

M500 Series RS232 3G Cellular Modem Datasheet



>>| Product Introduction

The M500 series Cellular Modem is a complete wireless data modem with RS232 port providing global cellular network connectivity, where 3G signal available, with EDGE and GSM/GPRS fallback capability for ensured access to the internet anywhere.

The M500 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.

The M500 enables internet connection speeds of up to 14.4 Mbps download and 5.76Mbps upload over HSPA, when HSPA service is not available. It automatically selects EDGE and GPRS continue to work.

E-Lins' mobile data products are widely used in more than 50 countries and regions, and 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

RS232 port

Broadband M2M communications

SIM failover/standby APN

3G failover for fixed line broadband connections

Rapid service deployment applications

>>| Brief

Broadband M2M Communications

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The product line provides a cost-effective broadband Machine-to-Machine (M2M) solution and supports the following radio access technologies: HSDPA, HSUPA UMTS, EDGE, GPRS, GSM, and EVDO, CDMA1x.

The compact and rugged structure makes it a suitable product for deployments in M2M applications such as CCTV, ATM, telemetry, SCADA, retail (POS), digital signage, and intelligent traffic systems.

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

>>| Features

■ Basic

- Auto install software
- Easy connection, directly to the PC or laptop by using a provided extension cable
- High speed with HSPA data (up to 14.1Mbps 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
- Compatible with nearly all modern desktop and laptop PC's equipped with Microsoft OS (2000, XP, XP Pro and Vista)
- 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
- Real-time Clock (RTC)
- Remote Data Monitor and Control
- Reliable GSM/GPRS/EDGE/UMTS/HSPA network connectivity, providing fast and cost-effective long-range wireless communication
- 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 M500 series Cellular Modem sets up in minutes, making it easy to use while on-the-go. Set up a wireless network with The M500 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	
Mobile Networks	<ul style="list-style-type: none"> • UMTS WCDMA (HSUPA/HSDPA) • GSM EDGE • GSM GPRS • CDMA1x • CDMA EVDO Rev 0 and Rev A
Cellular Frequency	<ul style="list-style-type: none"> • UMTS/HSPA/HSUPA (WCDMA/FDD) 850/1900/2100 MHz or 850/900/1900/2100Mhz • Quad-band EGSM 850/900/1800/1900Mhz • CDMA1x/EVDO: 800/1900Mhz or 450Mhz optional
Data	
Bandwidth	<ul style="list-style-type: none"> • HSUPA Downlink 14.4 Mbps Uplink 5.7Mbps • HSDPA Downlink 7.2 Mbps Uplink 384k bps • WCDMA/UMTS Downlink/Uplink 384 kbps • EDGE Downlink 236,8 kbps Uplink 118 kbps • GPRS Downlink 85.6 kbps Uplink 42.8 kbps • CDMA1x Downlink/Uplink 153.6kbps • CDMA EVDO Rev A: 3.1Mbps downlink, 2.4Mbps uplink Rev O: 2.4Mbps downlink, 153.6kbps uplink
Interface	

Antenna	50Ω SMA female interface
Serial port	DB9 (RS232/RS485 optional)
Led	Power indicator Data indicator
UIM/SIM	1.8V/3V
USB	optional
Power	
Power supply	DC5V-25V , typical DC5V1A
Power consumption	Peak: 1.5A@+5VDC Average: 150mA@+5VDC Idle: 30mA@+5VDC
Software	
OS	Windows 7, Vista, XP, 2000 Mac OS Linux
Physical	
Operating Temperature	Work temperature: -30°C to 80°C Storage temperature: -40°C to 90°C
Humidity	95% Maximum (Non-condensing)
Dimensions	Item (L x B x H): 72mm x 55mm x 23mm Packaging (L x B x H): 260mm x 190mm x 65mm (10.3" x 7.5" x 2.6")
Weight	Item: 400g Packaging: 1.6 lbs
Electromagnetic compatibility	anlistatig test: Class 3 Radio electromagnetism test: Class 3
Others	
Warranty	1 Year

Package Contents	<ul style="list-style-type: none"> • The M500 Series Modem • USB cable • DC 9V1A Power Adapter • Antenna • CD-ROM with Product Documentation
Model	
M500e	EDGE Modem, RS232 port, USB port optional, back compatible to GPRS/GSM networks
M500d	HSDPA Modem, RS232 port, USB port optional, back compatible to EDGE/GPRS/GSM networks
M500u	HSUPA Modem, RS232 port, USB port optional, back compatible to HSDPA/EDGE/GPRS/GSM networks
M500ev	EVDO Modem, RS232 port, USB port optional, back compatible to CDMA1x networks

