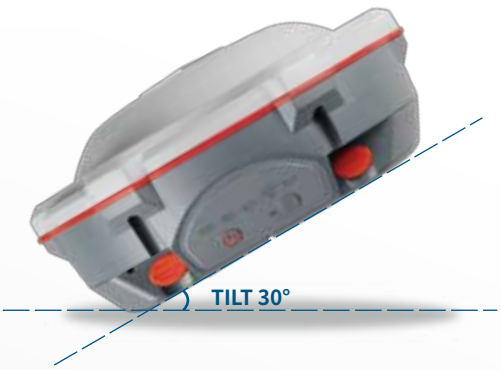
SinoGNSS®
By ComNav Technology Ltd.

T300 Plus GNSS Receiver



Features

- GPS L1/L2/L5, BeiDou B1/B2/B3, GLONASS L1/L2, Galileo SBAS
- Advanced QUANTUM™ Technology
- WIFI/UHF/4G Modem
- Tilt Compensation
- Smart Battery Design
- Low Power Consumption
- Support Long Baseline E-RTK[1]

ULTRA-RELIABLE GNSS

Powerful SinoGNSS T300 Plus GNSS receiver is an upgrade of the T300, offers 572 GNSS channels and supports all existing and planned GNSS constellations providing supper GNSS tracking performance. With the advanced QUANTUM™ technology, it remarkably improves position availability and reliability, so that surveyors are able to expand the reach of their GNSS rovers especially in obscured areas.

INTEGRATED AND COMPACT DESIGN

SinoGNSS T300 Plus combines a GNSS board, Bluetooth® and adjustable TX&RX UHF, WIFI and 4G modem into one rugged device for demanding surveying tasks. Its built-in 4G modem ensures the T300 Plus perfectly works with all kinds of CORS worldwide. Moreover, T300 Plus built-in tilt sensor supports maximum 30 ° pole tilt and keep the compensation accuracy within 3 centimeters, and you can check electronic bubble on the controller for fast survey in the field.

FLEXIBILITY FOR FIELD USE

Integrated a full-frequency UHF range from 410 to 470 MHz with its 12.5 KHz frequency interval, the T300 Plus is compatible with other radios and flexible for you to select different frequencies based on specific requirements. The built-in TX/RX UHF also enables your flexibility for base or rover option. For Radio router function, the T300 Plus is able to transmit correction data from the base to other rovers to expand working ranges in the fields.

SMART BATTERY DESIGN

With two hot swap batteries, the T300 Plus helps to extend working hours and ensures you fluent workflow in the field. The battery LEDs flash when battery shortage, then you can replace batteries or directly charge in T300 Plus through an external power. Moreover, you will benefit from its consumer-grade battery design, compatible with Canon LP-E6, which is easy to purchase and replace in your local market.

Technical Specifications T300 Plus

Signal Tracking

- 572 channels with simultaneously tracked satellite signals
  - GPS: L1, L2, L2C, L5
  - BeiDou: B1, B2, B3
  - GLONASS: L1, L2
  - Galileo: E1, E5a, E5b
  - QZSS (Reserved)
  - SBAS: WAAS, EGNOS, MSAS, GAGAN

Performance Specifications

- Cold start: <50 s
- Warm start: <30 s
- Hot start: <15 s
- Initialization time: <10 s
- Singal re-acquisition: <1.5 s
- Initialization reliability: >99.9%

Positioning Specifications

Mode	Accuracy
Post Processing	2.5 mm + 1 ppm Horizontal 5 mm + 1 ppm Vertical
Real Time Kinematic	8 mm + 1 ppm Horizontal 15 mm + 1 ppm Vertical
E-RTK (<100 km)[1]	0.2m + 1 ppm Horizontal 0.4m + 1 ppm Vertical
DGPS	<0.4 m RMS
SBAS	1 m 3D RMS
Standalone	1.5 m 3D RMS

Communications

- 1 Serial port (7 pin Lemo)
  Baud rates up to 921,600 bps
- UHF modem[2]: Tx/Rx with full frequency range from 410-470 MHz[3]
  - Transmit power: 0.5-2 W adjustable
  - Range: 1-5 km[4]
- WIFI/4G modem
  - 4G Bands: 800/900/1800/2100/2600 MHz
  - 3G Bands: 900/2100 MHz
  - 2G Bands: 900/1800 MHz
  - Support GSM, Point to Point/Points and NTRIP
- Position data output rates: 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz
- 5 LEDs (indicating Power, Satellite Tracking, GPRS Status and Differential Data)
- Bluetooth® : V 4.0 protocol, compatible with Windows OS and Android OS
- Tilt sensor

Data Format

- Correction data I/O:
  - RTCM 2.X, 3.X, CMR (GPS only), CMR+ (GPS only)
- Position data output:
  - ASCII: NMEA-0183 GSV, RMC, HDT, VHD, GGA, GSA, ZDA, VTG, GST; PTNL, PJK; PTNL, AVR; PTNL, GGK
  - ComNav Binary update to 20 Hz

Physical

- Size(W × H): Φ 15.8 cm × 7.5 cm
- Weight: 0.95 kg with two batteries

Environmental

- Operating temperature: -40 °C to + 65 °C (40 °F to 149 °F)
- Storage temperature: -40 °C to + 85 °C (40 °F to 185 °F)
- Humidity: 100% non-condensing
- Waterproof and dustproof: IP67, protected from temporary immersion to depth of 1 m
- Shock: Designed to survive a 2 m drop onto concrete

Electrical and Memory

- Input voltage: 5-27 VDC
- Power consumption: 3.1 W (3 constellations)[5]
- Li-ion battery capacity: 2 × 2000 mAh, up to 9 hours typically
- Memory: 8 GB

Software

- CGSurvey field data collection software
- Survey Master Android-based data collection software
- Carlson SurvCE field data collection software (optional)
- MicroSurvey FieldGenius field data collection software (optional)

1. BeiDou B3 signal is used in RTK calculating engine to enlarge length of baseline, which is only available in Asia Pacific area.
2. UHF modem is default configuration and it can be removed according to your specific needs.
3. Integrated UHF ranges from 410 to 470 MHz with 12.5 KHz channel spacing.
4. Working distance of internal UHF is varies in different environments, the maximum distance is 5 Km in ideal situation.
5. Power consumption will increase if transmitting corrections via internal UHF.

Specifications subject to change without notice.

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