LoRaWAN Sensor Controller

IoT Infrastructure

The LoRaWAN Sensor Controller is used for data acquisition from various sensors and equipment. It contains different I/O interfaces such as analog input, digital input, digital output, modbus, serial port and so on.
The device can be easily and quickly configured by NFC or wired USB port and is equipped with an IP67-rated enclosure and M12 connectors for protection from water and dust in harsh environments.

Easy to connect with multiple wired sensors through GPIO/AI/RS232/RS485 interfaces, it assures long transmission distance up to 15 km with line of sight.

Features

Wireless Transmission	
Technology	LoRaWAN®
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	UC501: OTAA/ABP Class A, Class C UC502: OTAA/ABP Class A
Physical Characteristics	
Power Supply	UC501: 1. 2 × 2550 mAh chargeable battery 2. Solar powered (5 V, 1.6 W) 3. 5-24 VDC UC502: 1. 3 × 9000 mAh replaceable Li-$SOCl_2$ battery 2. 5-24 VDC
Power Connector	1 × M12 A-Coded Male Interface
Operating Temperature	-20°C to +60°C
Ingress Protection	IP67
Dimension	116 × 116 × 45.5 mm (4.56 × 4.56 × 1.79 in)
Installation	Wall or Pole Mounting

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Data Interfaces	
Interface Type	M12 A-Coded Male
IO	
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
Serial Port	
Ports	1 × RS232 or RS485 (Switchable)
Baud Rate	1200~115200 bps
Protocol	Transparent (RS232), Modbus RTU (RS485)
Analog Input	
Ports	2 × Analog Input
Resolution	12 bit
Input Range	4~20 mA or 0~10 V (Switchable)
Power Output	
Ports	2 × 3.3 V@Max 300mA, 2 × 5/9/12 V @Max 200 mA (Switchable)