

# M300 Series Cellular Modem Datasheet



## >>| Product Introduction

The M300 series Cellular Modem is a complete wireless USB data modem providing global cellular network connectivity, where cellular signal available, with 4G/3G/2G fallback capabilities for ensured access to the internet anywhere.

The M300 is an easy to install productivity tool designed to provide maximum accessibility to the mobile professional allowing quick access to the internet for real-time business transactions, email, web browsing and more.

E-Lins' mobile data products are widely used in more than twenty industrial fields, such as power control, water schedule, traffic, oil field, weather forecast, environmental protection, street lamp control, post, bank and many other areas.

## >>| Hot Spot

Built-in 2G/3G/4G industrial cellular modules, insert SIM/UIM card to work directly;

Built-in SIM/UIM card slot;

Broadband M2M communications

SIM failover/standby APN

3G/4G failover for fixed line broadband connections

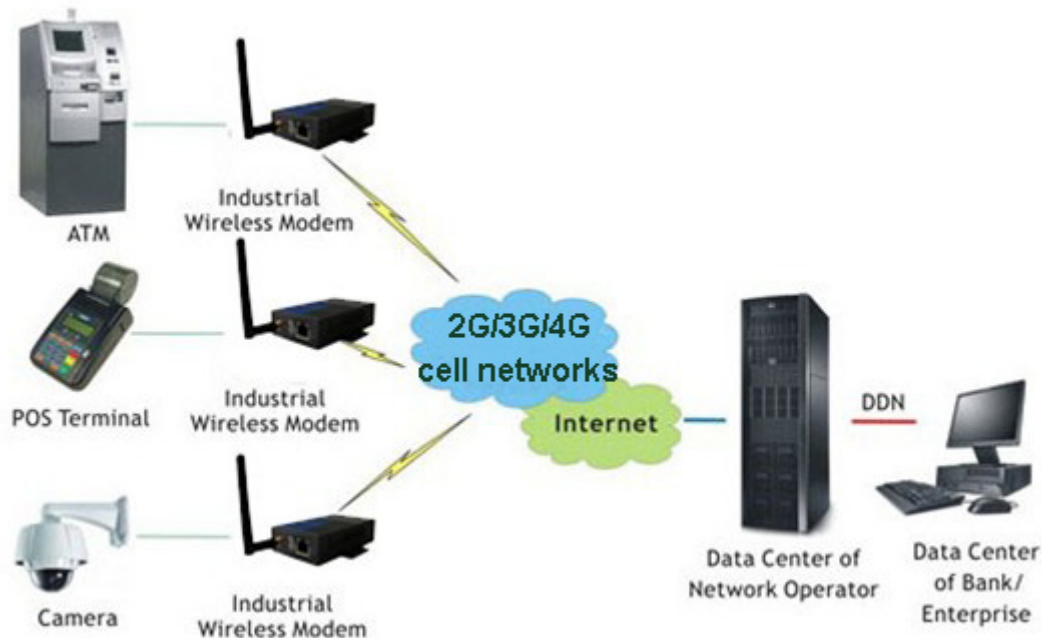
Rapid service deployment applications

Support At command

USB port

GPS support (option)

## >>| Typical Diagram



## >>| Industrial Application

- Remote Data Monitor and Control
- CCTV, security surveillance
- Water, gas and oil flow metering and schedule
- AMR (automatic meter reading)
- Power station monitoring and control
- Remote POS (point of sale) terminals, ATM,
- Traffic signals monitor and control, Traffic info guidance
- Oil field, weather forecast, environmental protection, street lamp monitoring and control
- Early Warning of Mountain Torrent
- Fleet management
- Power distribution network supervision
- Central heating system supervision
- Weather station data transmission
- Hydrologic data acquisition
- Vending machine
- Telemetry, SCADA
- Vehicle logistics and diagnostics controlling

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- Parking meter and Taxi Monitor
- Telecom equipment supervision (Mobile base station, microwave or optical relay station)

## >>| Features

- Auto install software
- Easy connection, directly to the PC or laptop by using a provided extension cable
- High speed with 4G LTE 100Mbps and back compatible to DC-HSPA+ data (up to 42Mbps downlink and 5.76Mbps uplink) and backward compatible with EDGE/ GPRS/ GSM data connectivity (up to 216~384 Kbps)
- Visual feedback on connection status with the LED and the easy connection software, including signal strength indication
- Industrial design with intelligent software capabilities, making it a reliable cellular solution for data collection and transmission
- Plug-and-play design with easy-to-use software interface for easy integration
- Easily manage and control distributed remote devices over the air
- Built-in Watch Dog
- Always-On-Line
- Easy-to-use
- Industrial design with surge protection
- Local and remote configuration over the air
- No need to build expensive fixed line network, saving cost substantially
- EASY TO INSTALL AND USE

The M300 series Cellular Modem sets up in minutes, making it easy to use while on-the-go.

Set up a wireless network with The M300 series Cellular Modem and provide your users with a secure, high-speed connection to the Internet virtually anywhere within a wireless broadband network.

## >>| Specification

Wireless	
<b>Mobile Networks</b>	UMTS WCDMA (HSUPA/HSDPA/HSPA/HSPA+/DC-HSPA+) GSM EDGE/GPRS CDMA1x CDMA2000 EVDO Rev 0/Rev A/Rev B TD-SCDMA(TD-HSDPA/TD-HSUPA)

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	4G LTE (FDD/TDD)
<b>Cellular Frequency</b>	<p>UMTS/HSPA/HSUPA/HSPA/HSPA+/DC-HSPA+ (WCDMA/FDD) 850/1900/2100 MHz or 850/900/1900/2100Mhz/AWS optional Quad-band EGSM 850/900/1800/1900Mhz CDMA1x/EVDO: 800/1900Mhz or 450Mhz optional</p> <p>4G FDD LTE: Band 1--2100Mhz Band 2--1900Mhz Band 3--1800Mhz Band 4—AWS(1700/2100Mhz) Band 5--850Mhz Band 7--2600MHz Band 8--900Mhz Band 12--700Mhz Band 13--700(B13)Mhz Band 17--700(B17)/AWS Band 19—800Mhz Band 20--DD800Mhz Band 21 Band 25 –1900Mhz G Block Band 31– 450Mhz Other FDD band(some bands are not listed)...</p> <p>4G TDD LTE (TD-LTE): Band 41 –2500/2600Mhz Band 40 -- 2300Mhz Band 39 – 1900Mhz Band 38 -- 2600Mhz Other TDD band(some bands are not listed)...</p> <p>3G TD-SCDMA: 2010~2025MHz/1880~1920MHz</p> <p>Notes: There are many different band and frequency for 4G LTE. Please confirm the detailed band and frequency with your carriers before order.</p>
<b>Data</b>	
<b>Bandwidth</b>	<p>4G LTE FDD LTE: 100Mbps or 150Mbps or 300Mbps downlink, 50Mbps uplink;</p>

	<p>TDD LTE: 150Mbps downlink, 50Mbps uplink;</p> <p>DC-HSPA+: Downlink 42Mbps, Uplink 5.76Mbps;                  HSPA+(H): Downlink 21Mbps, Uplink 5.76Mbps;                  HSPA+(L): Downlink 14.4Mbps, Uplink 5.76Mbps;                  HSUPA: Downlink 7.2Mbps, Uplink 5.76Mbps;                  HSDPA: Downlink 7.2 Mbps, Uplink 384k bps;                  WCDMA/UMTS: Downlink/Uplink 384 kbps;</p> <p>EDGE: Downlink 236,8 kbps, Uplink 118 kbps;                  GPRS: Downlink 85.6 kbps, Uplink 42.8 kbps;</p> <p>CDMA1x: Downlink/Uplink 153.6kbps;                  CDMA EVDO:                  Rev B: 14.7Mbps downlink, 5.4Mbps uplink                  Rev A: 3.1Mbps downlink, 2.4Mbps uplink                  Rev O: 2.4Mbps downlink, 153.6kbps uplink</p> <p>3G TD-SCDMA: 2.8Mbps</p> <p>Notes: the bandwidth is peak value. Real value depends on carrier network support.</p>
<b>Interface</b>	
<b>Antenna</b>	50Ω SMA female interface *3, external detachable; Antenna for Main Cell, MIMO Cell, GPS
<b>Led</b>	Power indicator Data indicator
<b>UIM/SIM</b>	1.8V/3V
<b>USB</b>	USB 2.0 female
<b>Power</b>	
<b>Power supply</b>	DC5V-40V, option is DC5V-50V / DC5V-60V, typical DC9V1A or 12V1A or 12V2A
<b>Power consumption</b>	Peak: 700mA@+9VDC Average: 85mA@+9VDC Idle: 30mA@+9VDC

<b>Software</b>	
<b>OS</b>	Windows; Mac OS; Linux; Other OS with USB port;
<b>At command</b>	Support at command; Packed with GUI software
<b>Physical</b>	
<b>Operating Temperature</b>	Work temperature: -30°C to 70°C option for -30°C to 80°C Storage temperature: -40°C to 85°C
<b>Humidity</b>	95% Maximum (Non-condensing)
<b>Dimensions</b>	Item (L x B x H): 87mm*50mm*23mm Packaging (L x B x H): 102*70*23mm PCBA: 84mm*48mm*20mm
<b>Weight</b>	150g (not including accessories and package)
<b>Electromagnetic compatibility</b>	anlistatig test: Class 3 Radio electromagnetism test: Class 3
<b>Others</b>	
<b>Warranty</b>	1 Year, can extend up to 5 years
<b>Package Contents</b>	The M300 Series Modem USB cable Power Adapter Antenna CD-ROM with Product Documentation

## >>| M300 series model and types

M300 x - - - XXX (option)

**G:** GPS

**50V:** DC input 5~50V support, default is 5~40V

**t:** 4G LTE version. Support FDD LTE or TDD LTE or FDD+TDD LTE, back compatible to 3G and 2G

**w:** 3G WCDMA HSPA version, support HSUPA/HSDPA/UMTS/EDGE/GPRS/GSM

**p:** 3G WCDMA HSPA+ version, support HSPA+/HSUPA/HSDPA/UMTS/EDGE/GPRS/GSM

**eva:** 3G CDMA2000 EVDO version, support EVDO RevA/EVDO Rev0/CDMA1x

**evb:** 3G CDMA2000 EVDO version, support EVDO RevB/EVDO RevA/EVDO Rev0/CDMA1x

**td:** 3G TD-SCDMA version, support TD-HSUPA/TD-HSDPA/TD-SCDMA/EDGE/GPRS/GSM

**Notes:**

- 1) option feature can be select one or all
- 2) for LTE version, please confirm your LTE band and Network Carrier with order to avoid wrong selection

Notes:

We name M300d HSDPA version and M300u HSUPA version both as M300w version.

## >>| Accessories

- The M300 Series Modem
- USB cable
- Power Adapter
- Antenna
- CD-ROM with Product Documentation



DB15 to DB9 Cable

DB9 serial cable

RJ45 to DB9 Cable

USB Cable



EU Power Supplier

US Power Supplier

AU Power Supplier

Desktop Power Supplier

UK Power Supplier

EU, US, AU, UK for choice



Metal Magnetic-Mount W/ Cable

Rubber antenna

Rubber Magnetic-Mount W/ Cable

CD-Rom with Manual/Data

**Notes:**

- 1) We packed the units with free accessories; default packed depends on stock and the device's feature requirement. If you need specify the type, please inform us when you order.
- 2) Different places have different band and frequency. Signal quality affects the data speed. The antenna in the packages is free default. It's a world-wide use type. Our free antenna may not get good signal or good speed in your area. Please get the dedicated antenna for your area yourself to get the best signal and data speed.
- 3) E-Lins has high gain antenna for option.