physical Characteristics	Configuration	NFC, USB Type-C Port
	Power	Built-in 19000 mAh Can be Used for up to 10 Years
	Supply* Operation Temperature	W050/W100/S050: -30°C ~ 65°C C050/C100: -15°C ~ 60°C
	Ingress Protection	IP67
	Dimension	156.1 × 71 × 69.5 mm (6.1 × 2.8 × 2.7 in)
	Installation	Pole, Wall or DIN Rail Mounting

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



# Soil Moisture, Temperature and Electrical Conductivity Sensor

EM500-SMTC SMT is suitable for soil condition monitoring. With an external probe, it can accurately and instantly detect conditions on soil moisture content, temperature, and electrical conductivity.



## Overall Features

- IP67 Rated and UV Resistance
- Research-Grade Accuracy in Multiple Soil Media
- Rapid Monitoring of Growing Conditions
- Temperature Compensation for Correcting Temperature Changes
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

### EM500-SMTC

Model		SMTC SMT	
Wireless Transmission	Technology	LoRaWAN®	
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923	
	Mode	OTAA/ABP Class A	
Measurement	Moisture	±2% (0~50%), ±3% (50~100%)±2%, (0% ~100%)	
	Temperature	±0.5°C (-40°C ~ 80°C)/	
	Conductivity	±3% (0~10000 µs/cm), ±5% (10000~20000 µs/cm)/	
Physical Characteristics	Configuration	NFC, USB Type-C Port	
	Power Supply*	Built-in 19000 mAh Can be Used for up to 10 Years	
	Ingress Protection	IP67 (Transceiver)/IP68 (Soil Sensor)IP67	
	Dimension	Transceiver: 105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in)Soil Sensor: 88 × 68 × 26 mm (3.5 × 2.7 × 1.0 in)Soil Sensor: 89 × 18 × 7 mm (3.5 × 0.7 × 0.3 in)(Probe length: 50mm/1.97 in)(Probe Length: 50mm/1.97 in, Cable Length: 5m)	
	Installation	Pole, Wall or DIN Rail Mounting	

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

# Submersible Water Level Sensor

EM500-SWL is designed to measure the tank level or open water applications while fully submerged in liquid.



## Overall Features

- IP67 Rated and UV Resistance
- Accurate Detection without Affecting by Foam, Wind, or Rain
- Support Water Detection & Customizable for Oil and Other Non-Corrosive Media
- Measuring Range is Customizable up to 200 m
- ±0.5% FS Measuring Accuracy for Better Detection
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

### EM500-SWL

Model		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	± 0.5% FS, (0 ~ 3m/5m/10m (H2O)) (Customizable up to 200 m and for Other Liquids)
	Long-term Stability	
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 (Level Sensor)
	Ingress Protection	IP67 (Transceiver)/IP68 (Level Sensor)
	Dimension	Transceiver: 105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 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.



# 5G Dongle

UF31 is a 5G-to-wire device which offers a 4G to 5G migration solution for mobility, embedded system, smart buildings and etc.

5G 4G



## Overall Features

- Ultra-Fast 4G/5G Connectivity with SA & NSA Modes
- Plug & Play Networking with Pint-Sized Design
- Support Power & Networking Supply via USB Type-C Port
- Higher Performance with 2 GHz Quad-Core Processor
- Industrial-Grade Design with Heavy Cast Aluminum Casing
- Support Devicehub Management for Easy Maintenance

UF31

Model		UF31
Hardware	Processor	
	Memory	1 GB LPDDR4X RAM and 1 GB NAND Flash
	Button	1 × Reset Button (Internal)
	GNSS	
Connectivity	Cellular Interface	5G NR SA&NSA/4G LTE/WCDMA
	Ethernet Interface	1 × 10/100/1000 Mbps LAN Port
Others	Network Protocols	IPv4/IPv6, TCP, UDP, DHCPv4/DHCPv6, HTTP, HTTPS, DNS, ARP, Telnet, SSH, etc.
	Power Input	5-24 VDC, with Surge-Protection and Reverse Polarity Protection 5V/3A by USB Type-C Port
		IP30
	Ingress Protection	-20°C to +50°C(-4 to +122)
	Operating Temperature	90 x 72 x 15 mm (3.54 x 2.83 x 0.59 in)
	Dimension	Desktop, Wall Mounting, DIN Rail Mounting
	Installation	

\*DC and PoE supply cannot be used at the same time.

# 5G CPE

UF51 features aesthetic design and outstanding performance with IP67 rating to deliver fast 5G connectivity, higher bandwidth, and low latency to more business.

5G



## Overall Features

- IP67 Rated and UV Resistance
- Ultra-Fast 5G Connectivity with SA & NSA Modes
- Dual Band Wi-Fi 6 with up to 3.6 Gbps Download Speed
- Equipped with Qualcomm Quad-Core Processor
- Aesthetic Design with Flexible Installation Ways
- Support Devicehub Management for Easy Maintenance

UF51

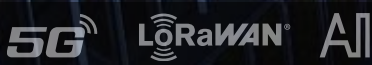
Model		UF51
Processor Hardware Memory		1 GB LPDDR4X RAM and 1 GB NAND Flash
	Cellular Interface	5G NR SA&NSA/4G LTE/WCDMA (1 x SIM Slot)
Connectivity	Ethernet Interface	
	Wi-Fi Interface (Optional)	IEEE 802.11b/g/n/ax 4 x 4 MIMO, 2.4 GHz IEEE 802.11a/n/ac/ax 4 x 4 MIMO, 5 GHz
	Serial Interface	1 × RS485 (RS232 Hardware Optional)
	DI/DO	
Others	Network Protocols	IPv4/IPv6, TCP, UDP, DHCP, HTTP, HTTPS, ARP, NTP, DNS, ARP, SSH, etc.
	Ingress Protection	IP67
	Dimension	
	Installation	Desktop, Pole Mounting, Wall Mounting, Bottom Screw Mounting

\*DC and PoE supply cannot be used at the same time.



# 5G AIoT 4X/12X Pro Bullet Plus Network Camera

Milesight 5G AIoT 4X/12X Pro Bullet Plus Network Camera provides a fresh experience of UHD image quality, low latency and fast transmission speed



## Overall Features

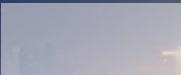
- Built-in LoRaWAN® Gateway for AIoT Insights
- Embedded Network Server for Easy Deployment
- Better AI Video Analytics, Face Detection, People Counting via AI Deep Learning
- 5G Wireless Communication with Higher Bandwidth, Higher Mobility, Higher Scalability, Lower Latency

## Camera

Model		5G AIoT 4X Pro Bullet Plus Network Camera	5G AIoT 12X Pro Bullet Plus Network Camera
Camera	Megapixel	2MP	4K
	Image Sensor		
	Lens	5.3~64mm, 12X Optical Zoom8~32mm, 4X Optical Zoom	
	Field of View	H61°~H5°/D69°~D5°/V36°~V2° H44°~H13°/D51°~D15°/V25°~V7°	
	Max.Image Resolution	1920x1080 3840x2160	
LoRaWAN®	Chipset	SX1302, 8 Channels (Half/Full-duplex)	
	Antenna		
	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	Cellular	Support 5G/4G/3G ( 1 x Nano SIM)	
	Ethernet	1*RJ45 10M/100M Ethernet Port	
	Audio I/O	1/1	
	Alarm I/O	1/1	
Physical Characteristics	Power Supply	PoE (802.3at) / DC 12V±10%	
	Ingress Protection	IP67(Only for Camera Body)	
	Dimension	320 x 134 x 126 mm (12.60 x 5.28 x 4.96 in)	

# 5G Industrial Router

The Milesight Ultra-Series Industrial Cellular Router UR75 delivers 5G connectivity for wireless networking solutions



## Overall Features

- Ultra-Fast 5G Connectivity with Superb Download Speed up to 4.67 Gbps
- Strong Wi-Fi Performance with up to 1.8 Gbps Download
- Speed Equipped with Quad-Core CPU Arm Cortex-A55 for Faster Data Transmission
- Advanced OpenCPU System for More Simplified Yet Efficient Frame Work
- Support Transmission of Data via RS232/RS485/ DI/DO
- Support GPS & Wi-Fi for Various Applications

## UR75

Model		UR75
Hardware	Processor	Quad-core ARM Cortex-A55, 2 GHz
	Memory	1 GB DDR4x RAM and 1 GB NAND Flash
	Extendable Storage	1 × M.2 NVMe SSD Interface
	Button	1 × Reset Button
	GNSS	
Connectivity	Cellular Interface	5G NR SA & NSA/4G LTE/WCDMA
	Ethernet Interface	
	Wi-Fi Interface (Optional)	IEEE 802.11b/g/n/ax 2 x 2 MIMO, 2.4 GHz
	Serial Port	IEEE 802.11a/n/ac/ax 2 x 2 MIMO, 5 GHz
	DI/DO	1 × RS232 + 1 × RS485
	Ingress Protection	1 × DI + 1 × DO
Others	Dimension	IP30
	Installation	135 x 115 x 36.4 mm (5.31 x 4.53 x 1.43 in)
		Desktop, Wall or DIN Rail Mounting



# 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
	Configuration	USB Type-C Port
Physical Characteristics	Power Supply	5 ~ 24 VDC by Terminal Block
		5 VDC by Type-C Port < 0.5 W
	Power Consumption	IP30
	Ingress Protection	
	Dimension	70 × 45 × 13 mm (2.75 × 1.77 × 0.51 in)
	Installation	Desktop, Wall Mounting

# LoRaWAN®/4G IoT Controller

UC300 is designed to connect devices on fields via rich industrial interfaces and backhaul connectivity.



## Overall Features

- Support LoRaWAN® & 4G LTE Version
- Integrated Rich Interfaces:  
DI/DO/AI/RS232/RS485/PT100/RTD Input
- Data Collection up to 16 Registers for Various Usage
- Autonomous Operation when the Network is Unavailable
- Industrial-Grade Design with Heavy Cast Aluminum Casing
- Milesight D2D with Communication Latency to <1 Sec
- Bridge Modbus Data between Serial and Ethernet Network

UC300

Model		UC300
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 + 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



# Multi-Interface LoRaWAN® Controller

UC50x is fully integrated and battery-powered with multiple communication interfaces.



## Overall Features

- IP67 Rated and UV Resistance Enclosure with M12 Connectors
- Integrated Rich Interfaces: RS232, RS485, GPIO, Analog Input
- Solar Powered and Built-In Batteries for Flexible Power Supply Options
- Support Configuration via NFC or Wired USB Type-C Port
- Bridge Modbus Data between Serial and Ethernet Network via LoRaWAN®

UC50x

Model		UC501 UC502	
Wireless Transmission	Technology	LoRaWAN®	
	Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4	
	Mode	OTAA/ABP Class A, Class COTAA/ABP Class A	
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)	
	Power Output	2 × 3.3 V@Max 100mA, 2 × 5/9/12 V@Max 100 mA (Switchable)	
Physical Characteristics	Configuration	NFC, USB Type-C Port	
	Power Supply	2 × Replaceable Batteries Solar Powered (5 V, 1.6 W)3 × Replaceable Batteries 5 ~ 24 VDC 5 ~ 24 VDC	
	Operation Temperature		
	Ingress Protection	IP67	
	Dimension	116 × 116 × 45.5 mm (4.56 × 4.56 × 1.79 in)	
	Installation	Wall or Pole Mounting	

# LoRaWAN® Solenoid Valve Controller

UC51x provides access capabilities for common irrigation vales with embedded pulse counter to monitor flow precisely.



## Overall Features

- IP67 Rated and UV Resistance Enclosure with M12 Connectors
- Integrated Rich Interfaces: RS232, RS485, GPIO, Analog Input
- Water Flow Monitoring with Programmable Unit per Pulse
- Solar Powered and Built-in Batteries for Flexible Power Supply Options
- Support Configuration via NFC or Wired USB Type-C Port

UC51x

Model		UC511 UC512	
Wireless Transmission	Technology	LoRaWAN®	
	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 BOTAA/ABP Class A, Class B	
Data Interfaces	Interface Type	M12 A-Coded Male	
	Solenoid Interface	2 × Solenoid Interfaces, 5/9/12 VDC Switchable	
	GPIO Interface	2 × GPIO Interfaces (Digital Input, Pulse Counter)	
Physical Characteristics	Configuration	NFC, USB Type-C Port	
	Power Supply	2 × 2550 mAh Replaceable Batteries Solar Powered (5 V, 1.6 W)3 × 9000 mAh Replaceable Li-SOCl2 Batteries	
	Operation Temperature		
	Ingress Protection	IP67	
	Dimension	116 × 116 × 45.5 mm (4.56 × 4.56 × 1.79 in)	
	Installation	Wall or Pole Mounting	



# Mini Series Industrial Router

UR41 is a compact size 4G router for IoT applications with low-cost and high efficiency.

4G



## Overall Features

- Secure 4G Connectivity in a Compact Design
- Power Consumption as Low as 60mA in Idle Mode
- Protect Power Sources by Dropping Power Consumption to a Target of 6.3mA in Standby Mode
- Fast Network Response from Standby Mode Triggered by Timers, DI, Cellular, Ethernet or Serial Port
- Remote and Bulk Management for Easy Maintenance
- Support GPS & Multiple Interfaces for Various Applications

UR41

Model		UR41
Hardware Processor	System Memory	128 MB DDR3 RAM and 128MB Flash
	Cellular Interface	4G LTE (CAT 4)/WCDMA/GSM (1 x SIM Slot)
Connectivity	Ethernet Interface	
	Wi-Fi Interface	IEEE 802.11 b/g/n, 2.4GHz
	Serial Interface	1 x RS232 or 1 x RS485 (Software Switchable)
Others	DI/DO	1 x DI + 1 x DO
	Network Protocols	IPv4/IPv6, PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, RIPv1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QOS, SNTP, Telnet, VLAN, SSH, etc.
	Power Input	5-24 VDC, with Surge-Protection and Reverse Polarity Protection 5V/1A by USB Type-C Port
	Ingress Protection	IP30
	Dimension	70 x 55 x 22 mm (2.76 x 2.17 x 0.87 in) ( Antenna Excluded)
	Installation	Desktop, Wall Mounting

# Lite Series Industrial Router

UR32L is rugged and secured 4G router for IoT applications with low-cost and high efficiency.



## Overall Features

- Industrial-Grade Design with Rugged Metal Casting
- Equipped with NXP Industrial Grade Processor
- Support Operating Temperature from -40°C to 70°C PoE-
- PSE for Less Wire Connection Option
- Reliable Connectivity with 4G/Ethernet Failover
- Support Milesight VPN & Devicehub Management for Easy Maintenance

UR32L

Model		UR32L
Hardware System	Processor	
	Memory	128 MB DDR3 RAM and 128MB Flash
	Button	1 x Reset Button
Connectivity	Cellular Interface	4G LTE (CAT 4)/WCDMA/GSM (1 x SIM Slot)
	Ethernet Interface	
Others	Network Protocols	IPv4/IPv6, PPP, PPPoE, SNMP v1/v2c/v 3, TCP, UDP, DHCP, RIPv1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QOS, SNTP, Telnet, VLAN, SSH, etc.
	Power Consumption	Typical 1.8 W, Max 2.2 W (In Non-PoE Mode)
	Ingress Protection	IP30
	Dimension	108 x 90 x 26 mm (4.25 x 3.54 x 1.02 in)
	Installation	Desktop, Wall or DIN Rail Mounting



# Pro Series Industrial Router

UR32/UR35 secures reliable cellular-to-ethernet connectivity for IoT applications, such as kiosk, self-service terminals and process automation equipment.

4G

## Overall Features

- Support Modbus RTU/TCP & Python Programming
- Industrial-Grade Design with Rugged Metal Casting
- Equipped with NXP Industrial Grade Processor
- Support Operating Temperature from -40°C to 70°C
- PoE-PSE for Less Wire Connection Option
- Reliable Connectivity with 4G/Ethernet/Wi-Fi Failover & Dual SIM
- Backup Support Milesight VPN & Devicehub Management for Easy Maintenance

UR32

2

UR35

5

Backup Support Milesight VPN & Devicehub Management for Easy Maintenance

Model		UR32	UR35
Hardware System	Processor		
	Memory	128 MB DDR3 RAM and 128MB Flash	
	Extendable Storage	1 × Micro SD	
	Button	1 × Reset Button	
	GPS (Optional)		
Connectivity	Cellular Interface	4G LTE (CAT 4)/WCDMA/GSM (2 × SIM Slots)	
	Ethernet Interface	2 × 10/100 Mbps (1 × WAN + 1 × LAN or 2 × LAN)	5 × 10/100 Mbps (1 × WAN + 4 × LAN)
	Wi-Fi Interface (Optional)	IEEE 802.11 b/g/n, 2.4GHz	
	Serial Interface	1 × RS232( 1 × RS485 Optional)	1 × RS232 + 1 × RS485 (2 × RS485 Optional)
	DI/DO	1 × DI + 1 × DO	
	Voice Interface (Optional)	-1 × FXS ( RJ-11)	
Others	Network Protocols	IPv4/IPv6, PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, RIPv1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QOS, SNTP, Telnet, VLAN, SSH, etc.	
	Power Output	2 × 802.3 af/at PoE PSE on LAN Ports (Optional)4 × 802.3 af/at PoE PSE on LAN Ports (Optional)	
	Ingress Protection	IP30	
	Dimension	108 × 90 × 26 mm (4.25 × 3.54 × 1.02 in)	135 × 103 × 45 mm (5.31 × 4.06 × 1.77 in)
	Installation	Desktop, Wall or DIN Rail Mounting	

# Ultra Series Industrial Router5G

Milesight Ultra-Series Industrial Cellular Router UR75 delivers 5G connectivity for wireless networking solutions.

## Overall Features

- Ultra-Fast 5G Connectivity with Superb Download Speed up to 4.67 Gbps
- Strong Wi-Fi Performance with up to 1.8 Gbps Download
- Speed Equipped with Quad-Core CPU Arm Cortex-A55 for Faster Data Transmission
- Advanced OpenCPU System for More Simplified Yet Efficient Frame Work
- Support Transmission of Data via RS232/RS485/ DI/DO
- Support GPS & Wi-Fi for Various Applications

\*For more specification, please refer to Page 44.

UR75



# Milesight PoE Switch

Milesight PoE Switch transmits data and power simultaneously, which is suitable for installation environment where power outlet is limited.



## Overall Features

- Multiple Options for Ports from 4, 8, 16 to Maximum 24 Ports
- Up to 14.8 Gbps Switching Capacity with Full Link-Speed Forwarding
- Maximum 400W Power Budget with 4 Kv Surge Protection
- Allow Different Camera Variations to be Configured

## PoE Switch

Model	MS-S0204-EL MS-S0208-EL MS-S0208-GL MS-S0216-GL MS-S0416-GF MS-S0224-GL MS-S0424-GF						
Ports	8X10/100Mbps PoE Ports (RJ45)8X10/100Mbps PoE Ports (RJ45)16X10/100Mbps PoE Ports (RJ45)24X10/100Mbps PoE Ports (RJ45)2X100Mbps Uplink Ports2X100Mbps Uplink Ports						
	----2X100Mbps SFP Ports-2X100Mbps SF Ports1.6Gbps 2Gbps 11.8Gbps 14.8Gbps						
	Non-blocking						
Switching Capacity	Built-in Switching Power Supply, AC 100~240V, 50-60Hz						
Power	1A 2.2A 2.5A 3A 5A						
Supply	IEEE802.3af/at						
PoE Standard							

# IoT Weather Station

WTS305/WTS50x is an ultimate all-in-one weather monitoring system with WTS Sensors, WTS Hub, and solar panel for various atmospheric conditions, including wind speed, wind direction, temperature, humidity, barometric pressure and rainfall.



## Overall Features

- IP65 Rated for WTS Sensors & IP67 Rated for WTS Hub
- Reliable Measurement for Standard Version (WTS305)
- Research-Grade Measurement for Professional Version (WTS50x)
- 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



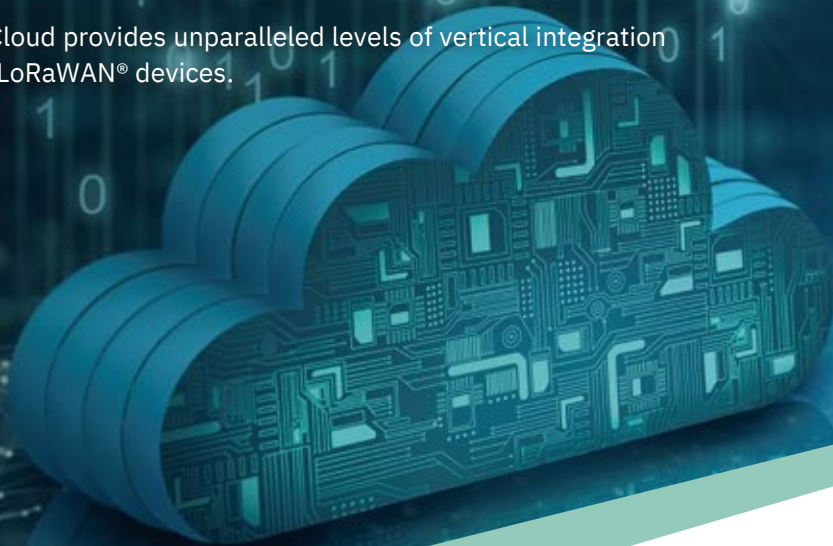
## WTS305 WTS50x

Model		WTS305	WTS505	WTS506
WTS Sensors	Temperature			
	Humidity	± 5% RH (0% ~ 100%) ± 3% RH (0% ~ 100%)		
	Wind Direction	± 3° (0° ~ 360°), 1°0° ~ 360°, 0.1°		
	Wind Speed	± (0.5 + 0.02 V) m/s (0 ~ 60m/s)± 0.3 m/s or ± 3% (0 ~ 60 m/s)		
	Barometric Pressure	±1 hPa (500 ~ 1100 hPa)±0.5 hPa (500 ~ 1100 hPa)		
	Rainfall	—±5 % (10 ~ 500 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)Rated Current1 A (± 5%)		
	Maximum Power	15 W (± 5%)Minimal Power14.5 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	116 × 116 × 45.5 mm (WTS Hub) 343 × 283 × 16.5 mm (Solar Panel)		
		Pole Mounting (WTS Sensor) Screw Mounting (WTS Hub)		



# Milesight IoT Cloud

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



**AWS**

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



# 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



# Milesight VPN

Milesight VPN 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





# List of LTE Frenquancy Band

	Number	Model	Region	Frequency Band
4G Cellular Module	L04AF	UR3x/UR75-4G	North America	LTE FDD: B2/B4/B5/B12/B13/B14/B66/B71
	L04AU		Latin America, ANZ	U/B3/B4/B5/B7/B8/B28
	L04EU		EMEA, Thailand	TDD: B38/B40/B41
	L04AF	UR41	North America	LTE-FDD: B2/B4/B5/B12/B13/B25/B26 WCDMA: B2/B4/B5
	L08AU		Latin America, ANZ	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 WCDMA: B1/B2/B5/B8 GSM: B2/B3/B5/B8
	L08EU		EMEA, ANZ	LTE-FDD: B1/B3/B7/B8/B20/B28 WCDMA: B1/B8 TD-SCDMA :B34/B39 GSM: EGSM900/DCS1800

	Number	Model	Region	Frequency Band
5G Cellular Module	500GL	UR75-5G	Global (except for US)	5G NR: N1/2/3/5/7/8/12/20/25/28/38/40/41/66/71 LTE FDD: B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 WCDMA: B1/2/3/4/5/6/8/19
	501EU	UF51	EMEA, APAC	WCDMA: B1/3/5/6/8/19
	504AE	UR75-5G/UF51	EMEA, APAC, Brazil	LTE FDD: B1/3/5/7/8/20/28/32 LTE TDD: B38/40/41/42/43 WCDMA: B1/5/8
	554AE	UF31	EMEA, APAC	WCDMA: B1/5/8

# Milesight IoT Product Naming Covention

## Occupancy & People Counting Sensor

AI Workplace Occupancy

Sensor VS 1 2 1 – 915M

- ①
- ②③
- ④
- ① Occupancy & People Counting Sensor
  - VS12
  - 1 VS
  - 132
  - VS33
  - 0
- ② Detection Type
  - 1: People Counting
  - 3: Continuous Perception
- ③ Detection Technology Type
  - 2: RGB
  - 3: ToF
- ④ LoRaWAN® Module

## LoRaWAN® Gas Sensor

LoRaWAN Gas Sensor

GS 1 01 – 915M

- ①
- ②
- ③
- ① Gas Sensor
  - GS10
  - 1 GS
  - 301
- ② Sub-Series
- ③ LoRaWAN® Module

## IoT Weather Station

IoT Weather

Station WTS 3 0 5 –

- ①
- ②
- ③
- ④
- ① Weather Station
  - WTS30
  - 5 W
  - TS505
  - WTS50
  - 6
- ② Sub-Series
  - 3: Standard Version
  - 5: Professional Version
- ③ Number of Sensors
- ④ LoRaWAN® Module

## Display Screen

LoRaWAN IoT Display

DS 7 6 10 – 915M

- ①
- ②
- ③
- ④
- ① Display Screen
- ② Screen Type
  - 7: Android Electronic Screen
- ③ Screen Size
  - 10: 10.1 Inch
- ④ LoRaWAN® Module



Industrial Cellular Router & 5G CPE & IoT Controller

UR32 - L 04 EU - G - P - W - RS485

①	②	③	④	⑤	⑥
① Model Name	② Cellular Network Type	③ Modem Manufacturer & Model	④ Operating Region	⑤ Function (for routers only)	⑥ RS485 (for UR32 only)
<ul style="list-style-type: none"><li>UR41</li><li>UR32L</li><li>UR32</li><li>UR35</li><li>UR75</li><li>UF51</li><li>UC300</li></ul>	<ul style="list-style-type: none"><li>L: 4G LTE</li><li>5: 5G</li></ul>	<ul style="list-style-type: none"><li>EU: EMEA/South Korea/Thailand/India</li><li>AU: Latin America/Australia/New Zealand</li><li>AF: North America FirstNet</li><li>GL: Global</li></ul>	<ul style="list-style-type: none"><li>G: GPS</li><li>P: PoE</li><li>W: Wi-Fi</li></ul>		<ul style="list-style-type: none"><li>Add RS-485 Serial Interface</li></ul>

LoRaWAN® Gateway

UG65 - L 04 EU - 915M - EA

①	②	③	④	⑤	⑥
① Model Name	② Cellular Network Type	③ Modem Manufacturer & Model	④ Operating Region	⑤ LoRaWAN® Module	⑥ External Antenna
<ul style="list-style-type: none"><li>UG6</li><li>3</li><li>UG5</li><li>6</li><li>UG6</li></ul>	<ul style="list-style-type: none"><li>L: 4G LTE</li></ul>	<ul style="list-style-type: none"><li>EU: EMEA/South Korea/Thailand/India</li><li>AU: Latin America/Australia/New Zealand</li><li>AF: North America FirstNet</li></ul>	<ul style="list-style-type: none"><li>EU: EMEA/South Korea/Thailand/India</li><li>AU: Latin America/Australia/New Zealand</li><li>AF: North America FirstNet</li></ul>	<ul style="list-style-type: none"><li>470M: CN470</li><li>868M: RU864/IN865/EU868</li><li>915M: US915/AU915/KR920/AS923</li></ul>	<ul style="list-style-type: none"><li>UG6</li><li>7</li></ul>

LoRaWAN® Sensor

EM500 — UDL 915M

①	②	③
① Model Name	② Sensor Type	③ LoRaWAN®Module
<ul style="list-style-type: none"><li>A M10 3</li><li>AM103L</li><li>A M10 4</li><li>A M10 7</li><li>AM307</li><li>AM308</li><li>A M319</li><li>EM300</li><li>E M310</li><li>EM320</li><li>EM500</li></ul>	<ul style="list-style-type: none"><li>UDL: Ultrasonic Distance/Level Sensor</li><li>SMTC/SMT: Soil Sensor</li><li>SWL: Submersible Water Level Sensor</li><li>LGT: Light Sensor</li><li>PT100: PT100 Temperature Sensor</li><li>CO2: CO2 Sensor</li><li>PP: Pipe Pressure Sensor</li><li>TH: Temperature &amp; Humidity Sensor</li></ul>	<ul style="list-style-type: none"><li>MCS: Magnetic Contact Switch Sensor</li><li>SLD: Spot Leak Detection Sensor</li><li>ZLD: Zone Leak Detection Sensor</li></ul>

LoRaWAN® Controller

UC511— DI - 915M

①	②	③
① Model Name	② Interface (For UC51x Only)	③ LoRaWAN®Module
<ul style="list-style-type: none"><li>UC300</li><li>UC501</li><li>UC502</li><li>U C</li><li>511 U</li><li>C 512</li></ul>	<ul style="list-style-type: none"><li>Digital Input (Pulse Counter)</li></ul>	<ul style="list-style-type: none"><li>470M: CN470</li><li>868M: RU864/IN865/EU868</li><li>915M: US915/AU915/KR920/AS923</li></ul>

CoWork Series

LoRaWAN Smart Button

WS 10 1 — 915M

①	②	③
① Workplace Sensor	② Number of Buttons	③ LoRaWAN® Module

LoRaWAN® Smart Scene Panel

WS 1 5 6 — 915M

①	②	③	④
① Workplace Sensor	② Display	③ Number of Buttons	④ LoRaWAN® Module
	<ul style="list-style-type: none"><li>5: E-Ink</li><li>Screen 3: PVC Sticker</li></ul>		

LoRaWAN® PIR & Light Sensor

WS 20 2 — 915M

①	②	③
① Workplace Sensor	② Number of Sensors	③ LoRaWAN® Module

LoRaWAN® Magnetic Contact Switch

WS 30 1 — 915M

①	②	③
① Workplace Sensor	② Sub-series	③ LoRaWAN® Module

LoRaWAN® Smart Portable Socket

WS 52 3 — 915M

①	②	③
① Workplace Sensor	② Number of Holes	③ LoRaWAN® Module

Smart Light Controller

WS 55 8 — 915M

①	②	③
① Workplace Sensor	② Number of Circuits	③ LoRaWAN® Module

Industrial PoE Switch

MS — S0 2 04 — E L MS — S0416 — G F

①	②	③	④	⑤	⑥
① Uplink Port and SFP Port	② Number of PoE Ports	③ Fast Uplink Port (10/100 Mbps)	④ Extend Mode	⑤ Gigabit Uplink Port (10/100/1000 Mbps)	⑥ Optical Fiber Port (SFP)
<ul style="list-style-type: none"><li>2: 2 × Uplink Ports</li><li>4: 2 × Uplink Ports + 2 × SFP Ports</li></ul>					