Software

Survey Master

Optional

Microsurvey FieldGenius Android

Microsurvey FieldGenius Windows

Compatible with most of Android devices

Easier survey workflow via Wizard function

Support up to 120° IMU tilt compensation

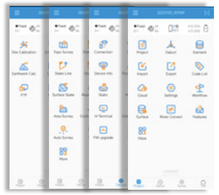
Support all survey modes, including Static, PPK and RTK

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

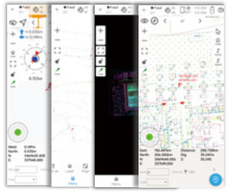
Support CAD import and directly use for stake out operations

Support Convert function from ComNavBinary raw file to RINEX

Laser Visual Surver&Stakeout



New Interface



CAD Basemap and Stake

Post-processing Software

SinoGNSS Compass solution software

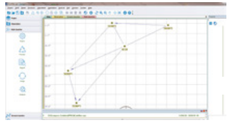
Provide the complete GPS/GLONASS/BeiDou/GALILEO post-processing solution

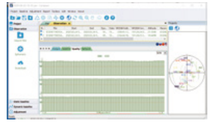
Support GNSS observation data in RINEX and ComNav Raw Binary Data format

Support different post-processing in static and kinematic modes

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

Supports DJI's UAV data format. Processing results can be imported into photogrammetry and 3D modeling software directly





Jupiter Laser Visual RTK

GNSS Surveying System

Ver.2024.08.21

Signal Tracking

Channel: 1668

GPS: L1C/A, L1C, L2P, L2C, L5

BDS: B1I, B2I, B3I, B1C, B2a, B2b

GLONASS: L1, L2, L3

Galileo: E1, E5a, E5b, E6c, E5 AltBOC

QZSS: L1C/A, L2C, L5, L1C

IRNSS: L5

SBAS: L1C/A

Performance Specification

Signal Re-acquisition: ≤1s

Cold Start: ≤30s

Hot Start: ≤10s

RTK Initialization Time: <5s(Baseline≤10km)

Initialization Reliability: ≥99.99%

Data Update Rate: 1Hz, 2Hz, 5Hz, 10Hz, 20Hz

Mode	Accuracy
Static and Fast Static	Horizontal 2.5 mm + 0.5 ppm RMS Vertical 5 mm + 0.5 ppm RMS
Long Observations Static	3 mm + 0.1 ppm Horizontal 3.5 mm + 0.4 ppm Vertical
Signal Baseline RTK	Horizontal 8mm + 1ppm RMS Vertical 15mm + 1ppm RMS
DGPS	＜0.4m RMS
SBAS	Horizontal 0.5 RMS Vertical 0.8 RMS
Standalone	1.5m 3D RMS
Laser Tilt Measurement	≤3.5cm (5m range, ≤60°Tilt in Laser mode)

Data Format

Correction Data I/O: RTCM2.X, 3.X,CMR(GPSonly),CMR+(GPSonly)

Position Data Output: - ASCII: NMEA-0183 GSV, RMC, HDT, GGA, GSA, ZDA, VTG, GST; PTNL, PJK; PTNL, AVR; PTNL, GGK
-ComNav Binary update to 20 Hz

Electrical and Battery

Voltage: 7.2V

Li-ion Battery Capacity: 5000mAh

Power Consumption: 1.8W[3]

Working Time: 16h

Interface: Type-C

Memory: 4 GB[4]

1. UHF modem is default configuration and it can be removed according to your specific needs.
2. Working distance of internal UHF varies in different environments and also depends on the protocols. With SNLonglink, 15km working range is achievable under ideal conditions.
3. Power consumption will increase when transmitting corrections via internal UHF.
4. Memory is expandable.

Communication

1 Serial port: Baud rates up to 921,600 bps

Datalink[1]:

- Tx/Rx with full frequency range from 410-470MHz
- Transmit power: 0.5W, 1W, 2W adjustable
- Air Baud Rate: 9600 / 19200 adjustable
- Range[2]: 3-15 km
- Protocol type: Compatible with all the ComNavTech GNSS Receiver, support Transparent/TT450S/South/Mac/SNLonglink

WIFI/4G modem

- LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
- LTE-TDD: B38/B39/B40/B41
- WCDMA: B1/B2/B4/B5/B6/B8/B19
- GSM: B2/B3/B5/B8

Position data output rates: 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz

2 LEDs (indicating Satellites Tracking and RTK Corrections data)

Bluetooth ® : V 4.0 protocol, compatible with Windows OS and Android OS

Auto-IMU integrated for tilt survey, up to 120°tilt with 2.5 cm accuracy

Environmental Specification

Working Temperature: -40℃ to +65℃(-4°F to 149°F)

Storage Temperature:-40℃ to +85℃(-40°F to 185°F)

Humidity: 100% non-condensing

Water- & Dustproof: IP67

Shock: Survive a 2m drop onto the concrete

Physical Specification

Housing Material: Aluminium magnesium alloy

Dimension: Φ 13.35 cm x 6.6 cm

Weight: ≤0.85 kg with two batteries

Display: 1.1 inch OLED color display

Laser Specification

Range: 50m

Accuracy(room temperature): (3-5)mm + 1ppm

Measuring Frequency: Classic Value: 3Hz
Maximum Value: 5Hz

Laser Injection Power: 0.9mW~1.5mW

Working Temperature: -20℃~+50℃

Storage Temperature: -30℃~+60℃

Cameras

Sensor pixels: Global shutter with 2 MP & 5 MP

Field of view: 75°

Video frame rate: 25 fps

Image group capture:

- Method: video photogrammetry. Rate: typically 2 Hz, up to 25Hz
- Max. capture time: 60s with an image group size of appr. 60MB

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SinoGNSS®
By ComNav Technology Ltd.

Jupiter Laser Visual RTK

Universe Series GNSS Receiver

LASER RTK - INNOVATION MAKES A DIFFERENCE

Features

Seamless Fusion of Laser & Dual-Camera for Next-Level Surveying & Stakeout

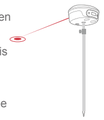
Jupiter, an IMU GNSS receiver with advanced laser sensor and dual-camera technologies, is one of the most highly-configured measurement tools on the market. Whether used for surveying or stakeout, it delivers an immersive user experience.

SATELLITE TRACKING		
GPS	L1C/A, L1C, L2P, L2C, L5	
BDS	B1I, B2I, B3I, B1C, B2a, B2b	
GLONASS	L1, L2, L3	
Galileo	E1, E5a, E5b, E6c, E5 AltBOC	

SATELLITE TRACKING		
QZSS	L1C/A, L2C, L5,L1C	
IRNSS	L5	
SBAS	L1C/A	

Laser Technology

Jupiter's precise green laser, visible even in daylight, enables accurate measurement of points where using range pole is not feasible. Additionally, the built-in camera overcomes the challenge of targeting points that are too distant to be seen with naked eyes, making field operations faster and more efficient.



Visual Stakeout

With Jupiter's camera, surveyors gain a 3D visual view on Survey Master software. By simply following the directional arrow and real-time distance, with the stakeout point marked directly on the ground, even less experienced operators can stake out points in one go, without moving the pole back and forth.

Super Datalink

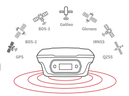
Jupiter's compatibility has been further enhanced. The advanced datalink allows to work with all type GNSS receivers of ComNavTech and receivers of other mainstream brands, and supports a number of protocols, incl. Transparent /TT450S/South/Mac/SNLonglink. With SNLonglink, 15km working range is achievable under ideal conditions.

Auto-IMU

Jupiter is equipped with Auto- IMU, eliminating the need for manual initialization, supporting automatic calibration, and streamlining the operations in the field. It continues to support 120° compensation in conventional, laser and visual modes.

Full-Constellation Multi-Frequency

With 1668 channels and 60+ satellite tracking capabilities, Jupiter also supports Has&B2b PPP service. Getting fixed in seconds boosts your productivity.



OLED Color Screen

The OLED color screen visually displays the number of satellites searched, fixed state, on/off state, power and other information, which is convenient for surveyors to control.

Jupiter Laser Visual RTK

Jupiter Laser Visual RTK is a high-end GNSS receiver that integrates cutting-edge GNSS, IMU, Laser and dual-camera technologies. Building on the advanced laser technology of the Universe Series, Jupiter also incorporates SinoGNSS's latest visual stake-out technology. This combination brings out immersive surveying and stakeout experiences, even in previously hard-to-reach, signal-blocked, or dangerous field.

Equipped with the latest K8 platform, Jupiter tracks 1668 channels for all running and existing constellations. The built-in IMU sensor supports up to 120°tilt compensation, in conventional, laser and visual mode.

R60 Data Collector

Qualcomm | 1080P Resolution | 5.5" Display | Full QWERTY | Android 12 | LARGE CAPACITY | IP67