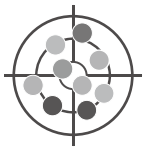# V30 PLUS

GNSS RTK SYSTEM

V30 PLUS

GNSS RTK SYSTEM

With its built-in multi-constellation GNSS engine, smaller dimension, and industrial-grade compact design, V30 Plus provides a flexible GNSS working solution. It also integrates with the WebUI, WIFI, Bluetooth and 4G module to make data management and transmission more convenient and faster. Accompanied by Hi-Target professional field surveying software and its up-to-18-hour working time, V30 Plus meets users' needs of efficient and convenient surveying experience.

83.5mm / **164**mm / **1200**g
HEIGHT / DIAMETER / WEIGHT

Multi-Constellation GNSS Engine

- Tracking full-constellation satellites to achieve accurate and stable positioning accuracy.
- Provides reliable results in harsh environments with its unique GNSS positioning algorithm.

Tilt Survey and Electronic Bubble

- The optimized tilt survey algorithm and procedure electronic bubble can achieve corner points measurement by shaking the receiver.
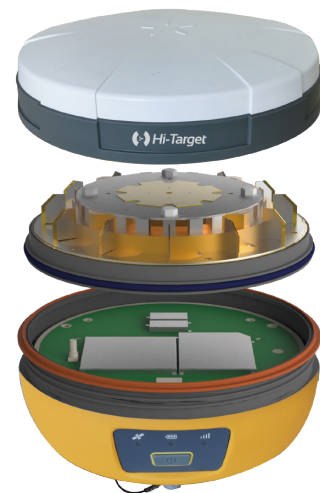
Hi-Fix Technology

- Reduce downtime in the field with continuous RTK coverage during correction outages from an RTK base station or VRS network.
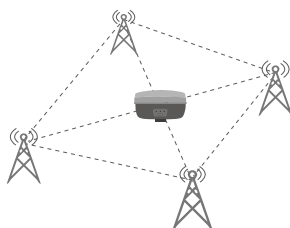
Full-frequency air antenna

- Stable full-wave GNSS antenna with excellent noise resistance.
- Supports a wide range of satellite tracking signals.
- Reduce the multipath effect influence.

Smart application

- Built-in Linux system and 8G storage.
- Intelligent management of the static data.
- Intelligent voice assistant to guide field operations.
- Standard Rinex data and Hi-Target raw data recorded simultaneously.

Data communication

- Compatible with other vendors' communication protocols.
- Long transmission distance, and good electromagnetic compatibility.
- Perfectly compatible with a variety of CORS systems.

iHand55
Professional Field Controller

The iHand55 Handheld Controller is a professional field controller with a big vision. More features of the latest Hi-Survey Software contribute to achieving high intelligence. Keeping robust and reliable in fieldwork under any conditions, iHand55 is a perfect choice for your survey work.

─ KEY FEATURES

5.5" sunlight readable display capacitive touch screen for fingers or stylus.

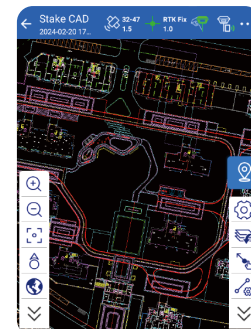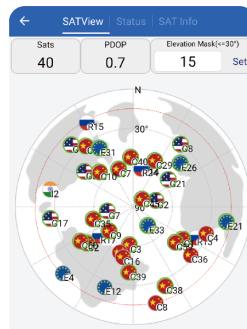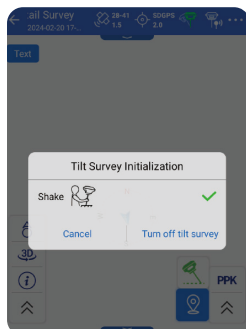QWERTY full keyboard designed, convenient for different measurement application scenarios.
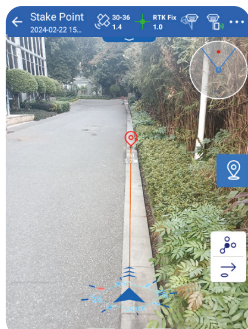
Android 11 operating system equipped to maintain the productivity of numerous survey projects and data.

Hardware Configuration	OS: Android 11 Processer: CPU: 8 core; 2.0 GHZ Storage: 3GB RAM+32GB ROMT-Flash memory card, up to 128GB Display: 720*1440, 5.5", 500 nit, bright Outdoor Color capacitive multi-touch screen Input Configuration: Qwerty full keyboard, number / letter separate, professional custom smart input method
Communication	Cellular mobile: 4G, Dual SIM WiFi: IEEE 802.11 a/b/g/n, Wapi, AP Bluetooth: Built-in Bluetooth (5.1+BLE) NFC USB: USB, TypeC interface, OTG
Physical	Weight: 406g(within battery) Size: 221 mm*78 mm*16.5 mm Operating temperature: -30℃~+60℃ Storage temperature: -40℃~+80℃ Free fall:1.2 m Shock and vibration: MIL-STD-810H
GNSS Features	GNSS: GNSS antenna, GPS, GLONASS, BDS, AGPS, 20 channels
Power Supply	Battery: 9200 mAh internal Duration: 15 hours

Hi-Survey
Survey Data Collection Software

Hi-Survey is an Android software that is designed for all types of land survey and road engineering projects in the field. It is compatible with Hi-Target professional controllers, Android phones, tablets and other third-party Android devices. It is a sleek and easy-to-use software that supports the operating of big data with built-in tools. With customized industrial application solutions, more possibilities are created for users.

KEY FEATURES ─

High accuracy and good reliability with various algorithms even in tough environments.
▶Supporting tilt survey, quasi-dynamic technology, electronic bubble, detail survey, time mode static survey, etc..

Integrated professional measurement functions for engineering application.
▶ Providing road functions, DTM surface operations, Cross-projects points selection, DXF and DWG format, Google map, OGC map service of WMS, WMTS, and third-party rangefinders, etc..

Strong interaction function to empower every surveyor.
▶AR stakeout, QR code scanning, COGO, FTP transmission, multi-format support, etc..

PERFORMANCE SPECIFICATIONS

Satellite Signals Tracked Simultaneously[1]

Channels..1408
GPS..L1C/A, L1C, L2P(Y), L2C, L5
BDS....................................B1I, B2I, B3I, B1C, B2a, B2b
GLONASS...L1, L2, L3
Galileo E1, E5a, E5b, E6
QZSS...L1, L2, L5, L6*
NavIC..L5
SBAS..L1, L2, L5

Positioning Performance[2]

High-precision static GNSS Surveying

Horizontal .... 2.5mm + 0.1ppm RMS
Vertical .... 3.5mm + 0.4ppm RMS

Static and Fast Static

Horizontal...2.5 mm + 0.5 ppm RMS
Vertical...5 mm + 0.5 ppm RMS

Post Processing Kinematic (PPK / Stop & Go)

Horizontal... 8mm+1ppm RMS
Vertical... 15mm+1ppm RMS
Initialization time.. Typically 10 min for base and 5 min for rover
Initialization reliability................................... Typically > 99.9%

Code Differential GNSS Positioning

Horizontal.. 25cm+1ppm RMS
Vertical.. 50cm+1ppm RMS
SBAS.. 0.5m(H), 0.85m(V)

Real Time Kinematic (RTK)

Horizontal……….. 8mm+0.5ppm RMS
Vertical……….. 15mm+0.5ppm RMS
Initialization time .... Typically <10s
Initialization reliability.. Typically > 99.9%
Positioning rate...1 Hz, 5 Hz and 10 Hz

Time to first Fix

Cold start………...< 45 s
Hot start………...< 30 s
Signal re-acquisition………...< 2 s

Hi-Fix[3]

Horizontal……….....................................RTK + 10 mm/minute RMS
Vertical……….....................................RTK + 20 mm/minute RMS

Tilt Survey Performance[4]

Additional horizontal pole-tilt uncertainty typically less than
8mm+0.7mm/°tilt (0° ~ 60°)

Communication

Internal UHF Radio

Frequency.. 403–473MHz
Channels ....116 (16 adjustable)
Working range... 3-5km typical, 8-15km optimal

Transmitting power...1W/2W/5W Adjustable
Supports multiple protocols: HI-TARGET, TRIMTALK450S, TRIMMARK III,
TRANSEOT, SATEL-3AS, etc.

External UHF Radio

Frequency...403-473MHz
Channels 116
Transmitting power...10W/35W adjustable
Supports multiple protocols: TRIMTALK450S, TRIMMARK III, TRANSEOT

Network Communication

Bluetooth .... 4.0/2.1+EDR, 2.4GHz
4G Network .... TDD-LTE, FDD-LTE, WCDMA, EDGE, GPRS, GSM
Wi-Fi frequency 2.4GHz
Wi-Fi protocol 802.11b/g/n

Power Supply

Internal Battery[5]

Internal 7.2V / 5100mAh lithium-ion rechargeable and removable battery
RTK Rover (UHF/Cellular) for 18 hours

External Power

6-28V DC external power input (5-pin port) with over-charge protection
Power consumption……………………………….......………………… 4.2W

Physical

Dimensions(W×H)..............................……………..........……. 164mm×83.5mm
Weight ....……....……. ≤1.4kg (includes battery)
Data storage ....………...…....... 8G internal storage

I/O Interface

1 × Mini USB port
1 × TNC antenna connector
1 × DC power input (5-pin)
1 × SIM card slot

Control Panel

Physical button 1
LED lamp ....Satellite, Signal, Power

Environment

Water/Dustproof IP67
Free fall................................ Survive from 2m natural fall on to ground
Humidity..100% condensing
Operation temperature ....-45℃~+75℃
Storage temperature ....-55℃~+85℃

Data Formats

Output rate 1-20Hz
Static data format...GNS, Rinex
Network model...................................VRS, FKP, MAC, Support NTRIP protocol
Message type .... RTCM2.X, RTCM3.X, CMR
Navigation outputs ASCII..NMEA-0183

*Description and Specifications are subject to change without notice.
1.QZSS L6 can be provided by firmware upgrade.
2.The measurement accuracy, precision, reliability and initialization time depend on various factors, including tilt angle, number of satellites, geometric distribution, observation time, atmospheric conditions and multi-path validation, etc. The data are derived under normal conditions.
3.Accuracies are dependent on GNSS satellite availability. Hi-Fix Positioning ends after 5 minutes without differential data.Hi-Fix is not available in all regions, check with your local sales representative for more information.
4.Irregular operations such as rapid rotation and high-intensity vibration may affect the inertial navigation accuracy.
5.The battery operating time is related to the operating environment, operating temperature and battery life.

24O124

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