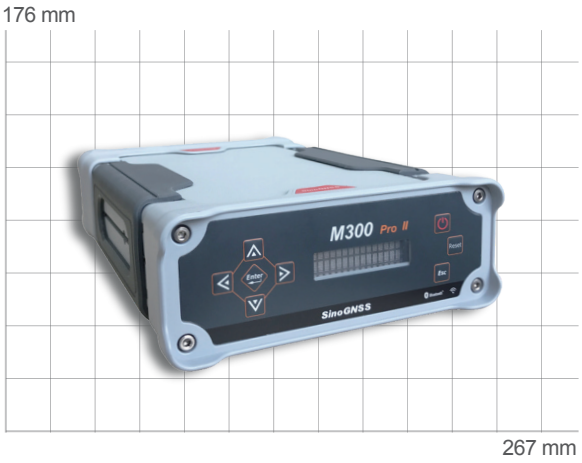
M300 Pro II GNSS Receiver

M Series GNSS Receiver

Ver.2020.11.16



Size: 267 mm × 176 mm × 67 mm
Weight: 2.83 kg

M300 Pro II
GNSS Receiver

Professional GNSS Receiver for Telecom Providers

With optical fiber interface, M300 pro II supports up to ±75 volts power input, so it is accessible to global telecom providers. M300 Pro II supports both IPV4 and IPV6, which means telecom providers have no need to replace other hardware in the event of increased demands.

Reliable and Robust in Positioning and Navigation

M300 Pro II is enhanced in providing reliable positioning data. It tracks 574 channels of all current and future satellites, including GPS, GLONASS, Beidou, Beidou global, Galileo, SBAS and L-Band. Adopted the optimized narrow band technology to withstand interference, M300 Pro II ensures higher data quality even near the Telecom tower.

Faster and Safer Data Transmission

Security and speed are important issues in telecommunications. All operations of M300 Pro II can be remotely controlled via network management protocols, including configuration, firmware update, data download, which brings security and convenience to telecom providers. The built-in TF-card in M300 pro II has password protection that guarantees the security of data transmission.

Promising and Helpful in Future Infrastructure Construction

With M300 pro II, telecom providers will build a vast spatial network, on which unmanned driving, intelligent parking and IoT will be soon realized. The combination of GNSS technology and communication technology not only promoted global applications and international services of BDS/GNSS worldwide, but also revolutionized industries such as commercial drone operations, autonomous vehicles and transportation, logistics, construction, agriculture and others.

Features

- Optical fiber interface for configuration
- Support plus or minus 75 volts input power
- Built-in TF-card with password protection
- Powerful remote control with network management protocols
- Support IPV4, IPV6 protocols
- IP67 waterproof and dustproof level for harsh environments
- User-friendly front panel display
- Integrated battery serves as primary power and an UPS backup

SinoGNSS®
By ComNav Technology Ltd.

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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
L-Band	Optional
SBAS	WAAS, EGNOS, MSAS, GAGAN

Advanced interference mitigation technology

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

High precision multiple correlators for GNSS pseudo range

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 m+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

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 Optical fiber interface	Support IPV4, IPV6
5 SMA male connectors	PPS output Event input Reserve for WLAN Frequency-marker oscillator input connector GPRS antenna connector
1TNC 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 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, RTCM, RINEX3.X, compatible with major CORS software (VRS, FKP and iMax)

Data Logging

Loop recording function supporting long-term recording

Support five 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 × W × H)	267×176×67mm
Weight	2.83 kg
Housing	Rugged aluminum housing

Environmental

Operating temperature	-40 °C to + 65 °C
Storage temperature	-45 °C to + 85 °C
Humidity	95% no condensation
Waterproof and dustproof	IP67
Shock	Rugged aluminum case with rubber ring

Electrical

Power consumption	< 5 W
External power input	±18 - ±75VDC, with overvoltage protection
Integrated internal battery	7.4 V, 8800 mAh, Li-ion; more than 16-hour continuously working

Recommend Antenna

AT340 Geodetic GNSS Antenna

AT500 Choke Ring GNSS Antenna

AT600 Choke Ring GNSS 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 Technology M300 Pro II Web Server

SinoGNSS CRU software

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