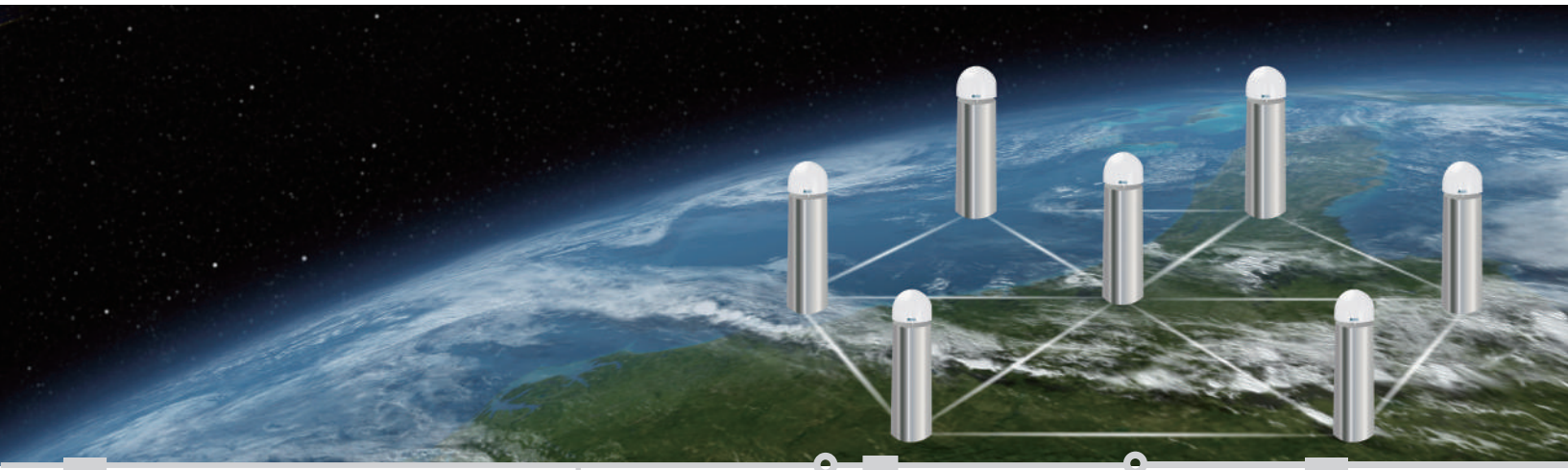
SinoGNSS®
By ComNav Technology Ltd.

M300 Pro GNSS Receiver



Features

- *256 channels and unmatched GPS / BeiDou / GLONASS multi-constellation tracking performance while already designed to track GALILEO*
- *Compact housing with a variety of interfaces for different external devices access*
- *Powerful remote control capacity for access, configuration, programming, data download, reboot/restart, firmware update, code registration and much more.*
- *Large capacity internal memory and expendable memory card for long term big data storage*
- *Integrated battery serves as either the primary power source or the stand-by Uninterrupted Power Supply (UPS) backup*
- *Powerful built-in web user interfaces provide full information such as receiver status, configuration, firmware update and data access control*

Designed to Challenge Your Needs

The M300 Pro is designed as a multi-purpose GNSS receiver for a wide range of applications. With its powerful integration ability, the M300 Pro serves as a key part of positioning infrastructure, active geodetic network, deformation monitoring system, machine guidance, harbour construction, land surveying, marine surveying and in any project where accuracy and reliability matter the most.

Modularity and Versatility

On the one hand, the extreme user-friendly design of front panel, including LCD screen and buttons, make it very easy for users to configure and check the status of operation. On the other hand, the interface of back panel can connect with a variety of external sensors to meet the demand of a wide range of applications.

All GNSS Constellations on Track

Given the rapid development of GNSS technology, the ability of synchronizing with lastest constellations is important, especially when working as a reference station. From this point of view, The M300 Pro is able to track GPS, GLONASS, Beidou (B1,B2,B3), and reserved for Galileo, QZSS and other coming constellations . There is no doubt that M300 Pro is always keeping pace with future development.

Cloud Computing Based

The M300 Pro is IP based and ready for GNSS Cloud Computing. Easily configured by an advanced built-in web server, the M300 Pro supports all the GNSS standards such RTCM, NTRIP, RINEX, NMEA. New and existing GNSS positioning infrastructures (GNSS Networks and CORS) will benefit of such plug-and-play architecture. Powered by RTK and E-RTK processing on-board for positioning and integrity monitoring, the M300 Pro is designed for professionals engaged in high definition positioning projects.

Technical Specifications M300 Pro

Signal Tracking
- 256 channels with simultaneously tracked satellite signals
  - GPS: L1 C/A code, L1/L2 P code, L2C, L5
  - BeiDou: B1, B2, B3
  - GLONASS: L1, L2
  - Galileo: Reserved
  - 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 pseudo range measurements
- Signal Noise Ratios reported in dB-Hz

Time Precision
- GPS+Glonass+Beidou 10ns

Positioning Specifications
- Post Processing Static
  - Horizontal: 2 mm + 1 ppm RMS
  - Vertical: 4 mm + 1 ppm RMS
- Single Baseline RTK(<30KM)
  - Horizontal: 8 mm + 1 ppm RMS
  - Vertical: 15 mm + 1 ppm RMS
- Network RTK
  - Horizontal: 8 mm +1 ppm RMS
  - Vertical: 15 mm + 1 ppm RMS
- E-RTK
  - Horizontal: 0.2 m +1 ppm RMS
  - Vertical: 0.4 m + 1 ppm RMS
- DGPS : 0.5 m 3D RMS
- SBAS : 1 m 3D RMS
- Standalone : 1.5 m 3D RMS

Communications
- 3 Lemo Ports
  - 1 Lemo port(2 pin): power supply and battery charging
  - 2 Lemo ports(7 pin): USB UART port, system debugging and static data download; RS485 Protocol configuring and connecting with external device(meteorological sensor/barograph/inclinometer)
- 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, HTTPS, TCP/IP, UDP, FTP, NTRIP
- 3 SMA male connectors
  - 1 PPS output
  - Event input
  - Reserve for WLAN and Bluetooth
- 2 TNC connectors
  - GNSS Antenna connector
  - Frequency-marker oscillator input connector

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, PJK, PTNL
  - Extended NMEA-0183: BDGGA, GPNTR, GPCDT, GPHPR
- Observations
  ComNav binary, BINEX, RTCM3.X, compatible with major CORS software (VRS, FKP and iMax).

Data logging
- Loop recording data function supports long time record
- Data logging frequency, maximum 50Hz
- Storage capacity
  - 8 GB internal memory[1]
  - 1TB External memory maximum
- File format
  - Rinex 3.X or 2.X or ComNav binary format
- File log session
  - Days or hours can be set by user
- Data transfer
  - FTP access download directly

Physical
- Size (L x W x H): 202mm x 163mm x 75mm
- Weight: 2.4 kg
- Case: Rugged and light high performance metal

Environmental
- Operating temperature: -40°C to +80°C
- Storage temperature: -45°C to +85°C
- Humidity: 100% no condensation
- Water proof and dust proof: IP67, survives the temporary immersion to a depth of 1 m
- Shock: rugged aluminium case plus rubber ring seal, designed to survive a 1m drop onto concrete

Electrical
- Power consumption: 3.5 W
- External power input: 9.5-15 VDC, with over-voltage protection
- Integrated 8800mAh Li-ion battery, 16 hours continuously working

Antenna
- AT300 GNSS Geodetic Antenna
- AT500 GNSS Choke Ring Antenna

User Interface
- Button and front LCD panel
  - 5 functional buttons on the left and 3 buttons on the right
  - LCD panel shows the status and setting
- ComNav M300 Pro Web Server
- CRU software

1 8GB is standard and it is optional to be much bigger, up to 32 GB. But you need to clarify when placing the order if larger memory is needed

Specifications subject to change without notice.

ComNav Technology Ltd.
Building E, No.50 Alley 2080 Lianhua Road
201103 Shanghai - China

Tel : +86 21 64056796
Fax: +86 21 54309582

Email: sales@comnavtech.com
www.comnavtech.com