Technical Specifications   T30 IMU

SinoGNSS®
By ComNav Technology Ltd.

Signal Tracking

- 574 Channels
  - GPS: L1 C/A, L2C, L2P, L5
  - BeiDou: B1, B2, B3
  - BeiDou Global Signal: B1C, B2a
  - GLONASS: L1 C/A, L1P, L2 C/A, L2P
  - Galileo: E1, E5a, E5b,AltBOC
  - QZSS, IRNSS[1]
  - SBAS: WAAS, EGNOS, MSAS, GAGAN
  - L-Band[2]

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

Mode	Accuracy
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	1.5 m 3D RMS
PPP	10cm Horizontal and 20cm Vertical

Communications

- 1 Serial port (7 pin Lemo)
  Baud rates up to 921,600 bps
- UHF modem[3]: Tx/Rx with full frequency range from 410-470 MHz[4]
  - Transmit power: 0.5-2 W adjustable
  - Range: 1-5 km[5]
- 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
- Built-in IMU supports up to 60° tilt compensation

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 15.5 cm × 7.3 cm
- Weight: 1.2 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: 2.7 W[6]
- Li-ion battery capacity: 2 × 3400 mAh, up to 15 hours typically
- Memory: 8 GB[7]

Software

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

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1. QZSS and IRNSS are reserved for future upgrade.

2. PPP service is optional.

3. UHF modem is default configuration and it can be removed according to your specific needs.

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

5. Working distance of internal UHF is varies in different environments, the maximum distance is 5 Km in ideal situation

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

7. 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.
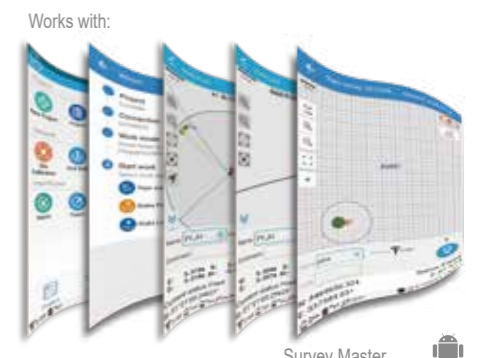
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To make your work easier is our original motivation

T30 IMU GNSS
SURVEYING SYSTEM

FULL CONSTELLATION

4G Tx & Rx
BUILT-IN 4G/TX & RX

WIFI

IMU
BUILT-IN IMU

RUGGED AL-MG ALLOY HOUSING

TWO 3400MAH HOT SWAP BATTERIES

67
IP67

8 GB Memory
8GB INTERNAL MEMORY

LBAND
SUPPORT L-BAND AND PPP

COMPATIBLE WITH OTHER BRANDS GNSS RECEIVER

Works with:

Survey Master

SinoGNSS T30 IMU GNSS Receiver is an extremely compact designed receiver, tracking all current and future GNSS constellations, as well as L-Band capability. Featuring built-in IMU for high convenience and efficiency, abundant 4G/WIFI/Bluetooth® communications for flexibility, advanced QUANTUM™ technology for positioning reliability and stability, the T30 IMU receiver is the best-in-class solution for any of your survey tasks.

- High-sensitive Full-constellation Tacking Antenna
- Anti-electromagnetic Interference Shield
- Advanced All-in-one GNSS OEM Board
- Up to 60° Tilt Compensation Built-in IMU

Magnesium-aluminium casing

7.3 cm

15.5 cm

Clear Front Panel

UHF Connector

7-pin Lemo Port

SIM Card Slot

Two 3400mAh hot swap batteries

FULL-CONSTELLATION TRACKING
574 channels tracking 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 BATTERY
Two 3400mAh hot swap batteries ensure you fluent workflow in the field.

SUPPORT LBAND
Support L-Band and PPP, gives one more choice for diverse surveying tasks.

BUILT-IN IMU
Built-in IMU provides a more efficient, convenient and reliable surveying solution for your field work.

SEAMLESSLY WORK WITH NETWORKING RTK POSITIONING
Its built-in 4G modem ensures the T30 IMU receiver perfectly works with all kinds of CORS worldwide.

WIFI CONNECTION
WebUI offers simple configuration, operation, status check of the T30 IMU receiver.

USB MODE
When connecting the T30 IMU receiver to your PC, you just copy the logged static data from the receiver to your PC.

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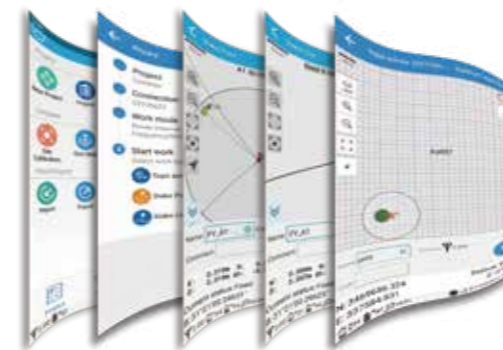

DATA COLLECTOR

R550 ANDROID-BASED RUGGED DATA COLLECTOR

○ Android 8.1 Operating System
○ MIL-STD 810 G and IP67 Certified
○ 5'' Sunlight Readable Touch Display
○ 13 MP Camera with Autofocus
○ Compact Design with Long Battery Life
○ Dual SIM and Dual Standby
○ Integrated 4G, Bluetooth® and Wi-Fi

Android | 67 | 5inch | | Bluetooth | | SIM x2

FIELD SOFTWARE

SURVEY MASTER

○ Compatible with most of Android devices
○ Easier survey workflow via Wizard function
○ Support maximum 60° tilt compensation
○ Supports all survey modes, including Static, PPK and RTK
○ Access to real-time open street maps
○ Collect users' feedback through Cloud Service

▶ Carlson SurvCE Optional ▶ Microsurvey FieldGenius Optional

Google play
Survey Master
Download for free

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 different post-processing in static and kinematic modes
○ Outputs analysis reports in various formats (web format, DXF, TXT, KML)