

Technical Specifications

GNSS Surveying System

RU Ver.2024.05.24

SinoGNSS[®]
By ComNav Technology Ltd.

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: WAAS, EGNOS, MSAS, GAGAN, SDCM, BDSBAS

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

- Post Processing (static and fast static)
 - Horizontal: 2.5 mm + 0.5 ppm
 - Vertical: 5 mm + 0.5 ppm
- Long Observations Static
 - Horizontal: 3 mm + 0.1 ppm
 - Vertical: 3.5 mm + 0.4 ppm
- Real Time Kinematic
 - Horizontal: 8 mm + 1 ppm
 - Vertical: 15 mm + 1 ppm
- DGPS:<0.4m RMS
- SBAS: 1 m 3D RMS
- Standalone: 1.5 m 3D RMS

Communications

- 1 x 7 pin lemo port (Combined Serial and USB function)
Baud rates up to 921600bps for serial
- UHF modem¹: Tx/Rx with full frequency range from 410-470 MHz²
 - Transmit power: 0.5-2 W adjustable
 - Range: 1-5 km³
- WIFI/4G modem¹
 - LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
 - LTE-TDD: B38/B39/B40/B41
 - WCDMA: B1/B2/B4/B5/B6/B8/B19
 - GSM: B2/B3/B5/B8
- 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 SC104 Version 2.x, 3.x formats, 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: IP68
- Shock: Designed to survive a 2 m drop onto concrete

Electrical and Memory

- Input voltage: 7-28 VDC
- Power consumption: 1.92 W⁴
- Li-ion battery capacity: 2 × 2000 mAh, up to 10 hours typically
- Memory: 8 GB⁵

Software

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

- 1.UHF Modem and 4G Modem is default configuration and it can be removed according to your specific needs.
 - 2.Integrated UHF ranges from 410 to 470 MHz with 12.5 KHz channel spacing.
 - 3.Working distance of internal UHF varies in different environments, the maximum distance is 5 Km in ideal situation.
 - 4.Power consumption will increase if transmitting corrections via internal UHF.
- 5.8GB is the default internal memory and optional 16GB, 32GB is available to order. Please clarify when placing the order.

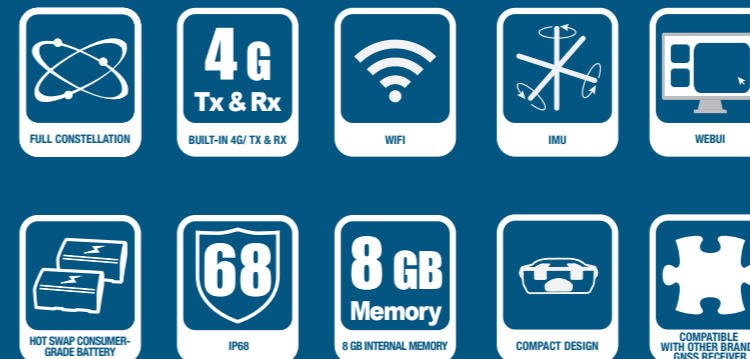
Specifications subject to change without notice.

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TILT
60°

T300 Plus GNSS SURVEYING SYSTEM



Works with:



Survey Master

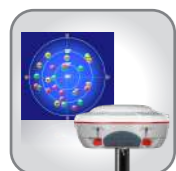
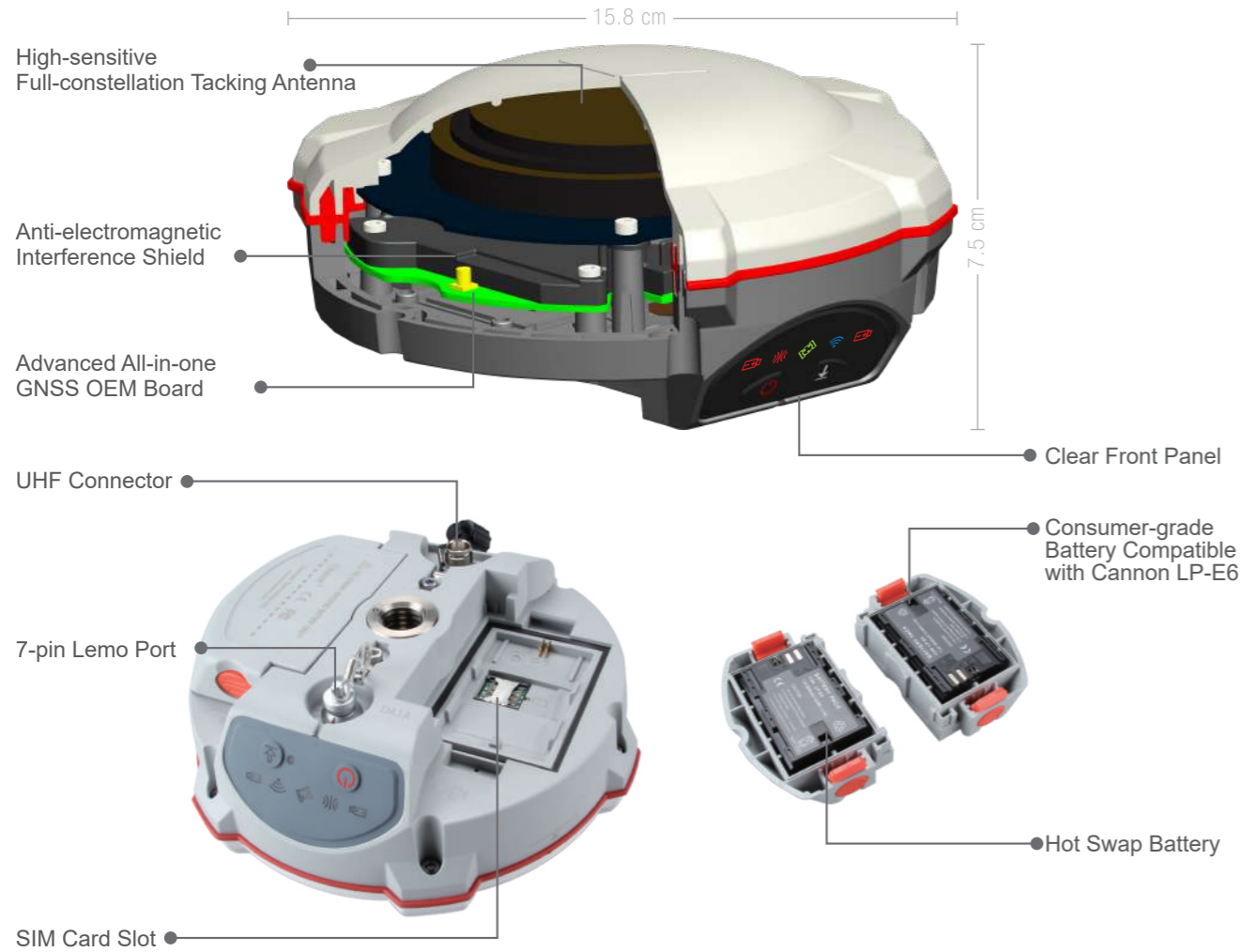
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Featuring full-constellation tracking capability, built-in IMU, 4G/WiFi connection, 8 GB internal memory and easy survey operation with Android-based Survey Master Software, the T300 Plus GNSS receiver is one of the most reliable choices for your demanding surveying tasks. It's easier and faster to collect accurate data, no matter for beginners or professional surveyors.



FULL-CONSTELLATION TRACKING

Its 965 channels are able to track all working and planned GNSS constellations.



ADJUSTABLE TX & RX INTERNAL UHF*

Integrated UHF ranges from 410 to 470 MHz with 12.5 KHz channel spacing.



HOT SWAP CONSUMER-GRADE BATTERY

Two hot swap batteries ensure fluent workflow in the field. The consumer-grade battery design is compatible with Canon LP-E6, which is easy to purchase and replace in your local market.



SMART-CHARGING DESIGN

You can charge the battery through the battery charger. Or leave the battery in T300 Plus and charge it through 12V DC power, for example, through a vehicle battery or 12V DC adaptor.



60° TILT IMU

It supports up to 60° tilt compensation and keeps the accuracy within 2.5 cm, providing higher working efficiency in the field.



SEAMLESSLY WORK WITH NETWORKING RTK POSITIONING

Its built-in 4G modem ensures the T300 Plus perfectly works with all kinds of CORS worldwide.



WiFi CONNECTION

WebUI offers simple configuration, operation, status checking of the T300 Plus.



USB MODE

When connecting the T300 Plus to your PC, you can copy the logged static data from the receiver to your PC.

* UHF is removable according to specific regulation in different countries.

DATA COLLECTOR

R60 ANDROID-BASED RUGGED DATA COLLECTOR



- Android 12.0 Operating System
- Qualcomm 8-Core Processor
- 5.5" Sunlight Readable Display with 1920*1080 Resolution
- 4+64 GB Memory
- White Backlight Keyboard with Full QWERTY
- 9000mAh Li-Polymer Battery, QC Super-Fast Charging
- Support 4G, Ultra-Distance Bluetooth, Wi-Fi, NFC



Qualcomm



1080P Resolution



5.5" Display



Full QWERTY



Android 12



LARGE CAPACITY



IP68

FIELD SOFTWARE



SURVEY MASTER

- Compatible with most of Android devices
- Easier survey workflow via Wizard function
- Support up to 60° IMU tilt compensation
- Support all survey modes, including Static, PPK and RTK
- Support Surface Stake, Mapping Survey and etc. to serve various survey tasks
- Support CAD import and directly use for stake out operations
- Support Convert function from ComNavBinary raw file to RINEX


[Carlson SurvCE](#) Optional

[Microsurvey FieldGenius](#) Optional

POST-PROCESSING SOFTWARE

SINO GNSS COMPASS SOLUTION SOFTWARE



- Provide the complete GPS/GLONASS/BeiDou/GALILEO post-processing solution
- Support GNSS observation data in RINEX and ComNav Raw Binary Data formats
- Support different post-processing in static and kinematic modes
- Output analysis reports in various formats (web format, DXF, TXT, KML)
- Supports DJI's P4R data format. Processing results can be imported into photogrammetry and 3D modeling software directly