

# Technical Specifications

# T300

**SINOGNSS**<sup>®</sup>  
By ComNav Technology Ltd.

## Signal Tracking

- 256 channels with simultaneously tracked satellite signals
- GPS: L1, L2C, L2P, L5
- BeiDou: B1, B2, B3
- GLONASS: L1, L2
- SBAS: WAAS, EGNOS, MSAS, GAGAN

## 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, PJK, PTNL
  - ComNav Binary update to 20Hz

## 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%

## Physical

- Size(W×H): 15.8 cm × 7.5 cm
- Weight: 0.95 kg (include 2 batteries)

## Environmental

- Operating temperature: -40 °C to + 65 °C
- Storage temperature: -40 °C to + 85 °C
- Humidity: 100% condensation
- Waterproof and dust proof: IP67 protected from temporary immersion to depth of 1 meter, floats
- Shock: survives a 2 meter drop on to concrete

## Positioning Specifications

- Post Processing Static
  - Horizontal: 2.5 mm + 0.5 ppm RMS
  - Vertical: 5 mm + 0.5 ppm RMS
- Real Time Kinematic
  - Horizontal: 8 mm + 1 ppm RMS
  - Vertical: 15 mm + 1 ppm RMS
- E-RTK<sup>1</sup> (baseline<100 km)
  - Horizontal: 0.2 m + 1 ppm RMS
  - Vertical: 0.4 m + 1 ppm RMS
- Code differential GNSS positioning
  - Horizontal: 0.25 m+ 1 ppm RMS
  - Vertical: 0.5 m + 1 ppm RMS
- SBAS: Typically <1 m 3D RMS
- Standalone: <1.5 m 3D RMS

## Electrical and Memory

- Input voltage: 5-27 VDC
- Power consumption: 2.85 W (3 constellations)<sup>5</sup>
- Li-ion battery capacity: 2 × 2000 mAh, up to 9 hours typically
- Memory: 256 MB internal with up to 16 GB pluggable memory card

## Software

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

## Communications

- 1 Serial port (7 pin Lemo)  
Baudrate up to 921,600 bps
- UHF modem<sup>2</sup>: Tx/Rx with full frequency range from 410-470 MHz<sup>3</sup>
  - Transmit power: 0.5-2W adjustable
  - Range: 1-5 km<sup>4</sup>
- 3.5G module
  - 2 Bands GSM|GPRS EDGE 900/1800 MHz
  - 2 Bands UMTS| HSPA 900/2100 MHzSupport GSM, Point to Point/Points and NTRIP
- Position data output rates: 1Hz, 2Hz, 5Hz, 10Hz
- 5 LEDs (indicating Power, Satellite Tracking, GPRS Status and Differential Data)
- Bluetooth<sup>®</sup>: V 2.X protocol, work compatible with Windows and Android OS

- <sup>1</sup> E-RTK, BeiDou B3 signal used in RTK calculate engine; concern the current situation, this mode can be used in APAC.
- <sup>2</sup> ComNav will remove UHF modem according to different country's regulations.
- <sup>3</sup> 410-470 MHz, 3 frequency range, 410-430, 430-450, 450-470, need to clarify when place the order.
- <sup>4</sup> Radio work distance is related with many environment factors, the maximum distance is 5 km in very optimised situation.
- <sup>5</sup> Power consumption will increase if using internal UHF as transmitter.

Specifications subject to change without notice.

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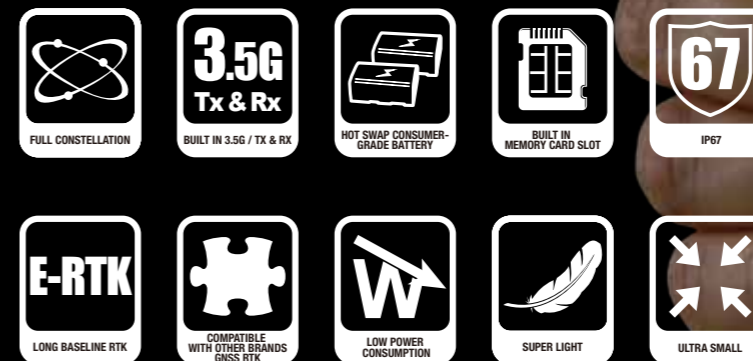
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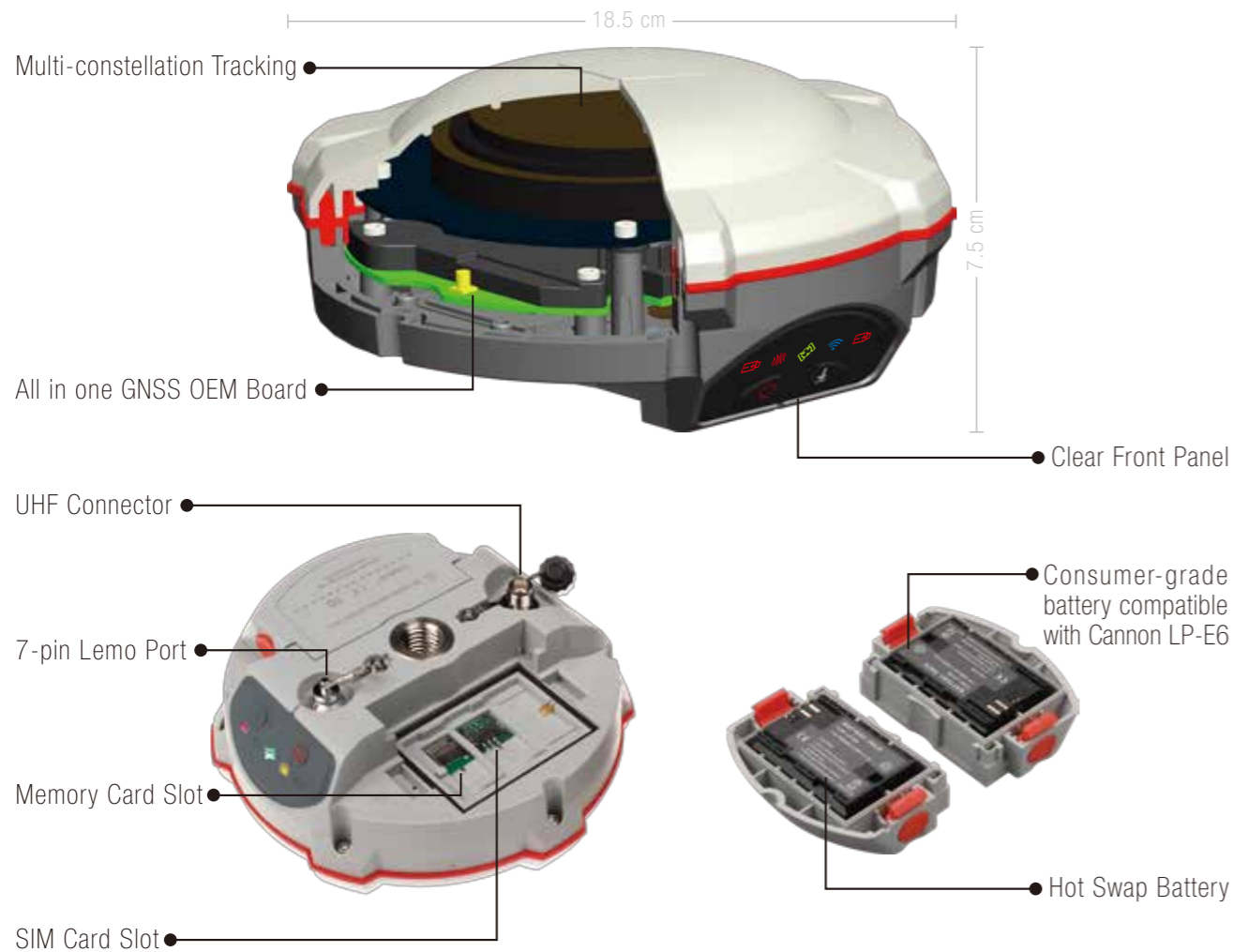
www.comnavtech.com



# T300 GNSS SURVEYING SYSTEM



With SinoGNSS Quantum™ algorithm and fully integrated design, the compact sized T300 GNSS receiver is one of the most reliable choices for any surveying tasks. Strong signal tracking ability, hot swap battery and rugged housing design make the T300 perfectly and effectively work even in harsh environments.



#### SINGLE & MULTI-CONSTELLATION COMPUTING

256 channels tracking all working constellations and each constellation can work independently



#### ADJUSTABLE TX & RX INTERNAL UHF\*

0 – 2 Watt internal UHF allows you more convenient and effective field work rather than external radio



#### SEAMLESSLY WORK WITH NETWORKING RTK POSITIONING

Built-in GPRS/GSM/3.5G module ensure the T300 perfectly work in all kinds of CORS



#### HOT SWAP AND CONSUMER-GRADE BATTERY

Two hot swap batteries ensure you fluent workflow in the field. Consuming-grade battery design, compatible with Canon LP-E6, makes it's easy to replace in local markets



#### EXPANDABLE MEMORY

16GB external memory card enlarges your data storage in the field



#### RUGGED LIGHTWEIGHT AND SMALL VOLUME DESIGN

IP67 Dust/Water proof design and survive a 2m drop onto the concrete. Small volume with less than 1kg weight makes the T300 is one of portable GNSS receivers meets your RTK surveying demands

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

## CONTROLLER



### GETAC PS336 FIELD CONTROLLER Optional

- Windows Embedded Handheld 6.5
- MIL-STD 810G and IP68 certified
- 3.5 inch sunlight readable display
- Pressure sensitive touchscreen
- Long range Bluetooth
- 8GB internal storage

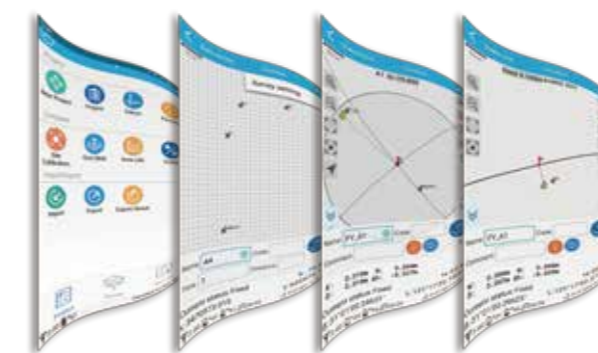
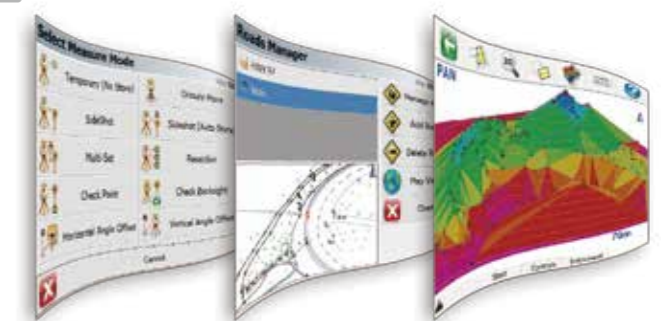


## FIELD SOFTWARE

### MICROSURVEY FIELDGENIUS Optional

- User-friendly Project workflow
- Instrument control at your Fingertips
- Powerful Staking and Road Module
- Painless Data Transfer
- Works with Tablets and Desktop PCs
- Contouring, Surfacing, and Volume Calculations

► SinoGNSS CGSurvey Default ► Carlson SurvCE Optional



### ANDROID SURVEY MASTER

- Compatible with most of Android devices
- Perfect workflows and user-friendly interface
- Supports all survey modes, including Static, PPK and RTK
- Access to real-time open street maps
- Collect users' feedback through Cloud Service



## POST-PROCESSING SOFTWARE

### SINOGNSS COMPASS SOLUTION SOFTWARE

- Provides the complete GPS/GLONASS/BeiDou/GALILEO processing solution
- Supports GNSS observation data in RINEX and ComNav Raw Binary Data formats
- Supports differential post-processing in static and kinematic modes
- Outputs analysis reports in various formats (web format, DXF, TXT, KML)

