

## Software

### Survey Master

Compatible with most of Android devices

Easier survey workflow via Wizard function

Support up to 60° IMU tilt compensation

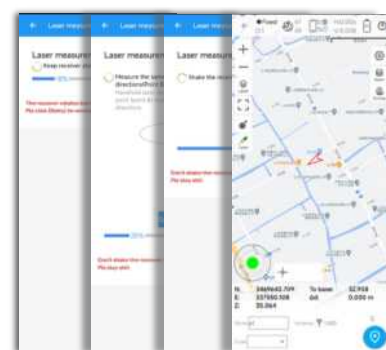
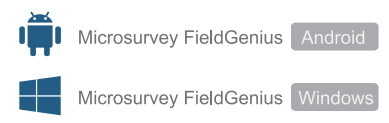
Support all survey modes, including Static, PPK and RTK

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

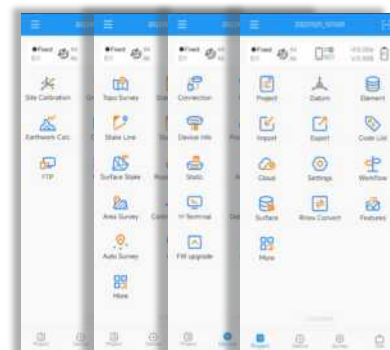
Support CAD import and directly use for stake out operations

Support Convert function from ComNavBinary raw file to RINEX

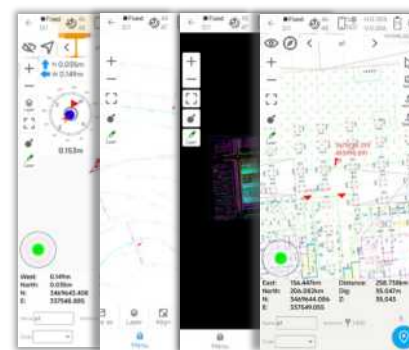
#### Optional



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

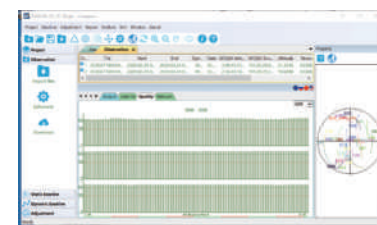
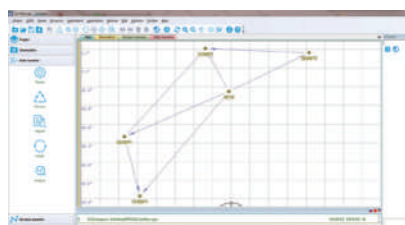
Support GNSS observation data in RINEX and ComNav Raw Binary Data format

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



## Venus Laser RTK

GNSS Surveying System

Ver.2022.11.20

### Signal Tracking

Channel: 1590  
 GPS: L1C/A, L1C, L2P, L2C, L5  
 BDS: B1I, B2I, B3I, B1C, B2a, B2b  
 GLONASS: G1, G2, G3  
 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: ≤45s  
 Hot start: ≤15 s  
 RTK Initialization Time: <10s(Baseline≤10km)  
 Initialization reliability: ≥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
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	≤5.5cm (2m range, ≤60°Tilt in handheld 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, VTC, GST; PTNL, PJK; PTNL, AVR; PTNL, GGK  
 -ComNav Binary update to 20 Hz

### Electrical and Battery

Voltage: 5/9V  
 Power Consumption: 1.45W  
 Over Current Protection Voltage: 30V, VBUS 9.99V  
 Charging Time: <4h(QC2.0)  
 Working time: ≥20h

### Communication

Bluetooth: 5.0 Dual-Mode Bluetooth  
 NFC: NFC Fast Connection  
 Interface: USB TYPE-C

### Environmental Specification

Working Temperature: -20 C~+60 C  
 Storage Temperature: -30 C~+70 C  
 Humidity: 100% non-condensing  
 Water- & Dustproof: IP67  
 Shock: Survive a 2m drop onto the concrete  
 Vibration: MIL-STD-810G Method 514.6 procedure I

### Physical Specification

Housing Material: Plastic  
 Dimension: 80±1mm(L), 70±1mm(W), 150±1mm(H)  
 Weight: 380g  
 Range Pole Interface: M8 thread

### Laser Specification

Range: 15m  
 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 C~+50 C  
 Storage Temperature: -30 C~+60 C

Specifications subject to change without notice.

**SinoGNSS**  
 By ComNav Technology Ltd.



# Venus Laser RTK

## Universe Series GNSS Receiver



LASER RTK - INNOVATION MAKES THE DIFFERENCE

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




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## Features

### LASER DISTANCE METER ENABLES RODLESS SURVEY

Innovatively equipped with a laser distance meter, Venus makes rod-free stakeout and measurement possible, greatly expanding the working scope.

SATELLITE TRACKING			SATELLITE TRACKING		
	GPS	L1C/A, L1C, L2P, L2C, L5		QZSS	L1C/A, L2C, L5, L1C
	BDS	B1I, B2I, B3I, B1C, B2a, B2b		IRNSS	L5
	GLONASS	G1, G2, G3		SBAS	L1C/A
	Galileo	E1, E5a, E5b, E6c, E5 AltBOC			

### Laser Technology

The fusion of GNSS, IMU and laser technologies pushes working efficiency to the limits and ensures accuracy.



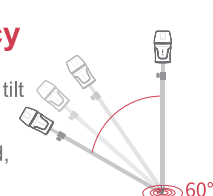
### Full-Constellation Multi-Frequency

With 1590 channels and 50+ satellite tracking capabilities, Venus also supports SBAS PPP service. Getting fixed in seconds boosts your productivity.



### Third Generation IMU Improves 30% Efficiency

The 3rd generation IMU supports 60° tilt compensation, allows 10-second initialization. No bubble check needed, survey as you will.



### Handheld Design, Easy to Carry

Venus is ergonomically designed for easy carrying. The 380g GNSS receiver with sophisticated structure minimizes user fatigue.



### Robust Design

Built to IP67 standards, Venus is waterproof and dustproof, completely workable even in harsh environments.



### NFC Connection

Venus Laser RTK can be connected automatically with a single touch.



## Venus Laser RTK

Venus is the world's first GNSS receiver combined with laser and IMU. Laser distance meter makes rodless survey possible, enabling GNSS surveying beyond usual constraints. IMU achieves 60° tilt compensation in both traditional and laser modes, supports free calibration and 10-second initialization.

Integrated the SinoGNSS K8 platform, Venus features full-constellation with 1590 channels, providing high-precision measurement results even in harsh environments.



## R60 Data Collector

Patent for design, ergonomic operation

With advanced NFC, tedious matching is a thing of the past

9000mAh Li-Polymer Battery for continuously working 30+ hours  
QC3.0, 0.5h charging enables all-day use

Qualcomm 8-core processor **Android 12** operation system with GMS certificate

4+64GB Memory  
Open CAD drawing in seconds

5.5 inch sunlight readable screen  
1080P HD display

Survive a 1.6m drop onto the concrete  
Anti-static design, excellent heat dissipation

Physic **full QWERTY** keyboard speeds up working efficiency

5.0 Dual-mode Bluetooth, ultra long range Bluetooth connection

