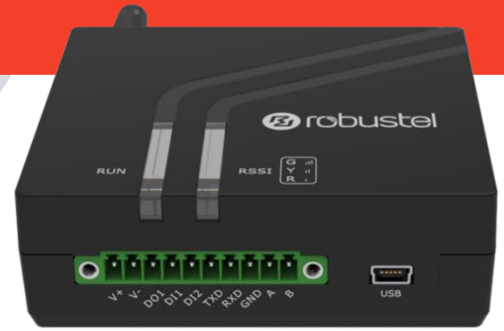# M1200 robustOS

Smart Industrial IoT Gateway

2 SIM + 2 DI + 1 DO + 1 RS-232 + 1 RS-485 + 1 Mini USB

INTRODUCTION
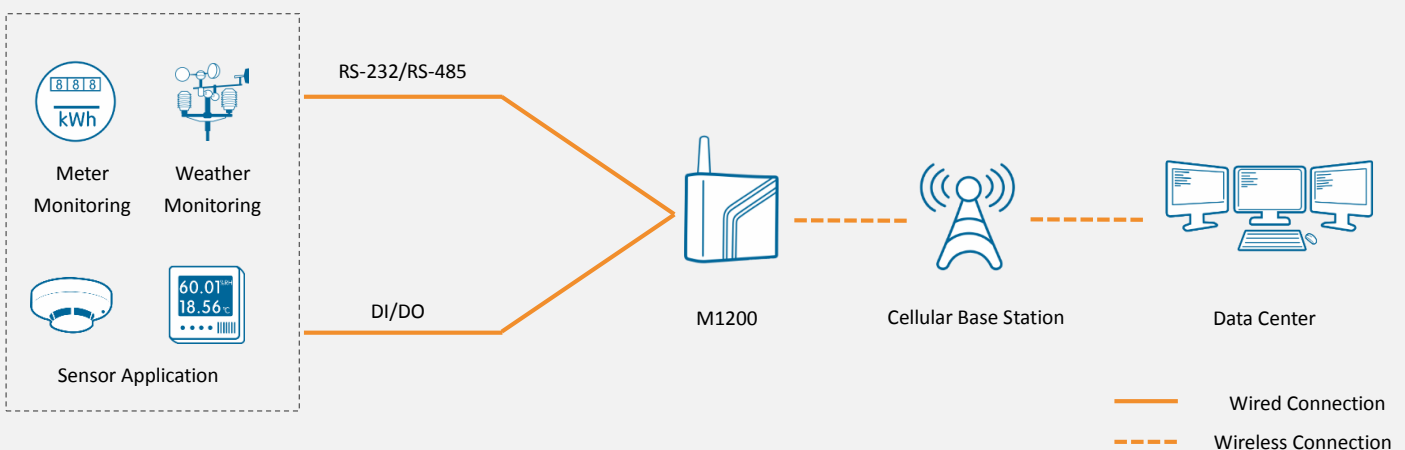
The Robustel Smart Industrial IoT Gateway M1200 is a compact cellular gateway based on GSM/GPRS/ EDGE/UMTS/WCDMA/HSDPA/HSUPA/HSPA+/FDD LTE/ TDD LTE/Cat.M1/Cat.NB1 networks. This dual-SIM gateway enables remote data transmission of local serial ports and I/O, and supports such interfaces as RS-232, RS-485 and mini-USB. M1200 provides users with stable network connectivity and data transmission. It is available to meet industrial application demands for its standards-compliant industrial designs. As a universal gateway, it can be applied in many scenarios such as Energy, Transportation and Agriculture, etc.

Robustel is a leading global industrial IoT/M2M hardware and solution provider. Since its establishment in 2010 in Guangzhou, China, Robustel has been focusing on designing and manufacturing industrial cellular routers, gateways, modems, cloud platforms and E2E solutions. In order to support global business in more than 100+ countries and regions, Robustel has set up local offices in Germany, Australia, the Netherlands, the UK, Japan and Hong Kong.

KEY FEATURES

- Auto GSM/GPRS/EDGE/UMTS/WCDMA/HSDPA/ HSUPA/HSPA+/FDD LTE/TDD LTE/Cat.M1/Cat.NB1 connections (No AT command required)
- Dual-SIM backup (push-push or MFF type optional)
- IPsec/OpenVPN/GRE/L2TP/PPTP
- Transparent TCP and UDP protocol connections
- ICMP, DDNS, SNTP and Telnet
- Modbus RTU to TCP
- Auto rebooting via SMS and Timer
- Configuration and firmware upgrading via USB and RCMS
- Sending SMS if DI is triggered
- Robust industrial design (9 to 36V DC, -40 to +75 °C extended operating temperature, desktop or wall mounting or DIN rail mounting)
- Support bridge (modem only) mode, via serial port or USB port

APPLICATION EXAMPLE

Meter Monitoring — Weather Monitoring — Sensor Application — RS-232/RS-485 — DI/DO — M1200 — Cellular Base Station — Data Center — Wired Connection — Wireless Connection

SPECIFICATIONS

Cellular Interface
Number of antennas	1
Connector	SMA-K
SIM slot	2 (3.0 V & 1.8 V)
Standards	GSM/GPRS/EDGE/UMTS/WCDMA/HSDPA/HSUPA/HSPA+/FDD LTE/TDD LTE/Cat.M1/Cat.NB1

Serial Interface
Number of ports	1 x RS-232 + 1 x RS-485
Connector	10-pin 3.5 mm RP female socket with lock
Baud rate	300 bps to 115200 bps
RS-232	TxD, RxD, GND
RS-485	A (Data+), B (Data-)

Digital Input / Digital Output
Number of ports	2 x DI (wet contact) + 1 x DO (wet contact)
Connector	10-pin 3.5 mm RP female socket with lock
ESD withstand level	contact: ±6 K, air: ±8 K
Absolute maximum VDC	"V+" +5V DC (DI), 30V DC (DO)

USB Port
Number of ports	1 x Mini USB for configuration
Connector	Mini Female
Speed	2.0 high speed up to 480 Mbit/s

Others
LED indicators	1 x RUN + 1 x RSSI (red/green bi-color light)
Built-in	RTC, Watchdog, Timer

Software (Basic features of RobustOS)
Network protocols	PPP, TCP, UDP, ICMP, HTTP, HTTPs, DNS, NTP, SMTP, Telnet, SSH2, DDNS, etc.
VPN tunnel	IPsec, OpenVPN, GRE
Management	Web, CLI, SMS
Serial port	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway

App Center (Available Apps for RobustOS)
Apps*	Language, RCMS

Request on demand. For more Apps please visit www.robustel.com.

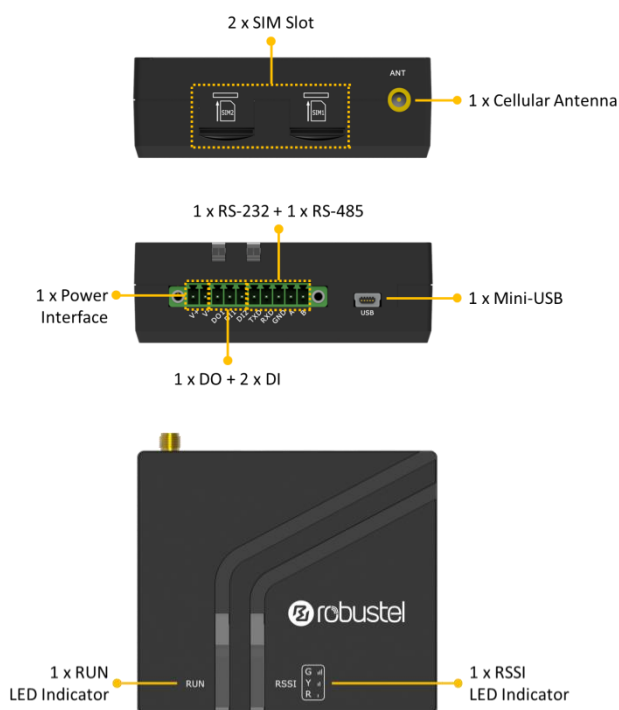## Power Supply and Consumption
Connector	10-pin 3.5 mm RP female socket with lock
Input voltage	9 to 36V DC
Power consumption	Idle: 50 to 70 mA@12 V
	Data link: 300 mA (peak) @12 V

Physical Characteristics
Ingress protection	IP30
Housing & Weight	Plastic, 106 g
Dimensions	85 x 75 x 28.5 mm
Installations	Desktop, wall mounting and 35 mm DIN rail mounting

Approvals
Regulatory	CE,RCM,FCC,PTCRB,IC
Carrier	AT&T
Environmental	RoHS2.0, WEEE
EMI	EN 55032: 2015 (CE) Class B
	EN 55032: 2015 (RE) Class B
EMS	IEC 61000-4-2 (ESD) Contact Level 2; Air Level 3
	IEC 61000-4-3 (RS) Level 2
	IEC 61000-4-4 (EFT) Level 2
	IEC 61000-4-5 (Surge) Level 3
	IEC 61000-4-6 (CS) Level 2

2 x SIM Slot
ANT
1 x Cellular Antenna

1 x RS-232 + 1 x RS-485
1 x Power Interface
1 x Mini-USB
1 x DO + 2 x DI

1 x RUN LED Indicator — RUN
1 x RSSI LED Indicator — RSSI

ORDERING INFORMATION

Model	M1200-3P	M1200-4L	M1200-4M
Antenna Number	1	1	1
Air Interface	GSM/GPRS/EDGE/EGPRS/UMTS/WCDMA/HSDPA/HSUPA/HSPA+	GSM/GPRS/EDGE/EGPRS/UMTS/WCDMA/HSDPA/HSUPA/HSPA+/FDD LTE/TDD LTE	EGPRS/Cat.M1/Cat.NB1
Frequency Bands* 4G	--	EMEA:B1/B3/B5/B7/B8/B20; B38/B40/B41 AU: B1/B2/B3/B4/B5/B7/B8/B28; B40	Global：B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28; B39(for Cat-M1 only)
3G	B1/B2/B5/B8/B19	EMEA: B1/B5/B8 AU: B1/B2/B5/B8	--
2G	B2/B3/B5/B8	EMEA: B3/B8 AU: B2/B3/B5/B8	Global：B2/B3/B5/B8
Operating Temperature	-40 to +75 °C	-40 to +75 °C	-40 to +75 °C
Storage Temperature	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C
Relative Humidity	0 to 95% RH	0 to 95% RH	0 to 95% RH

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