

Software

Survey Master

Compatible with most of Android devices

Easier survey workflow via Wizard function

Support up to 60° IMU tilt compensation

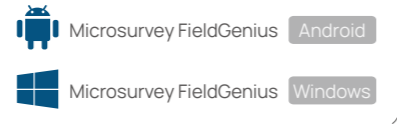
Support all survey modes, including Static, PPK and RTK

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

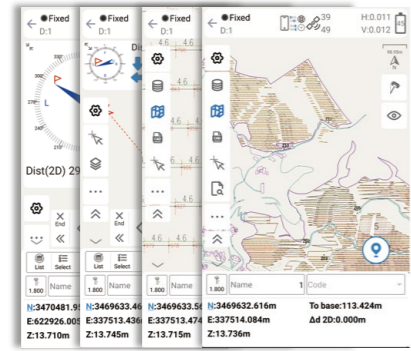
Support CAD import and directly use for stake out operations

Support Convert function from ComNav Binary raw file to RINEX

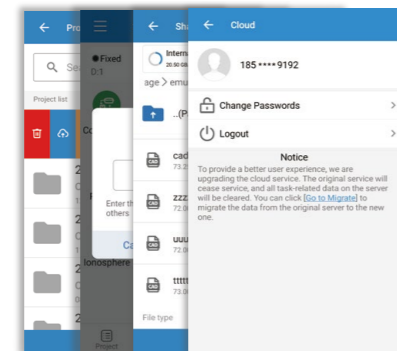
Optional



Laser Visual Survey & Stakeout



CAD Basemap & Stake



Cloud Service

Post-processing Software

SinoGNSS Compass solution software

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

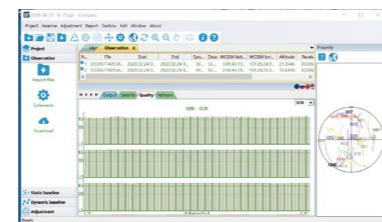
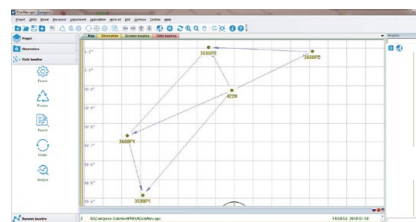
Support GNSS observation data in RINEX and ComNav Raw Binary Data format

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



Mercury Laser RTK

GNSS Surveying System

Ver.2026.04.10

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
 PPP: B2b & HAS
 L-Band

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	Horizontal 3 mm + 0.1 ppm Vertical 3.5 mm + 0.4 ppm
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(GPS only),CMR+(GPS only)
 Position Data Output: - ASCII: NMEA-0183 GSV, RMC, HDT, GGA, GSA, ZDA, VTG, GST; PTNL, PJK, GKG
 -ComNav Binary update to 20 Hz

Electrical and Battery

Voltage: 7.2V
 Li-ion Battery Capacity: 5000mAh
 Power Consumption: 1.8W
 Working Time: 15h
 Interface: Type-C
 Memory: 4 GB²

Communication

1 Virtual Serial Port: Baud rate up to 921,600 bps
 WIFI: 802.11 a/b/g/n, 5GHz
 Position data output rates: 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz
 Bluetooth[®]: V 4.0 protocol, compatible with Windows OS and Android OS
 4G Module
 B1/B3/B5/B7/B8/B20/B28
 Screen: 1.6-inch color touchscreen, providing intuitive data display and flexible work configuration
 Auto-IMU integrated for tilt survey, up to 120° tilt with 2.5 cm accuracy
 Equipped with three buttons: Power, Function, and Measurement

Environmental Specification

Working Temperature: -40 C to +65 C (-72°F to 117°F)
 Storage Temperature: -40 C to +85 C (-72°F to 153°F)
 Humidity: 100% non-condensing
 Water & Dustproof: IP68
 Shock: Survive a 1.5m drop onto the concrete

Physical Specification

Housing Material: Aluminium magnesium alloy
 Dimension: Φ 8.1cm × 7.6cm × 17.1cm
 Weight: 550g with internal battery

Laser Specification

Range: 50m
 Laser Safety: Class 3R
 Accuracy(room temperature): (3-5)mm + 1ppm
 Measuring Frequency: Classic Value: 3Hz
 Maximum Value: 5Hz

Camera Specification

Pixel size: 1600*1300
 Field of view: 47°
 Video frame rate: 30 fps
 Image group capture:
 - Rate: typically 2 Hz, up to 25Hz
 - Max. capture time: 60s with an image group size of appr. 60MB

1. PPP Service is optional.
 2. Memory is expandable.

SinoGNSS



Mercury Laser RTK

Universe Series GNSS Receiver

LASER RTK - INNOVATION MAKES THE DIFFERENCE

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Features

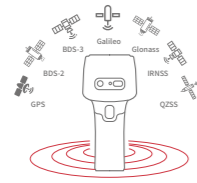
UNIVERSE SERIES HANDHELD DEVICES: A NEW PEAK ACHIEVEMENT

Designed with enhanced ergonomics for ultimate comfort during use, the latest laser stability technology ensures every measurement is more accurate and reliable, allowing users to easily tackle challenges in any environment.

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			

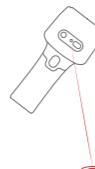
Full-Congellation Multi-Frequency

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



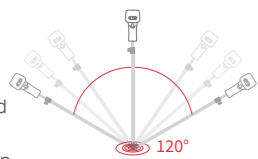
Laser Technology

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



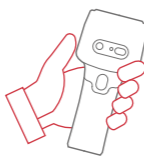
Auto-IMU

Mercury 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.



Handheld Design, Easy to Carry

Mercury is ergonomically designed for easy carrying. The 550g GNSS receiver with sophisticated structure minimizes user fatigue.



Robust Design

Built to IP68 standards, Mercury is waterproof and dustproof, completely workable even in harsh environments.



NFC Connection

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



One-Click Data Sync

Mercury works seamlessly with Survey Master, streamlining workflows and upgrading data management. From coordinate system setup to real-time cloud sharing, everything is unified for maximum efficiency.



Visual Stakeout

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.



Mercury : Advanced Pole-Free Surveying Solution

Mercury Laser RTK sets a new standard in surveying with true Pole-Free operation. Powered by the next-generation K9 chip and advanced IMU algorithms, it delivers high-precision measurements without a survey pole or controller. By combining laser technology with real-time visualization, Mercury makes surveying faster, more flexible, and intuitive.

This all-in-one device integrates a high-performance geodetic antenna, long-range laser, and high-definition camera, ensuring accurate measurements up to 50 meters. Its ergonomic handheld design, touch-screen, and quick measurement button provide comfortable, efficient operation even in complex environments.

With versatile multi-mode operation, Mercury adapts to any surveying scenario. Real-time visualization, automatic point photo recording, and flexible connectivity make fieldwork smarter, more reliable, and easier than ever, empowering professionals to work efficiently anytime, anywhere.



R80 Data Collector

