IoT Controller

Featuring LoRaWAN®

UC100

Milesight

◆ Introduction

UC100 is an IoT controller used for remote control and data acquisition from Modbus RS485 devices via LoRaWAN® networks. It can read up to 32 Modbus RTU devices and support Modbus transparent transmission between server and RS485 devices as a Modbus to LoRaWAN® converter. Besides, UC100 supports multiple trigger conditions and actions which can work autonomously even when the network dropped. Combining with Milesight Development Platform solution, it can monitor and control remote assets via web server easily.

UC100 is widely used in indoor applications like smart metering, smart cities, building automation, etc.

UC100   **UC100 (EA)**

◆ Application Example

RS485

UC100 IoT Controller   LoRaWAN Gateway   Ethernet/Wi-Fi/Cellular   Web

◆ Features

➢ Support reading 32 Modbus registers, can connect up to 32 Modbus devices

➢ Ultra-wide-distance transmission up to line of sight of 15 km

➢ Multiple triggering conditions and actions

➢ Embedded watchdog for device working stability

➢ Store historical data locally and support retransmission to prevent data loss

➢ Support Milesight D2D protocol to enable ultra-low latency and directly control without LoRaWAN® gateway

➢ Compliant with standard LoRaWAN® gateways and network servers

➢ Quick and easy management with Milesight IoT Cloud (IA Version Only) and Milesight Development Platform solution

➢ Support Firmware Update Over the Air (FUOTA) feature (EA Version Only)

◆ Specifications

Model	UC100	UC100 (EA)
Wireless Transmission		
Technology	LoRaWAN®, Milesight D2D	
Antenna	Internal Antenna	1 × 50 Ω SMA Connector (Center PIN: SMA Female)
Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4	
Tx Power	16dBm (868 MHz)/22dBm (915 MHz)/19dBm (470 MHz)	
Sensitivity	-137dBm @300bps	
Mode	OTAA/ABP Class C	
Data Interface		
Port	1 × RS485	
Connector	2-pin 3.5 mm Terminal Block	

Terminal Resistor	1 × 120 Ω Resister Switch	
Baud Rate	1200~115200 bps	
Protocol	Modbus RTU, Passthrough	
Others		
USB	1 × Type-C for Power Supply, Configuration and Console	
Reset Button	1 × Reset Button (Internal)	
LED Indicator	1 × System	
Power Connector	1 × 3.5mm 2-pin Terminal Block, with Surge-Protection and Reverse Polarity Protection	
Software		
Configuration	USB Type-C or Downlink	
Advanced Feature	Threshold Alarm, Change Alarm, Data Storage (1000 entries), Data Retrievability, Data Retransmission, Milesight D2D Controller, Milesight D2D Agent, IF-THEN Command	Threshold Alarm, Change Alarm, Data Storage (800 entries), Data Retrievability, Data Retransmission, Milesight D2D Controller, Milesight D2D Agent, IF-THEN Command, FUOTA
Physical Characteristics		
Power Supply	1. DC 5-24 V by Power Connector 2. DC 5V/1A by Type-C Port	
Power Consumption	< 0.5 W	
Material & Color	PC+ABS, White	
Weight	28.9g	32.1g
Ingress Protection	IP30	
Operating Temperature	-20°C ~ 60°C (-4°F~140°F)	
Relative Humidity	0% ~ 95% (non-condensing)	
Dimensions	70 × 45 × 13 mm (2.75 × 1.77 × 0.51 in) (Connectors Excluded)	
Installation	Desktop, Wall Screw Mounting	

◆ Dimensions (mm)

45

13

81.8 70

⌀ 3.2

44

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