

# 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



Survey Master Download for free



Optional



Optional



IMU Tilt Survey



New Interface



CAD Basemap and Stake

## Post-processing Software

# SinoGNSS 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



# N3 GNSS Receiver

GNSS Surveying System

Ver.2021.6.2

## Signal Tracking

Channels: 1198  
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: L1C, L2, L5, L1C/A  
IRNSS<sup>1</sup>  
SBAS: WAAS, EGNOS, MSAS, GAGAN  
L-Band<sup>2</sup>

## 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  
Enhanced UHF modem<sup>3</sup>: Tx/Rx with full frequency range from 410-470 MHz<sup>4</sup>  
- Transmit power: 0.5-2 W adjustable  
- Range: 15 km<sup>5</sup>  
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 Satellites Tracking, RTK Corrections Data, GPRS Status and Power)  
2 Function buttons for Power and Static Data Record  
Bluetooth<sup>®</sup> : 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 (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: 6-28 VDC  
Power consumption: 1.7 W<sup>6</sup>  
Li-ion battery capacity: 2 × 3400 mAh, 7.4V, up to 25 hours typically  
Memory: 8 GB<sup>7</sup>

## Software

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

1. IRNSS is 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 varies in different environments, the maximum distance is 15 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.



# N3 IMU RTK GNSS RECEIVER

Reliable IMU and Enhanced UHF bring you a brand new high-efficiency experience! \*

\*From our filed testing statistics, with the IMU will increasing over 20% surveying productivity.



# N3 IMU RTK

Up to 15km long work range with 2W power consumption, making it work-efficient and energy-saving for your survey tasks. Integrated UHF ranges from 410 to 470 MHz with 12.5 KHz channel spacing.

15KM

# Higher Efficiency with Enhanced UHF Modem

Simplified IMU initialization process with shaking poles only. Up to 60° tilt compensation within 2cm accuracy, no need to center the bubble. Convenience and reliability are guaranteed at the same time.

# More Convenient with Integrated IMU Module



# Features



## Full constellations tracking

Powerful tracking capability with 1198 Channels  
Support all current and future GNSS constellations  
Improved fixed rate by integrated with new anti-interference algorithm technology



## 25 hours long-lasting batteries

Last for 25hrs' working time  
Support hot swap and mobile charging, no worry about power off



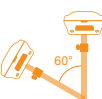
## Enhanced UHF\* for long range

Up to 15km work range with 2W power consumption  
Integrated UHF ranges from 410 to 470 MHz with 12.5 KHz channel spacing



## Rugged housing

Magnesium-aluminum alloy housing  
IP67 waterproof and dustproof level  
Survive a 2m drop onto concrete



## Reliable IMU for 60° tilt survey

Support up to 60° tilt compensation  
Reach 2cm accuracy with tilt survey



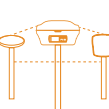
## Powerful web-based UI

Available for users to check status and configure receiver via the web UI  
Easily download the static data & upgrade firmware via Wi-Fi



## Industry-leading low power consumption

1.7w power consumption in static mode, which prolongs working time and reduces heat generation



## Seamlessly work with GNSS network

Support GNSS industry common protocols  
Perfectly work with all kinds of CORS worldwide with in-built 4G modem

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

# R550 Data Collector

