

# LoRaWAN<sup>®</sup> Controller

## UC50x Series

*Milesight*



UC50x series is a LoRaWAN<sup>®</sup> controller used for data acquisition from various sensors and equipments. It contains different I/O interfaces such as analog input, digital input, digital output, serial port and so on, which simplify the deployment and replacement of LoRaWAN<sup>®</sup> networks.

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



UC501



UC502

### ◆ Features

- Easy to connect with multiple wired sensors through GPIO/AI/RS232/RS485/SDI-12 interfaces

- Long transmission distance up to 15 km with line of sight
- Waterproof design including IP67 case and M12 connectors
- Solar powered and built-in battery optional
- Store locally 600 historical records and support retransmission to prevent data loss
- Quick wireless configuration via NFC
- Compliant with standard LoRaWAN® gateways and network servers
- Quick and easy management with Milesight IoT Cloud solution
- Supports multicast for control in bulk for UC501 device

## ◆ Specifications

Model	UC501	UC502
<b>Wireless Transmission</b>		
Technology	LoRaWAN®	
Antenna	Internal Antenna or External Antenna (Hardware Optional) External Antenna (EA) Version: 1 × 50 Ω SMA Female Connector	
Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4	
Tx Power	16dBm (868 MHz)/20dBm (915 MHz)/19dBm (470 MHz)	
Sensitivity	-137dBm @300bps	
Work Mode	OTAA/ABP Class A, Class C	OTAA/ABP Class A
<b>Data Interfaces</b>		
Interface Type	M12 A-Coded Male	
<b>IO</b>		
Ports	2 × GPIO	
Logical Level	Low: 0~0.9 V, High: 2.5~3.3 V	
Maximum Current	20 mA	
Work Mode	Digital Input, Digital Output, Pulse Counter (Software Switchable)	
<b>Serial Port</b>		
Ports	1 × RS232 or RS485 (Software Switchable)	
Baud Rate	1200~115200 bps	
Protocol	Transparent (RS232/RS485), Modbus RTU (RS485)	
<b>Analog Input</b>		
Ports	2 × Analog Input	
Resolution	12 bit	
Input Range	4~20 mA or 0~10 V (Switchable)	

<b>SDI-12</b>			
Ports	1 × SDI-12		
Protocol	SDI-12 V1.4		
<b>Power Output</b>			
Ports	2 × 3.3 V, 2 × 5/9/12 V(Switchable)		
Power Time Before Data Collection	0~10 minutes		
<b>Operation</b>			
Power On & Off	Mobile App (via NFC), PC Software (via USB Type-C), Power Button (Internal)		
Configuration	Mobile App (via NFC) or PC software (via USB Type-C)		
<b>Physical Characteristics</b>			
Power Connector	1 × M12 A-Coded Male Interface		
Power Supply	<table border="0"> <tr> <td style="vertical-align: top;">           1. 2 × 2550 mAh Chargeable Batteries            2. Solar powered (6 V, 1.7 W)            3. 5-24 VDC         </td> <td style="vertical-align: top;">           1. 3 × 9000 mAh Replaceable ER26500 Li-SOCl<sub>2</sub> Batteries            2. 5-24 VDC         </td> </tr> </table>	1. 2 × 2550 mAh Chargeable Batteries 2. Solar powered (6 V, 1.7 W) 3. 5-24 VDC	1. 3 × 9000 mAh Replaceable ER26500 Li-SOCl <sub>2</sub> Batteries 2. 5-24 VDC
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Operating Temperature	-20°C to +60°C      -30°C to +70°C		
Ingress Protection	IP67		
Dimension	116 × 116 × 45.5 mm (4.56 × 4.56 × 1.79 in) (Connectors Excluded)		
Installation	Wall or Pole Mounting		

