N5 GNSS Receiver

SinoGNSS®
By ComNav Technology Ltd.

Signal Tracking

Channels: 574
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
Singal 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
E-RTK (<100 km)[3]	0.2m + 1 ppm Horizontal 0.4m + 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[4]: Tx/Rx with full frequency range from 410-470 MHz[5]
- Transmit power: 0.5-2 W adjustable
- Range: 1-5 km[6]
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
2 LEDs (indicating Satellites Tracking and RTK Corrections data)
1 OLED Display and 2 Function buttons
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 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: 5-27 VDC
Power consumption: 2.7 W[8]
Li-ion battery capacity: 2 × 3400 mAh, up to 15 hours typically
Memory: 8 GB

Software

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

1. QZSS and IRNSS are reserved for future upgrade.

2. PPP service is optional.

3. BeiDou B3 signal is used in RTK calculating engine to enlarge length of baseline, which is only available in Asia Pacific area.

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

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

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

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

Specifications subject to change without notice.

N5 IMU GNSS RECEIVER

A reliable IMU RTK receiver you can really count on in the field!*

*From our filed testing statistics, with the IMU the surveying working efficiency improved at least 20%.

N5 IMU RTK

Up to 60° tilting compensation, no need to center the Bubble, enables to measure quickly and acquire the precise position easily.
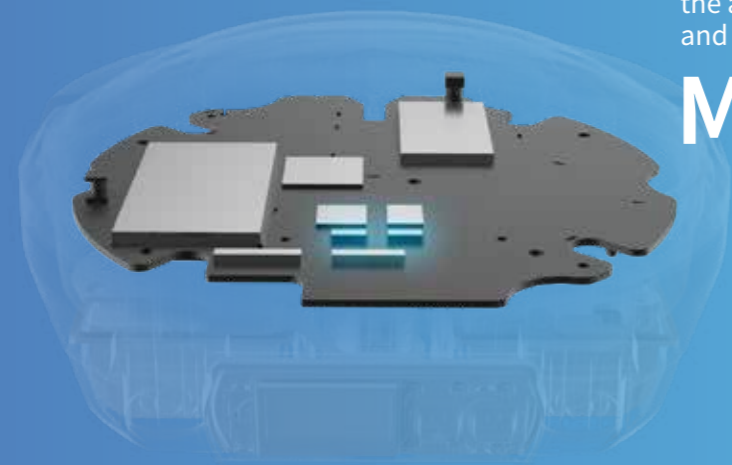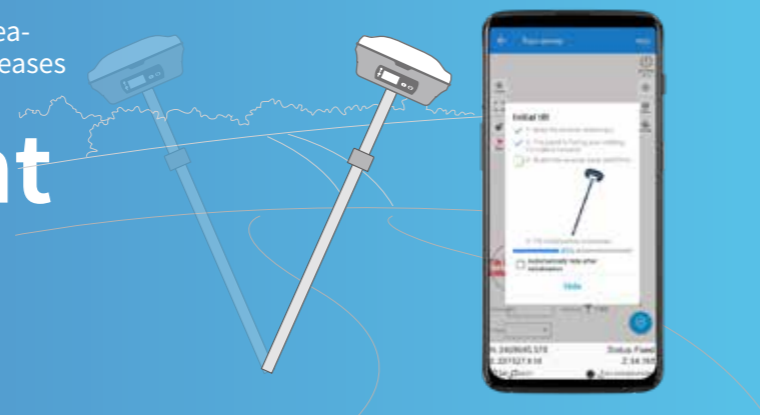
More Convenient

In-built IMU and adopted self-developed core algorithm, with the accuracy less than 2.5cm, ensure the accuracy anywhere and anytime, without being effected by geomagnetic.

More Reliable

One-time adjustment for successive tilting measurement with centimeter-level accuracy increases work efficiency.

More Efficient

Features

Full constellations tracking
Powerful tracking capability with 574 Channels
Support all current and future GNSS constellations
Improved fixed rate by integrated with new anti-inter-ference algorithm technology

OLED Enhanced OLED Display
Sunlight readability for a clear, easy-to read viewing experience
Handle all of surveying operations on screen freely

6800mAh Large Li-battery
Last over 15hrs' work time.
Support mobile charging, no worry about power-off

LBAND Support PPP
Easy installation, start survey work without base station.
Achieve centimeter-level accuracy with PPP mode

Rugged housing
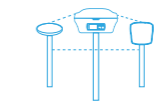IP 67 waterproof and dustproof
Survive a 2m drop onto concrete

Web-based UI
Available for users to check receiver status via the web UI.
Easily download the static data without connecting cable

UHF Adjustable TX & RX Internal UHF*
Integrated UHF ranges from 410 to 470 MHz with 12.5 KHz channel spacing

Seamlessly Work with Network RTK Positioning
Perfectly work with all kinds of CORS world-wide with in-built 4G modem

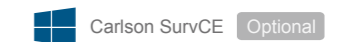* UHF is removable according to specifc regulation in different countries.

R550 Data Collector
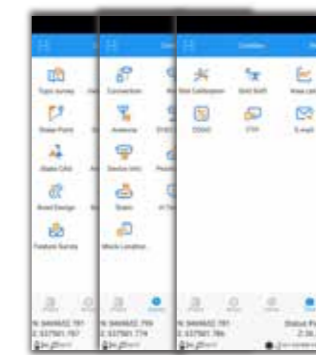
5'' capacitive touch screen with sunlight readability

IP67 waterproof and dustproof

In-built **7000mAh battery** supports at least 24hrs' work

64GB storage,

Support of Bluetooth, WIFI and 4G

Typical **Type-C** interface

Less than **4 hours PE fast charging**

Octa-core 2.0GHz processor

Android 67 4G Bluetooth SIM x2

Software

Survey Master

Compatible with most of Android devices

Easier survey worflow via Wizard function

Support up 60° IMU tilt compensation

Support all survey modes, including Static, PPK and RTK

Access to real-time open street maps

Support CAD import and directly use for stake

Collect users' feedback through Cloud Service

▶ Google play
Survey Master Download for free

Carlson SurvCE Optional
Microsurvey Fieldgenius Optional

IMU Tilt Survey   New Interface   CAD Basemap and Stake

Post-processing Software
SinoGNSS Compass solution software

Provide the complete GPS/GLONASS/BeiDou/GALILEO 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)