T300 Plus GNSS Receiver

T Series GNSS Receiver | Ver.2023.02.14

Size: 15.8 cm × 7.5 cm
Weight: 0.95 kg with two batteries

Features

- Support GPS L1/L2/L5, BeiDou B1/B2/B3, GLONASS L1/L2/L3, Galileo E1/E5a/E5b/E6/AltBOC, QZSS L1/L2/L5, Navic L5, SBAS
- Advanced QUANTUM™ Generation III Technology
- WIFI/UHF/4G Module
- Up to 60° tilt IMU
- Smart Battery Design
- Low Power Consumption

T300 Plus
GNSS Receiver

ULTRA-RELIABLE GNSS

The Powerful SinoGNSS T300 Plus GNSS receiver is an upgrade of the T300, offers 965 GNSS channels and supports all existing and planned GNSS constellations, providing robust GNSS tracking performance. With the advanced QUANTUM™ Generation III 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. Industrial 4G ensures the receiver seamlessly connect to the mobile network globally. Moreover, T300 Plus built-in tilt IMU supports maximum 60° pole tilt and keeps the compensation accuracy in 2.5 centimeters, which makes your field work more efficient, convenient and reliable.

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 ensure your fluent workflow in the field. The battery LEDs flash when battery shortage. 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.

SinoGNSS®
By ComNav Technology Ltd.

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Signal Tracking

965 channels for simultaneously tracking satellite signals

GPS	L1C/A, L2C, L2P, L5
BeiDou	B1I, B2I, B3I, B1C, B2a, B2b
GLONASS	L1, L2, L3
Galileo	E1, E5a, E5b, E6, AltBOC
QZSS	L1C/A, L1C, L2C, L5
Navic	L5
SBAS	L1, L5[1]

Performance Specifications

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

Positioning Specifications

Static and Fast Static	2.5 mm + 0.5 ppm Horizontal 5 mm + 0.5 ppm Vertical
Long Observations Static	3 mm + 0.1 ppm Horizontal 3.5 mm + 0.4 ppm Vertical
Real Time Kinematic	8 mm + 1 ppm Horizontal 15 mm + 1 ppm Vertical
DGPS	<0.4 m RMS
SBAS	1 m 3D RMS
Standalone	1.5m 3D RMS

Communications

1 x 7 pin lemo port (Combined Serial and USB function)
Baud rates up to 921600bps for serial

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: 802.11b/g/n
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

Calibration-free IMU integrated for Tilt Survey, up to 60° tilt with 2.5 cm accuracy

Data Format

Correction data I/O	RTCM 2.X, 3.X, CMR,CMR+
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(L × W × H)	15.8 cm × 7.5 cm
Weight	0.95 kg with two batteries

Environmental

Operating temperature	-40 °C to + 65 °C
Storage temperature	-40 °C to + 85 °C
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	7-28 VDC
Power consumption	1.92 W[5]
Li-ion battery capacity	2 × 2000 mAh, up to 10 hours typically
Memory	8 GB[6]

Software

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

1.L5 is upgradable

2.UHF Modem and 4G 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 varies in different environments, the maximum distance is 5 Km in ideal situation.

5.Power consumption will increase if transmitting corrections via internal UHF.

6.8GB is the default internal memory and optional 16GB, 32GB is available to order. Please clarify when placing the order.

Specifications subject to change without notice.

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