

MEG5000 robustOS

Modular Edge Gateway for IoT
Control Card + Expansion Card 1+ Expansion Card 2



INTRODUCTION

MEG5000, Robustel Modular Edge Gateway for Internet of Things (IoT), is a most configurable and manageable cellular gateway. The MEG5000 features three scalable cards supporting various interfaces to meet changing demands for industrial IoT applications. It is developed to provide application of calculation, and performs real-time data analysis and intelligent processing at the edge of sensor, which is more effective and secure. With quick-to-deploy and easy-to-customize, the MEG5000 gateway can be tailored to your industrial needs.

MEG5000 is a powerful gateway developed from **RobustOS**, a Robustel self-developed and Linux-based operating system which is designed to be used in Robustel devices. The RobustOS includes basic networking features and protocols providing customers with a very good user experience. Meanwhile, Robustel offers a **Software Development Kit (SDK)** for partners and customers to allow additional customization by using C, Python or Java. It also provides rich **Apps** to meet fragmented IoT market demands.

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, Japan and Hong Kong.

KEY FEATURES

- Flexible interfaces supporting numerous industrial applications
- High performance, high reliability and high throughput for data processing
- Quick customization meeting rapid market promotion
- Custom development based on integrated Linux environment, and providing edge computing power
- Embedded mSATA SSD providing data logging
- Real-time running temperature
- RobustOS + SDK + App
- IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN
- The option *Backup Mode* supporting cold, warm and load balancing
- Event/Alarm management with notification (SMS, e-mail, DI/DO, SNMP trap or RobustLink)
- Robust industrial design (12 to 60V DC, desktop or wall mounting or DIN rail mounting)

PLUG-IN CARDS



Control Card

- 2 x cellular SMA antenna
- 4 x WiFi antenna
- 6 x LED indicator
- 2 x SIM slot
- 1 x Gigabit WAN port/
Gigabit Fiber
- 1 x 3-pin power interface



Expansion Card 1

- 8 x Megabyte LAN Ethernet
- 1 x mSATA SSD



Expansion Card 2

- 1 x RUN LED indicator for card running status
- 1 x GPS antenna
- 2 x RS-232
- 2 x Digital Input
- 2 x Digital Output
- 1 x CAN
- 1 x RS-485

SPECIFICATIONS

Cellular Interface

Number of antennas	2 (MAIN + AUX)
Connector	SMA, female
SIM slot	2 (3 V & 1.8 V)
Standards	GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/FDD LTE/TDD LTE

Ethernet Interface

Number of ports	1 x 10/100/1000 Mbps WAN (ETH0) + 8 x 10/100 Mbps LAN (ETH1~ETH8)
Magnet isolation protection	1.5 KV

WiFi Interface

Number of antennas	4 (WiFi1 + WiFi2 + WiFi3 + WiFi4)
Connector	RP-SMA, male
Standards	802.11a/b/g/n/ac, supporting AP and Client modes
Frequency bands	2.412 - 2.472 GHz (2.4 GHz ISM band) 5.180 - 5.825 GHz (5 GHz ISM band)
Security	Open, WPA, WPA2, WEP
Encryption	AES, TKIP, WEP64, WEP128
Data speed	Up to 1300 Mbps

Device Interface

GPS/GLONASS	1 x GPS/GLONASS, SMA, female
Serial port	2 x RS-232 + 1 x RS-485 + 1 x CAN
DI/DO	2 x Digital Input + 2 x Digital Output

Others

Reset button	1 x RST
LED indicators	2 x RUN, 1 x MODEM, 1 x USR, 3 x RSSI 1 x Link indicator + 1 x Speed indicator for each Ethernet port

Software (Basic features of RobustOS)

Network protocols	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, NTP, SMTP, Telnet, VLAN, SSH2, DDNS, etc.
VPN tunnel	IPsec, OpenVPN, GRE
Firewall	DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control
Management	Web, CLI, SMS
Serial port	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway

App Center (Available Apps for RobustOS)

Apps	L2TP, PPTP, DMVPN, RobustVPN, VRRP, QoS, SNMP, Language, RobustLink
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**Request on demand. For more Apps please visit www.robustel.com.*

Power Supply and Consumption

Connector	3.5 mm terminal block with lock
Input voltage	12 to 60V DC
Input current	3.0 A @ 12V DC; 330 mA @ 60V DC

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Metal, 1600 g
Dimensions	157 x 145 x 89 mm
Installations	Desktop, wall mounting and 35 mm DIN rail mounting

EMC

EMI	EN 55022: 2006/A1: 2007 (CE & RE) Class B
EMS	IEC 61000-4-2 (ESD) Level 3 IEC 61000-4-3 (RS) Level 3 IEC 61000-4-4 (EFT) Level 3 IEC 61000-4-5 (Surge) Level 3

ORDERING INFORMATION

Model	MEG5000-4L	MEG5000-NU
Gateway Type	LTE gateway	--
Antenna Number	2	2
Air Interface	GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/FDD LTE/TDD LTE	--
Frequency Bands	AU: B1/B3/B5/B7/B8/B28, B40 EU: B1/B3/B7/B8/B20/B28/B31, B38/B40 US: B2/B4/B5/B13/B17/B25, B41 JP: B1/B3/B8/B9/B18/B19/B21/B28, B41 CN: B1/B3, B38/B39/B40/B41	--
4G		
3G	WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1/B2/B5/B6/B8/B9/B19 TD-SCDMA: B34/B39 CDMA (CDMA 1X/EVDO): R0/A BC0/BC1/BC10	--
2G	850/900/1800/1900 MHz	--
Operating Environment	-40 to +75 °C/5 to 95% RH	-40 to +75 °C/5 to 95% RH

**For more information about 4G frequency bands in different countries, please contact your Robustel sales representative.*