Multi-Interface Controller

UC50x Series

Milesight

◆ Introduction

UC50x series is a multi-interface 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 cellular networks.

UC50x series can be easily and quickly configured by NFC. For outdoor applications, it provides flexible power like built-in solar panel or high-capacity battery and is equipped with an IP68-rated enclosure and M12 connectors to protect itself from water and dust in harsh environments.
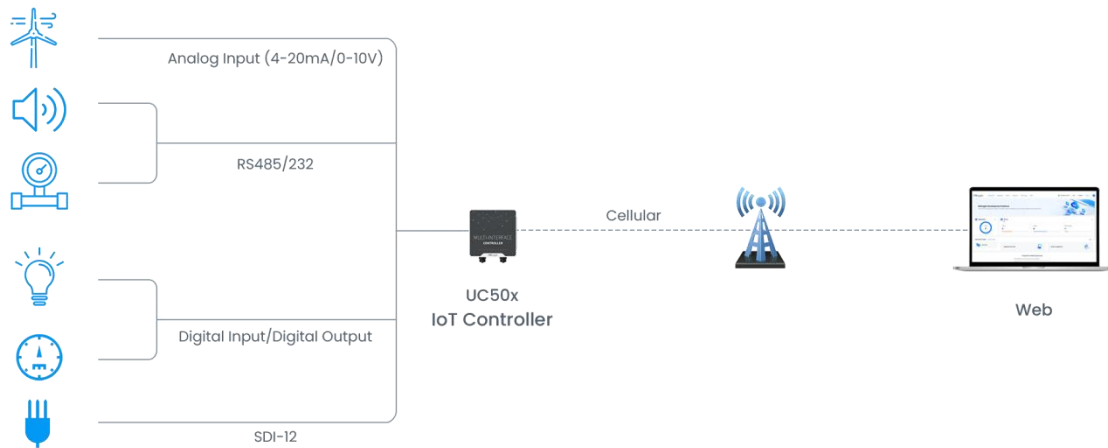
UC501

UC502

◆ Application Example

◆ Features

- Easy to connect with multiple wired sensors through GPIO/AI/RS232/RS485/SDI-12 interfaces
- Waterproof design including IP68 case and M12 connectors
- Solar powered and built-in battery optional
- Quick wireless configuration via NFC
- Support cumulative number report function for power saving
- Support multiple network protocols to be compatible with IoT platforms
- Support threshold alarms and change alarms
- Store historical records locally and support retransmission to prevent data loss

◆ Specifications

Model	UC501	UC502
Wireless Transmission		
Antenna	Internal Antenna	
Cellular Band	**NB-IoT/Cat.M Version:** Cat M1: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 Cat NB2: B1/B2/B3/B4/B5/B8/ B12/B13/B18/B19/B20/B25/B28/ B66/B71/B85	
SIM Slot	1 (Nano SIM-4FF), 1.8V	
Application Mode	TCP/UDP/MQTT/AWS	

Data Interfaces

Interface Type	M12 A-Coded Male

IO

Ports	2 × GPIO
Logical Level	Low: 0~0.8 V, High: 2.5~3.3 V
Maximum Current	20 mA
Work Mode	Digital Input, Digital Output, Pulse Counter (Software Switchable)
Input Frequency	Suggested value: ≤ 4000 Hz

Serial Port

Ports	1 × RS232 or RS485 (Software Switchable)
Baud Rate	1200~115200 bps
Protocol	Transparent (RS232/RS485), Modbus RTU (RS485)

Analog Input

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

SDI-12

Ports	1 × SDI-12
Protocol	SDI-12 V1.4, Transparent

Power Output

Ports	2 × 3.3 V, 2 × 5/9/12 V(Switchable)
Power Time Before Data Collection	Continuous (3.3V), 0~10 minutes (5/9/12V)

Others

Button	1 × Power/Reset Button (Internal)
USB	1 × Type-C (Internal) for Console
LED Indicator	1 × Reboot/Reset (Internal)

Software

Power On & Off	Mobile App via NFC, Power Button (Internal)
Configuration	Mobile App via NFC or Downlink
Advanced Feature	Threshold Alarm, Change Alarm, Cumulative Report, Data Storage (Up to 10,000 entries), Data Retrievability, Data Retransmission

Physical Characteristics

Power Supply	1. 2 × 2550 mAh ICR18650 Chargeable Batteries	1. 3 × 9000 mAh Replaceable ER26500 Li-SOCl$_2$ Batteries

	2. Embedded Solar Power (6V, 1.7W) 3. DC5-24V by M12 Connector	2. DC 5-24V by M12 Connector
Operating Temperature	-20°C~60°C	-30°C~70°C
Relative Humidity	0 ~ 95% (Non-condensing)	
Ingress Protection	IP68 (1m underwater, 7 days)	
Dimension	116 × 116 × 45.5 mm (4.56 × 4.56 × 1.79 in) (Connectors Excluded)	
Installation	Wall or Pole Mounting	
Approvals		
Regulatory	CE	

◆ Dimensions (mm)

100

38

77.5

66.5

Milesight | www.milesight.com

Tel: 86-592-5085280
Sales email: iot.sales@milesight.com
Address: Building C09, Software Park Phase III, Xiamen 361024, Fujian, China

Support email: iot.support@milesight.com
Website: www.milesight.com