



Communication Expert
of Industrial IOT

M100 Specification

Remote IoT Gateway



Introduction

M100 is designed for edge computing applications in IoT, Smart Manufacturing, Industrial Automation etc. It provides rich network protocols, like TCP, UDP, HTTP, MQTT, SSL, etc. The USR-M100 integrates comprehensive interface such as: RS232, RS485, Ethernet port, Cellular antenna, DI, DO, AI etc. It also supports Modbus RTU to TCP /JSON. The product features edge computing capabilities to reduce cloud-end computing resources and realize data optimization on the IoT application.

Specifications

M100 Parameters

Power Supply	Input Voltage	9 - 36 VDC, reverse polarity protection, surge protection
	Power Consumption	Idle: < 2.4W, Max: < 4.8W
Serial Port	No.	2 serial ports: 1 x RS232/485, 1 x RS485
		RS232 Terminal block connector: TX, RX
		RS485 Terminal block connector: A, B
	Baud rates	600~230400 bps
	Data bits	7,8
	Stop bits	1,2
	Parity	None, Even, Odd, Mark, Space
	Flow	None, XON/XOFF
Physical Interface	DI	2 x Digital opto-isolated input (0 - 2 V detected as logic low, 9 - 36 V detected as logic high)
	DO	2 x Relays,
		DC contacts rating @R(at resistive load)10A / 28V DC
		AC contacts rating @R(at resistive load)10A / 277V AC,NO
	AI	AC contacts rating @R(at resistive load)5A / 250V AC, NC
		2 x Analog input 4-20mA
		USR-IO4040: 4 x Digital input, 4 x Digital output
	Extendable I/O modules	USR-IO0440: 4 x Analog input(4-20mA), 4 x Digital output USR-IO0080: 8 x Digital output
Physical Spec	Antennas	1 x SMA-K Connectors (Center PIN: SMA Female)
	SIM Slot	1 x (3 V/1.8 V) Micro-SIM(3FF)
	Dimensions (W x H x D)	79.6 x 58 x 110 (mm)
Hardware Protection	Mounting options	DIN rail, wall mounting
	ESD	IEC61000-4-2, Level 3, class B, contact 6KV, air 8KV
	Surge	IEC61000-4-5, Level 3, class B
Status LEDS	EFT	IEC61000-4-4, Level 3, class B
	Power	1 x Power, 1 x WORK, 1x NET, 1 x DATA, 2 x DI, 2 x DO
Network	Cellular	<i>Frequency:</i> LTE FDD: B1/3/5/7/8/20/28 LTE TDD: B38/40/41 WCDMA: B1/5/8 GSM/GPRS/EDGE: 850/900/1800 <i>Maximum Transmission Data Rate:</i> LTE FDD: 150(DL)/ 50(UL) Mbps

		LTE FDD: 130(DL)/ 30.5(UL) Mbps WCDMA: 384(DL)/ 384(UL) Kbps
	ETHERNET	1 x WAN port 10/100 Mbps, compliance IEEE 802.3, IEEE 802.3u standards, supports auto MDI/MDIX
Software	Network protocols	ICMP,IPv4,IPv4,ARP,ICMP,TCP,UDP,DHCP,DNS,HTTPS,MQTT,SNMP,Telnet ,NTP,SSL v3
	IP	DHCP/Static IP
	WebSocket	Supported
	MQTT	Supported, standard MQTT protocol, 16 subscription topics and 16 publish topics
	Linkage control	Supported. Data collection points, DI, and AI can be used as trigger and executed by DO
	IOT PLATFORMS	Alibaba cloud, AWS IOT, PUSR cloud, Thingsboard
	User Configuring	Windows Utility, web console (HTTP)
Operating Environment	Operating temperature	-25 °C to 75 °C
	Operating humidity	10% to 90% non-condensing
	Ingress Protection Rating	IP30
MODBUS RTU Master	Supported functions	01, 02, 03, 04
	Supported data formats	8 bit: INT, UINT; 16 bit: INT, UINT (MSB first); 32 bit: float, INT, UINT (ABCD (big-endian), DCBA (little-endian), CDAB);64bit: float
	Supported data points	128
Approvals	Regulatory	CE/RED, RoHS

Dimensions(mm)

