



# M1200

robustOS

Smart Industrial IoT Gateway

2 SIM + 2 DI + 1 DO + 1 RS232 + 1 RS485 + 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 RS232, RS485 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.

**RCMS** is Robustel's free router monitoring service that is fully compatible with the M1200. It allows customer to see a location overview of their routers quickly and simply on a map. Features such as data usage, signal strength, current network and much more can then be viewed on a per router basis. Over-the-air updates are supported for Firmware, router configuration and Apps serving as essential 'insurance' if anything was not quite right during deployment.

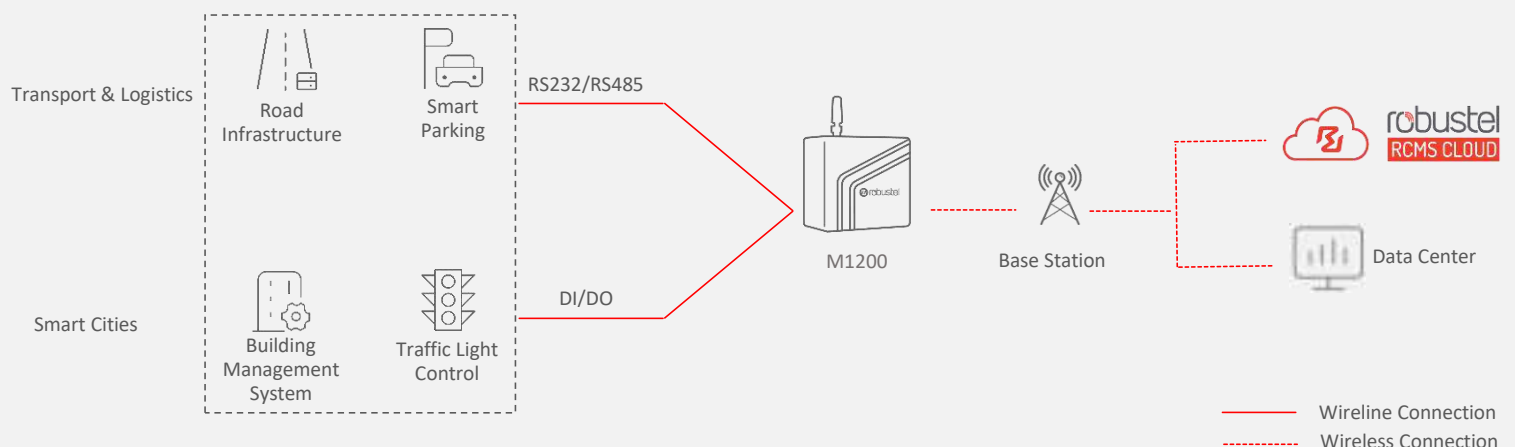
You can try Robustel's free router management platform by signing up here: <https://rcms-cloud.robustel.net>

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RCMS CLOUD

## 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 ~ 36 VDC, -40 ~ +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



## SPECIFICATIONS

### Cellular Interface

|                    |                                                                           |
|--------------------|---------------------------------------------------------------------------|
| Number of antennas | 1                                                                         |
| Connector          | SMA-K                                                                     |
| SIM                | 2 Mini SIM (2 FF)                                                         |
| Standards          | GSM/GPRS/EDGE/UMTS/WCDMA/HSDPA/HSUPA/HSPA+/FDD LTE/TDD LTE/Cat M1/Cat NB1 |

### Serial Interface

|                   |                                                     |
|-------------------|-----------------------------------------------------|
| Number of ports   | 1 x RS232 + 1 x RS485                               |
| Connector         | 10-pin 3.5 mm RP female socket with lock            |
| Baud rate         | 300 bps ~ 115200 bps                                |
| Signal definition | RS232: TxD, RxD, GND<br>RS485: A (Data+), B (Data-) |

### DI/DO

|                       |                                             |
|-----------------------|---------------------------------------------|
| 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: $\pm 6$ K, air: $\pm 8$ K          |
| Absolute maximum V DC | "V+" +5 VDC (DI), 30 VDC (DO)               |

### USB Interface

|                 |                                  |
|-----------------|----------------------------------|
| 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                                                        |
| Remote 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](http://www.robustel.com).

### SDK

|                                |        |
|--------------------------------|--------|
| Supported programming language | C, C++ |
|--------------------------------|--------|

|                         |      |
|-------------------------|------|
| Flash available for SDK | 3 MB |
|-------------------------|------|

|                       |       |
|-----------------------|-------|
| RAM available for SDK | 16 MB |
|-----------------------|-------|

### Power Supply and Consumption

|                   |                                                          |
|-------------------|----------------------------------------------------------|
| Connector         | 10-pin 3.5 mm RP female socket with lock                 |
| Input voltage     | 9 ~ 36 VDC                                               |
| Power consumption | Idle: 50 ~ 70 mA @12 V<br>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 |
| Operating temperature | -40 ~ +75°C                                        |
| Storage temperature   | -40 ~ +85°C                                        |
| Relative humidity     | 0 ~ 95%RH                                          |

### Regulatory and Type Approvals

|               |                                                                                                                                                                              |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental | RoHS2.0, WEEE                                                                                                                                                                |
| EMI           | EN 55032: 2015 (CE) Class B<br>EN 55032: 2015 (RE) Class B                                                                                                                   |
| EMS           | IEC 61000-4-2 (ESD) Contact Level 2; Air Level 3<br>IEC 61000-4-3 (RS) Level 2<br>IEC 61000-4-4 (EFT) Level 2<br>IEC 61000-4-5 (Surge) Level 3<br>IEC 61000-4-6 (CS) Level 2 |

## ORDERING INFORMATION

| Model    | PN      | Category | Frequency Bands*                                                                                                             | Country/Region         | Certifications (*In progress) |
|----------|---------|----------|------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------|
| M1200-4L | B033701 | Cat 4    | <b>4G:</b> LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28<br>LTE TDD: B40<br><b>3G:</b> WCDMA: B1/B2/B5/B8<br><b>2G:</b> GSM: B2/B3/B5/B8 | South America, Oceania | CRC, SUBTEL, Enacom, RCM      |
|          | B033702 |          | <b>4G:</b> LTE FDD: B1/B3/B5/B7/B8/B20<br>LTE TDD: B38/B40/B41<br><b>3G:</b> WCDMA: B1/B5/B8<br><b>2G:</b> GSM: B3/B8        | EMEA                   | ICASA, CE, UKCA               |

\* For more information about frequency bands in different countries, please contact your Robustel sales representative.