PROSCEND®

M300 / M300-G Industrial 4G LTE Cellular Router

Introduction

Proscend M300 series **4G/LTE Cellular Routers** are highly reliable and secure wireless communications gateway designed for industrial networking. It supports multi-band connectivity including FDD/TDD LTE, WCDMA and GSM for a wide range of applications and vertical machine-to-machine (M2M) markets. To enhance reliability, **M300** series are equipped with dual SIM that supports failover and roaming over to ensure uninterrupted connectivity for mission-critical cellular communications.

Providing 1 10/100 Base-TX LAN port and 1 10/100 Base-TX WAN port, **M300** series allow you to customize your professional applications in diverse environments. It also provides enterprise-grade software features, such as Quality of Service (QoS) for traffic prioritization, IPSec, OpenVPN, Firewall security and etc. The devices are administrated via web GUI, Telnet, SSH v2 and HTTP/HTTPS.

Built for secure and uninterrupted operation in harsh environments, **M300** series support extended operating temperature from -20 to +70°C and a flexible input voltage range of 10-32V DC. **Proscend M300** series are ideal cellular communications solutions for heavy industrial use.

CE FC EN50155 EN50121-4 EN61000-6-2 EN61000-6-4 HALT RoHS

Features

- Highly reliable and secure for mission-critical cellular communications
- Provide 1 10/100 Base-TX LAN port and 1 10/100 Base-TX WAN port
- Support multi-band connectivity with FDD LTE/ TDD LTE/ WCDMA/ GSM/ LTE Cat4
- Built-in dual SIM for network redundancy
- Equipped with GPS for quickly and easily tracking your devices
- Integrated dual detachable antenna against radio interference
- LED indicators for connection and data transmission status
- Industrial rated from -20 to +70°C for use in harsh environments
- Aluminum housing with IP40 industrial-grade protection
- IPv6/IPv4 dual stack and all applications are IPv6 ready
- Support various serial communication protocols for rich connectivity
- Enhance security and encryption for authentication and transmission

Specifications

Cellular Interface

- Standards: (Please see ordering information for optional band)
  - 4G : FDD LTE, TDD LTE
  - 3G : WCDMA
  - 2G : GSM/EDGE
- LTE Data Rate: Cat 4, 150Mbps (DL), 50Mbps (UL)

Processor & I/O Interface

- High performance 528 MHz CPU with 512 Mbytes of DDR3 memory
- 2 x SIM Card Slots
- 1 x LAN 10/100 Mbps Ethernet port
- 1 x WAN 10/100 Mbps Ethernet port
- Reset Button
- Console: 1 x RS232 (9-pin Sub-D)
- 2 x SMA connectors for detachable LTE antenna
- 1 x GPS detachable antenna (M300-G)
- 1 x RS485 (D+/D-)
- 1 x RS232 (TXD/RXD)
- 2 x DI, 1 x DO (Alarm +/-)

Physical Characteristics

- Enclosure：Aluminum Case
- Housing：IP40 Protection
- Dimensions (W x H x D)：60 x 110 x 106 mm
- Weight：451 g (0.9943 lb) (Model:M300)
  452 g (0.9965 lb) (Model:M300-G)
- Installation：DIN Rail (Default) or Wall Mount (Optional)

LED Display

- 1 x System status LED (Green)
- 1 x VPN status LED (Green)
- 1 x SIM1 status LED (Green)
- 1 x SIM2 status LED (Green)
- Ethernet status LEDs (Green for LINK/ACT, Yellow for SPEED)
- 2 x Mobile connection strength LEDs (Green)

Power Supply

- Power Consumption   7 Watts(Max)
- Power Input   10 ~ 32V DC

MTBF (mean time between failures)

- M300: 155,899 hrs   (MIL-HDBK-217-FN2)

Software

- **Network Protocols:**
  IPv4, IPv6, IPv4/IPv6 dual stack, DHCP server and client, PPPoE, Static IP, SNTP, GPS sync time, DNS Proxy, Modbus, VRRP, OSPF, Message Queue Telemetry Transport (MQTT Broker), BGP, Flow (Modbus master ↔ MQTT client)
- **Routing/Firewall:**
  NAT, Virtual Server, DMZ, MAC Filter, URL Filter, IP Filter, VLAN, Static Routing and RIP-1/2, IPS, Policy Route
- **VPN:**
  OpenVPN, IPSec (3DES, AES128, AES196, AES256, MD5, SHA-1, SHA256), GRE, PPTP, L2TP
- **Wireless Connectivity:**
  Two SIM for failover/ roaming over/ back up
  Two SIM data usage control
  Seamless multi WAN connections switch
- **Others:**
  DDNS, QoS, Virtual COM, UPnP, SMS Action, GPS Track Drawing, GPS TCP Push
- **Alarm:**
  DI, DO, SMS, VPN/WAN Disconnect, SNMP Trap, E-mail, TR069

Management Software

- Web GUI for remote and local management, CLI
- Dual Image firmware upgrade by Web GUI
- Syslog monitor
- SNMP, TR069
- FOTA (Firmware over the Air)
- Remote management via SSH v2, HTTPS
- Local management via Telnet, SSH v2, HTTP/HTTPS

Environment

- Operating Temperature   -20 ~ +70°C
- Storage Temperature   -40 ~ +85°C
- Ambient Relative Humidity   10 ~ 95% (non-condensing)
- Humidity   0 ~ 95% (non-condensing)

Standards and Certifications

- **EMC**：CE, FCC
- **EMI**：EN 55032 Class A, FCC Part 15 Subpart B Class A
- **EMS**：EN 55024 / EN 61000-4-2 (ESD) Level 3 / EN 61000-4-3 (RS) Level 3 / EN 61000-4-4 (EFT) Level 4 / EN 61000-4-5 (Surge) Level 3 / EN 61000-4-6 (CS) Level 3 / EN 61000-4-8 (PFMF) Level 4 / EN 61000-4-11 / EN 61000-6-2 (Industrial) / EN 61000-6-4 (Industrial)
- **Rail Traffic**：EN50155, EN50121-4
- **Vibration**：IEC60068-2-6
- **Safety :** EN60950-1
- **Highly Accelerated Life Test (HALT)**

Dimensions (M300-G Model)

Left Side View | Front View | Right Side View | Rear View | Top & Bottom View
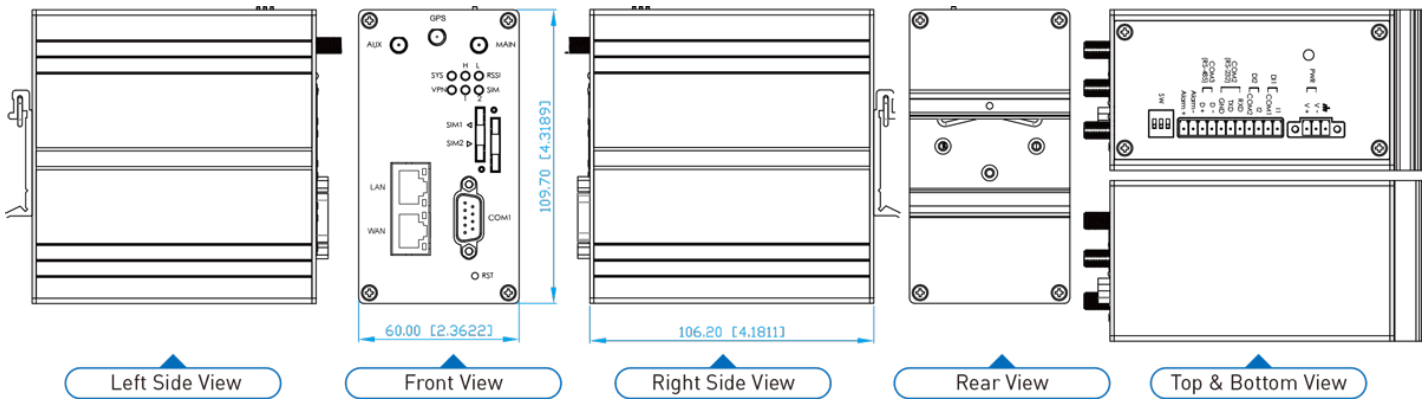
Ordering Information

Model Name	Description
M300	Industrial 4G LTE Cellular Router (1 x WAN, 1 x LAN, 2 x RS232, 1 x RS485, 2 x DI, 1 x DO, 2 x SIM Card Slots, -20 ~ +70°C)
M300-G	Industrial 4G LTE Cellular Router (1 x WAN, 1 x LAN, 2 x RS232, 1 x RS485, DI/DO, 2 x SIM Card Slots, -20 ~ +70°C, 1 x GPS)

Options of Bands/Frequencies (MHz)

Option	4G		3G	2G	Region
	FDD LTE	TDD LTE	WCDMA	GSM / EDGE	
E	B1(2100), B3(1800), B5(850), B7(2600), B8(900), B20(800)	B38(2600), B40(2300), B41(2500)	B1(2100), B5(850), B8(900)	B3(1800), B8(900)	Europe Africa Middle East Korea Thailand India
A	B2(1900), B4(1700), B12(700)		B2(1900), B4(1700), B5(850)		North America
AU	B1(2100), B2(1900), B3(1800), B4(1700), B5(850), B7(2600), B8(900), B28(700)	B40(2300)	B1(2100), B2(1900), B5(850), B8(900)	B2(1900), B3(1800), B5(850), B8(900)	Australia New Zealand South Africa Taiwan
J	B1(2100), B3(1800), B8(900), B18(850), B19(850), B26(850)	B41(2500)	B1(2100), B6(850), B8(900), B19(850)		Japan

* Features and specifications are subject to change without prior notice.