

M300 4G Modem Datasheet



>>| Product Introduction



The M300 series Cellular Modem is a compact, ruggedized industrial wireless USB modem providing global wireless cellular network connectivity, where cellular signal available, with 4G/3G/2G fallback capabilities for ensured access to the internet and private networks anywhere for wireless M2M and IoT.

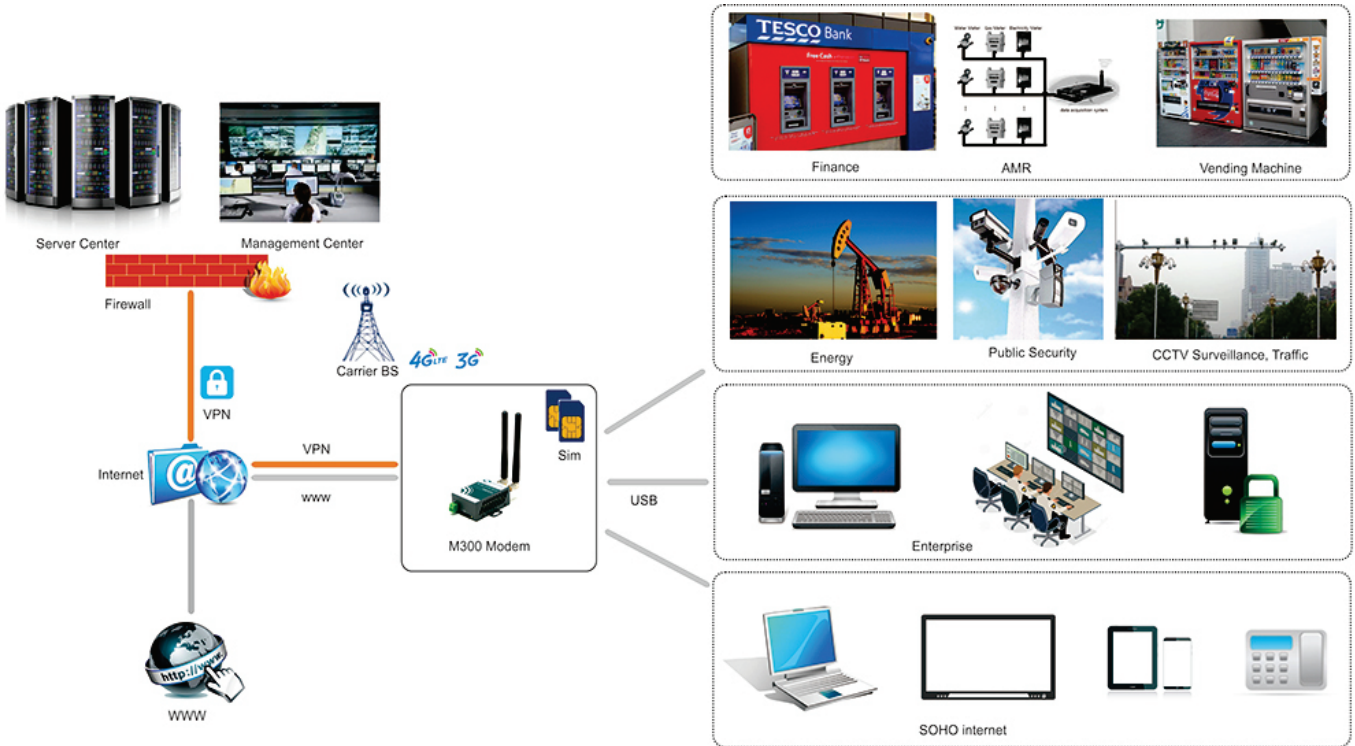
In addition to the robustness, reliability, security, friendly-using, the M300 is competent to be engineered to protect against extreme temperatures, humidity, shocks, vibrations, dust, reverse polarity, and transient voltage, which is widely used in more than twenty industrial fields, such as CCTV security surveillance, AMR, vehicle, retails, vending machines, power control, water schedule, traffic, oil field, weather forecast, environmental protection, street lamp control, post, bank and many other fields.

>>| Hot Spot

- 1) Built-in 2G/3G/4G industrial cellular module with sim card slot, insert SIM/UIM card to work directly
- 2) Wide range DC input 5-40V, option 5-60V
- 3) SIM failover/standby APN
- 4) 2G/3G/4G failover for fixed line broadband connections
- 5) External antenna connectors for high gain antennas replacement
- 6) Support At command

- 7) High speed USB port, ESD protection
- 8) MIMO supported
- 9) Robust Metal Case and anti-lightning protection. Provide IP30 protection
- 10) Dual power input for failover
- 11) GPS/GNSS option
- 12) Desktop, Wall-mount and Din-rail mount of installation

>>| Typical Application Diagram



>>| Specification

Wireless	
Mobile Networks	4G LTE (FDD/TDD); 3G UMTS WCDMA (HSUPA/HSDPA/HSPA/HSPA+/DC-HSPA+) 2G GSM EDGE/GPRS CDMA1x CDMA2000 EVDO Rev 0/Rev A/Rev B TD-SCDMA(TD-HSDPA/TD-HSUPA)

Cellular Frequency	<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 9 – 1700Mhz Band 12 – 700Mhz Band 13 – 700Mhz Band 14 – 700Mhz Band 17 – 700Mhz Band 18 – 850Mhz Band 19 – 800Mhz Band 20 – 800Mhz Band 21 – 1500Mhz Band 25 – 1900Mhz G Block Band 26 – 850Mhz Band 28 – 700Mhz Band 29 – 700Mhz (SDL) Band 30 – 2300Mhz Band 31 – 450Mhz Band 32 – 1500Mhz (SDL) Band 66 – 1700Mhz Band 72 – 450Mhz And other more FDD band...</p>
	<p>4G TDD LTE (TD-LTE): Band 48 – 3600Mhz (CBRS) Band 46 – 5200Mhz Band 43 – 3700Mhz Band 42 – 3500Mhz (CBRS) Band 41 – 2500/2600Mhz Band 40 – 2300Mhz Band 39 – 1900Mhz Band 38 – 2600Mhz And other more TDD band...</p>
	<p>UMTS/HSPA/HSUPA/HSPA/HSPA+/DC-HSPA+ (WCDMA/FDD): 2100MHz(B1)/1900MHz (B2)/1800MHz (B3)/ 1700MHz /AWS (B4)/850MHz (B5)/900MHz (B8)/800MHz</p>

	<p>(B6)/1800MHz (B9)/850MHz (B19)</p> <p>Quad-band EGSM 850/900/1800/1900Mhz;</p> <p>CDMA1x/EVDO: 800/1900Mhz, option for 450Mhz;</p> <p>3G TD-SCDMA: 2010~2025MHz/1880~1920MHz</p> <p>Notes: There are many different band and frequencies. Please confirm the detailed band and frequency with your carriers before order.</p>
<p>Data</p>	
<p>Bandwidth</p>	<p>4G LTE FDD LTE: downlink 100Mbps / 150Mbps / 300Mbps / 600Mbps / 1200Mbps; uplink 50Mbps / 150Mbps / 300Mbps / 600Mbps; 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>
<p>Interface</p>	

Antenna	50Ω SMA female interface *3, external detachable; Antenna for Main Cell, MIMO Cell, GPS
Led	Power indicator Data indicator
UIM/SIM	1.8V/3V
USB	USB 2.0 female
Power	
Power supply	DC5V-40V, option DC5V-60V, typical DC9V1A or 12V1A or 12V2A; Dual Power Inputs / Power Failover; Two types of input jack for DC 2.5mm DC jack * 1 Terminal Block * 1
Power consumption	Peak: 700mA@+9VDC Average: 85mA@+9VDC Idle: 30mA@+9VDC
Software	
Minimum System Requirements	Windows, Linux, Mac OS, IOS, Symbian, Android, other OS support USB port;
At command	Support at command; Packed with GUI software
GPS/GNSS (Option)	GPS, GNSS, Beidou
Physical	
Operating Temperature	Work temperature: -35°C to 75°C Storage temperature: -40°C to 85°C
Humidity	95% Maximum (Non-condensing)
Dimensions	Item (L x B x H): 87mm*50mm*23mm Packaging (L x B x H): 102*70*23mm PCBA: 84mm*48mm*20mm
Weight	150g (not including accessories and package)
Electromagnetic	anlistatig test: Class 3

compatibility	Radio electromagnetism test: Class 3
Others	
Warranty	1 Year, can extend up to 5 years
Package Contents	The M300 Wireless 4G Modem USB cable Power Adapter Antenna Other accessories depends on option features

>>| Order Part Number

M300 Series Modem Order Models								
Part Number	4G LTE	3G	2G	USB	5-60VDC	GPS	Market	Marks
M300t-F1	Y	Y	Y	Y	O	O	Asia, Europe, South America, Africa	CAT3 or CAT4 or CAT6
M300t-F4	Y	Y	Y	Y	O	O	North America	CAT3 or CAT4 or CAT6
M300t-F5	Y	Y	Y	Y	O	O	Japan	CAT3 or CAT4 or CAT6
M300t-TF1	Y	Y	Y	Y	O	O	customized for some operators	CAT4
M300t-TF2	Y	Y	Y	Y	O	O	customized for some operators	CAT4
M300t450-F1	Y			Y	O		customized for some operators	CAT3 or CAT4, 450Mhz
M300p		Y	Y	Y	O	O	Global	
M300ev450-2		Y		Y	O		customized for some operators	450Mhz

Y = supported
O = option

M300x --- XXX (option features)

G: GPS / GNSS

60V: DC input 5-60V supported, 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

e: 2G EDGE version, support EDGE/GPRS/GSM

g: 2G GPRS version, support GPRS/GSM

c: 2G CDMA version, support CDMA1x

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