M300 Pro GNSS Receiver

M Series GNSS Receiver | Ver.2020.11.30

Size: 202 mm × 163 mm × 75 mm
Weight: 2.4Kg

Features

- Support GPS, GLONASS, BeiDou, BeiDou Global, Galileo, QZSS and SBAS
- Compact Housing with Flexible Interfaces for External Devices
- User-friendly Front Panel Display and Configuration
- Full Remote Control with Powerful Built-in Web Server
- Large Capacity Internal Memory and Expandable Memory
- Integrated Battery Serves as Primary Power or an UPS Backup
- Built-in 4G/Ethernet Data Transmission

M300 Pro
GNSS Receiver

ALL GNSS CONSTELLATIONS TRACKED

The M300 Pro is able to track all existing and future GNSS constellations including GPS, GLONASS, Beidou, Galileo and QZSS. There is no doubt that the M300 Pro is always keeping pace with GNSS development, which provides a robust and future-proof GNSS solution for CORS.

PROVEN DESIGNED

The M300 Pro is designed as a multi-purpose GNSS receiver for a wide range of high-accuracy positioning applications. The user-friendly front panel makes it easier to configure and check receiver's status. Customers also benefit from its flexible interfaces that support Ethernet, serial and USB connections, allowing users to combine with external sensors to meet the unique application demand.

IDEAL FOR REFERENCE STATION

The integrated lithium-ion battery works as a primary power or an Uninterrupted Power Supply (UPS) backup, combined with raw data loop recording function, M300 Pro can achieve continuous long-term recording. These proven designs make M300 Pro an optimal choice for the reference station, deformation monitoring, harbor construction and any applications where positioning accuracy and reliability matter the most.

POWERFUL REMOTE CONTROL

The powerful built-in WebServer 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.

SinoGNSS®
By ComNav Technology Ltd.

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Signal Tracking

574 channels for simultaneously tracking	
GPS	L1 C/A, L1P, L2C, L2P, L5
BeiDou	B1, B2, B3
BeiDou Global	B1C, B2a
GLONASS	L1 C/A, L1P, L2 C/A, L2P
Galileo	E1, E5a, E5b
QZSS	Reserved
SBAS	WAAS, EGNOS, MSAS, GAGAN
Advanced multipath mitigation technology	
Low noise carrier phase measurements with <1 mm precision in a 1 Hz bandwidth	
High precision multiple correlators for GNSS pseudorange measurements	
Signal Noise Ratios reported in dB-Hz	

Time Precision

GPS+Glonass+Beidou 20 ns

Positioning Specifications

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

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	- 1 PPS output - 1 Event input - 1 Reserved for WLAN and Bluetooth - 1 Frequency-marker oscillator input connector - 1 GPRS antenna connector
1 TNC connector	GNSS Antenna connector
4G modem	- LTE-FDD: B1/B3/B5/B8 - LTE-TDD: B34/B38/B39/B40/B41 - WCDMA: B1/B8 - GSM: B3/B8

Physical

Size(L × W × H)	202 mm × 163 mm × 75 mm
Weight	2.4 kg
Housing	Rugged aluminum housing

Data Format

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

Data logging

Loop recording function supports long-term recording	
Support five simultaneously raw data recording	
Maximum 20 Hz data logging rate	
Storage capacity	32 GB internal memory Maximum 1TB external memory
File format	5/10/15/20/30 min and 1/2/4/24 hour
Data retrieval and transfer	FTP and USB

Environmental

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

Electrical

Power consumption	3.5 W
External power input	9.5-28 VDC, with over-voltage protection
ntegrated internal battery 7.4 V, 8800 mAh, Li-ion; 16-hour continuously working	

Recommend Antenna

AT340 GNSS Geodetic Antenna

AT600 GNSS Choke Ring Antenna

AT500 GNSS Choke Ring Antenna

User Interface

Front Panel Display	4 arrow keys and data entry Power button, Reset button and Esc button LCD display showing receiver's status
ComNav M300 Pro Web Server	
CRU software	

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