



Size: 225×176×67 mm

Weight: < 2 kg

M300 Plus GNSS Receiver

POWERFUL PERFORMANCE

The M300 Plus GNSS Receiver uses ComNav Technology new generation GNSS engine, which makes it possible to keep track of more signals from all running satellite constellations. By using the powerful adaptive detecting and canceling technology, the M300 Plus GNSS receiver can further enhance anti-jamming capability to provide reliable GNSS data which is very critical for a reference station.

RELIABLE DATA TRANSMITTING

In addition to its standard Ethernet port used for data transmitting, the M300 Plus GNSS Receiver also fully implements one 4G module as a backup for Ethernet, which can enhance the stability of the internet connections. Furthermore, the abundant interfaces of M300 Plus make it possible to connect easily with external devices, such as external radios, meteorological instruments etc.

POWERFUL REMOTE CONTROL

The powerful built-in Webserver of M300 Plus provides a full remote control of receiver configuration, status checking, firmware update, data download and user management. The M300 Pro supports five independent data transfer through TCP protocol in RTCM, ComNav binary, NMEA, and BINEX data formats, combined with Email Alert and FTP push, which truly improves the effectivity and profitability of your business.

Features

Working with all running constellations

Optimized narrow band technologies targeting higher data quality

Compact and rugged housing with flexible interfaces for external devices

Integrated Ethernet and 4G modem guarantees the stability of internet communications

Easy to remote configure by built-in web server

SinoGNSS[®]
By ComNav Technology Ltd.

Signal Tracking

Channels	574
GPS	L1 C/A, L1P, L2C, L2P, L5
BeiDou	B1, B2, B3
BeiDou Global Signal:	B1C, B2a
GLONASS	L1 C/A, L1P, L2 C/A, L2P
Galileo	E1, E5a, E5b
QZSS	Reserved
SBAS	WAAS, EGNOS, MSAS, GAGAN

Advanced interference mitigation technology

Low noise carrier phase measurements with <1 mm precision in a 1 Hz bandwidth

High precision multiple correlators for GNSS pseudo range measurements

Signal Noise Ratios reported in dB-Hz

Time Precision

GPS+GLONASS+BeiDou 20 ns

Positioning Specifications

Post Processing Static	Horizontal: 2 mm + 0.5 ppm RMS Vertical: 4 mm + 0.5 ppm RMS
Single Baseline RTK (<30 KM)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS
Network RTK	Horizontal: 8 mm+0.5 ppm RMS Vertical: 15 mm+ 0.5 ppm RMS
DGPS	0.4 m 3D RMS
SBAS	1 m 3D RMS
Standalone	1.5 m 3D RMS

Data Format

Correction data I/O	RTCM 2.X, 3.X, RTCM3.2 MSM4, CMR (GPS only), CMR+(GPS only)
Positioning data outputs	ASCII: NMEA-0183: GSV, RMC, HDT, VHD, GGA, GSA, ZDA, VTG, GST, PTNL, PJK Extended NMEA-0183: BDGGA, GPNTR, GPCDT, GPHPR
Observations	ComNav binary, BINEX, RTCM3.X, compatible with major CORS software (VRS, FKP and iMax)

Environmental

Operating temperature	-40 °C to +80 °C
Storage temperature	-45 °C to +85 °C
Humidity	100% no condensation
Waterproof and dustproof	IP67
Shock	rugged aluminum case with rubber ring seal, designed to survive a 1m drop onto concrete

Communications

3 Lemo Ports	One 2-pin Lemo port for power supply and battery charging One 7-pin Lemo port (USB UART port) for system debugging and static data downloading One 7-pin Lemo port (RS485 Protocol) for meteorological sensor /barograph /inclinometer connection
1 DB9 male port	Standard RS232 protocol
1 Standard USB port	Connect with external storage card
1 RJ45 LAN Ethernet port (10/100M Bit)	Supports protocols HTTP, TCP/IP, FTP, NTRIP
5 SMA male connectors	PPS output Event input Reserve for WLAN Frequency-marker oscillator input connector GPRS antenna connector
1 TNC connectors	GNSS Antenna connector
4G modem	LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B8 GSM: B3/B8

Data Logging

Loop recording function supports long-term recording	
Support three simultaneously raw data recording	
Maximum 20Hz data logging rate	
Storage capacity	32 GB internal memory Maximum 1TB external memory
File format	RINEX 3.X, 2.X or ComNav binary format
File log session	5/10/15/20/30 min or 1/2/4/24hour
Data retrieval and transfer	FTP and USB

Physical

Size (L x W x H)	225×176×67 mm
Weight	< 2 kg
Housing	Rugged aluminum housing

Electrical

Power consumption	< 5 W
External power input	7-36 VDC, with overvoltage protection

Recommend Antenna

AT340 Geodetic GNSS Antenna
AT600 Choke Ring GNSS Antenna
AT500 Choke Ring GNSS Antenna

User Interface

4 LEDs in Front Panel
ComNav M300 Plus Web Server
CRU software