# Software

# Survey Master

Compatible with most of Android devices

Easier survey workflow via Wizard function

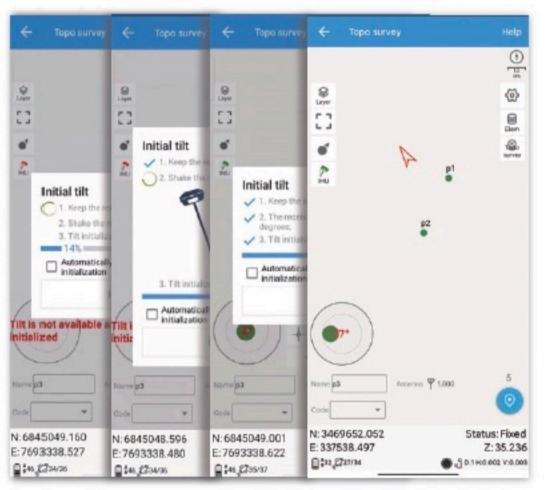
Support up to 60° IMU tilt compensation

Support all survey modes, including Static, PPK and RTK

Support Surface Stake, Mapping Survey and etc. to serve various survey tasks

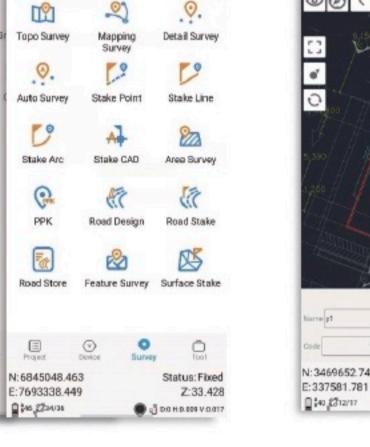
Support CAD import and directly use for stake out operations

Support Convert function from ComNavBinary raw file to RINEX





Connection Wizard P Site Calibration Gr Topo Survey Mapping Detail Survey

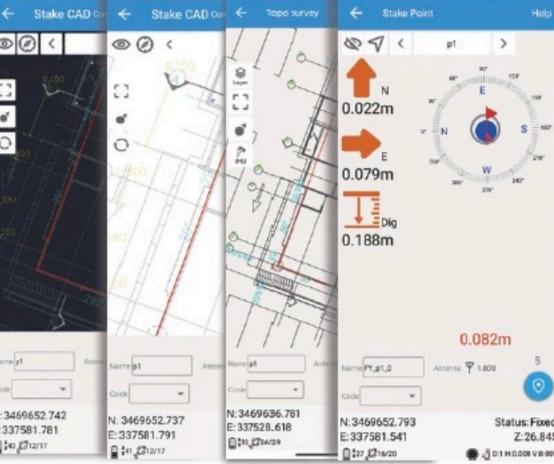


New Interface

# Google play

Survey Master Download for free





CAD Basemap and Stake

# Post-processing Software

IMU Tilt Survey

# SinoGNSS Compass solution software

Provide the complete GPS/GLONASS/BeiDou/GALILEO post-processing solution

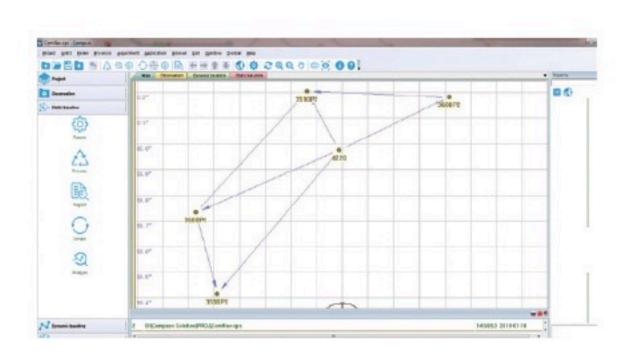
Support GNSS observation data in RINEX and ComNav Raw Binary Data formats

Support different post-processing in static and kinematic modes

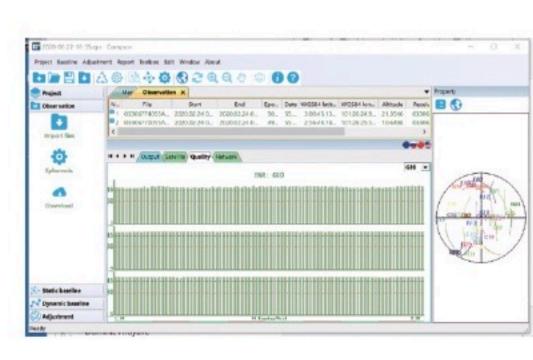
Output analysis reports in various formats (web format, DXF, TXT, KML)

Supports DJI's P4R data format. Processing results can be imported into photogrammetry

and 3D modeling software directly







# N3 GNSS Receiver

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

SBAS: WAAS, EGNOS, MSAS, GAGAN

### 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

- 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®: 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

GNSS Surveying System

Ver.2021.6.2

### **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

Shock: Designed to survive a 2 m drop onto concrete

# **Electrical and Memory**

Input voltage: 7-28 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 GB7

#### 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.

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		)



# N3 IMU RTK GNSS RECEIVER

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

# 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.

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















15<sub>KN</sub>





### Full constellations tracking

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



# 25 hours long-lasting batteries

Last for 25hrs' work 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



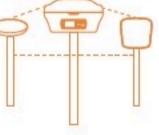
### Powerful web-based UI

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



# **R550 Data Collector**













