

LoRaWAN[®] Controller

UC50x Series

Milesight



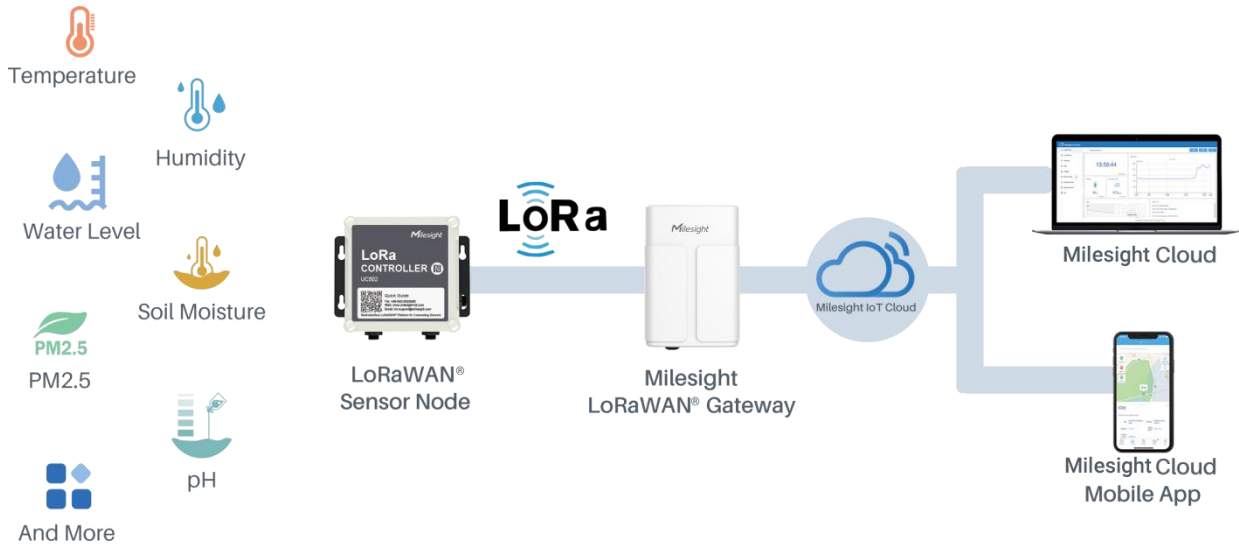
UC50x series is a LoRaWAN[®] controller used for data acquisition from multiple sensors. It contains different I/O interfaces such as analog inputs, digital inputs, digital outputs, serial ports and so on, which simplify the deployment and replacement of LoRaWAN[®] networks.

UC50x series can be easily and quickly configured by NFC or wired USB port. For outdoor applications, it provides solar or built-in battery power supply and is equipped with IP67-rated enclosure and M12 connectors to protect itself from water and dust in harsh environments.

◆ Features

- Easy to connect with multiple wired sensors through GPIO/AI/RS232/RS485 interfaces
- Long transmission distance up to 11km with line of sight
- Waterproof design including IP67 case and M12 connectors
- Solar powered and built-in battery optional
- Quick wireless configuration via NFC
- Compliant with standard LoRaWAN[®] gateways and network servers
- Quick and easy management with Milesight IoT Cloud solution

◆ Application



◆ Specifications

Wireless Transmission

Technology	LoRaWAN®
Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923
Tx Power	16dBm(868)/20dBm(915)/19dBm(470)
Sensitivity	-137dBm @300bps
Work Mode	UC501: Class A, Class C UC502: Class A

Data Interfaces

Interface Type	M12 A-Coded Male
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IO

Ports	2 × GPIO
Logical Level	Low: 0~0.9V, High: 2.5~3.3V
Work Mode	Digital Input, Digital Output, Pulse Counter

Serial Port

Ports	1 × RS232 or RS485 (Switchable)
Baud Rate	300~115200 bps
Protocol	Transparent (RS232), Modbus RTU (RS485)

Analog Input

Ports	2 × Analog input
Resolution	12 bit
Input Range	4~20mA or 0~10V (Switchable)

Power Output

Ports 2 × 3.3 V, 2 × 5/9/12 V (Switchable)

Operation

Power On & Off NFC, power button (Internal)

Configuration Mobile App(via NFC) or PC software(via USB Type-C)

Physical Characteristics

Operating Temperature -20°C to +60°C

Ingress Protection IP67

Dimension 120.1 × 120.1 × 55.4 mm (4.73 × 4.73 × 2.18 in)

Power Connector 1 × M12 A-Coded Male Interface (Only UC501 included)

Power Supply
1. Solar powered + 2*2550mAh battery backup + 5-24 VDC
2. 19000mAh replaceable Li-SOCL₂ battery

Installation Wall or Pole Mounting

◆ Ordering Information

Model	Power Supply
UC501-868M	<ol style="list-style-type: none"> Solar powered (5V, 1W) 2 × 2550mAh chargeable battery 5-24 VDC powered by M12 connector
UC502-868M	19000mAh replaceable Li-SoCl ₂ battery
<p>Remark:</p> <p>"-915M"/"-868M"/"-470M" in the model refers to different LoRaWAN® Frequency in option for different countries/regions, (e.g.)</p> <p>"-915M": KR920/AS923/AU915/US915</p> <p>"-868M": IN865/EU868/RU864</p> <p>"-470M": CN470</p>	

