

V30 PERFORMANCE SPECIFICATIONS

MEASUREMENTS

- 220 Channels
- High precision multiple correlator for GNSS pseudo range measurements
- Unfiltered, unsmoothed pseudo range measurements data for low noise, low multipath error, low time domain correlation and high dynamic response
- Very low noise GNSS carrier phase measurements with <1 mm precision in a 1 Hz bandwidth
- Signal-to-Noise ratios reported in dB-Hz

Satellite signals tracked simultaneously

GPS Simultaneous L1, L2C/P, L5
 GLONASS Simultaneous L1, L2
 SBAS L1 C/A, L5 (EGNOS, WAAS, MSAS, GAGAN, QZSS)
 BDS B1, B2, B3

POSITIONING PERFORMANCE¹

Static and Fast Static GNSS surveying

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

Post Processing Kinematic (PPK / Stop & Go) GNSS surveying

Horizontal 1cm+1ppm RMS
 Vertical 2.5cm+1ppm RMS
 Initialization time typically 10 minutes for base while 5 minutes for rover
 Initialization reliability typically > 99.9%

Realtime Kinematic (RTK) surveying

Horizontal 8mm+1ppm RMS
 Vertical 15mm+1ppm RMS
 Initialization time typically < 8 seconds
 Initialization reliability typically > 99.9%

Code Differential GNSS positioning

Horizontal 25cm+1ppm RMS
 Vertical 50cm+1ppm RMS
 SBAS² 0.50m Horizontal, 0.85m Vertical

HARDWARE

Physical

Dimensions (W x H) 19.50cm x 10.40cm (7.68 in x 4.09 in)
 Weight 1.3kg (2.86lb) with internal battery, internal radio, standard UHF antenna
 Operating temperature -45°C to +65°C (-49°F to +149°F)
 Storage temperature -55°C to +85°C (-67°F to +185°F)
 Humidity 100%, considering Water/dustproof IP67 dustproof, protected from temporary immersion to depth of 1m (3.28ft).
 Shock and Vibration Designed to survive a 3m(9.84ft) nature fall onto concrete.

Electrical

Power 6V to 28V DC external power input
 Power consumption 2.5W
 Automatic Switching between internal power and external power
 Rechargeable, removable 7.4V, 5000mAh Lithium-Ion battery in internal battery compartment

Internal battery life

Static 13 - 15 hours
 RTK Rover (UHF/GPRS/3G) 10 - 12 hours
 RTK Base 8 - 10 hours

I/O interface

1 x Bluetooth
 1 x standard USB2.0 port
 2 x RS232 serial port

2 x DC power input (8-pin & 5-pin)

COMMUNICATION AND DATA STORAGE

GPRS/GSM or 3G

Fully integrated, fully sealed internal GPRS/GSM or 3G Network RTK (via CORS) range 20-50km

HI-TARGET internal UHF radio (standard)

Frequency 460 MHz with 116 channels
 Transmitting power 0.1W, 1W, 2W adjustable
 Transmitting Speed Up to 19.2Kbps
 Working range 3-5Km typical, 8-10km optimal

HI-TARGET External UHF radio (standard)

Frequency 460 MHz with 116 channels
 Transmitting power 5W, 10W, 20W, 30W adjustable
 Transmitting Speed Up to 19.2Kbps
 Working Range 8-10Km typical, 15-20km optimal

Support other external communication device

For example, external GSM modem.

Data storage

64MB internal memory

Data formats

(1Hz positioning output, up to 50 Hz - depends on installed option)
 CMR: sCMRx, CMR, CMR+input and output
 RTCM: RTCM 2.1, 2.2, 2.3, 3.0, 3.1, 3.2 input and output
 Navigation outputs ASCII: NMEA-0183 GSV, AVR, RMC, HDT, VGK, VHD, ROT, GSK, GGA, GSA, ZDA, VTG, GST, PJT, PJK, BPO, GLL, GRS, GBS
 Navigation outputs Binary: GSOF
 1 Pulse Per Second Output

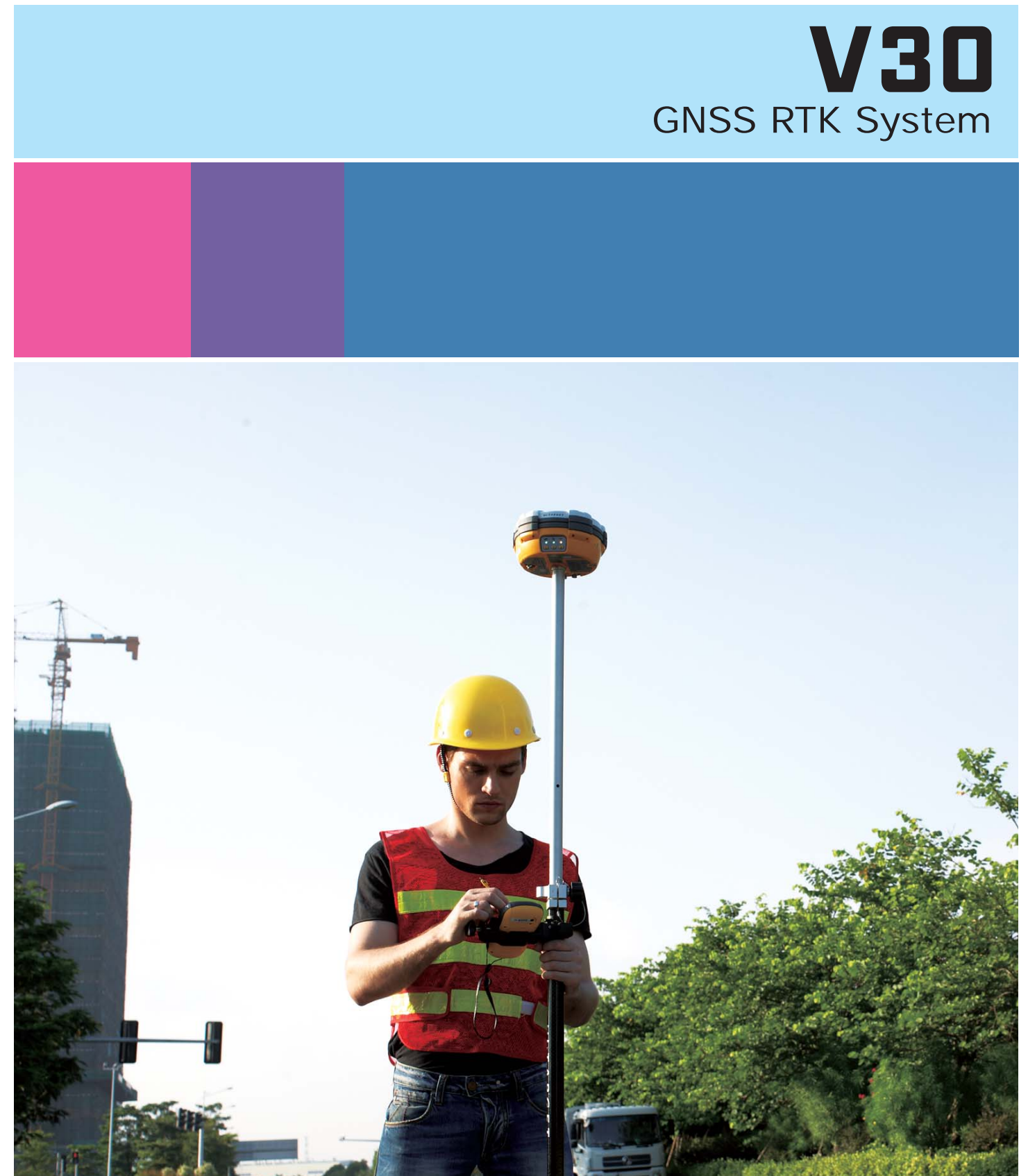
¹Precision and reliability may be subject to anomalies due to multipath, obstructions, satellite geometry, and atmospheric conditions. The specifications stated recommend the use of stable mounts in an open sky view, EMI and multipath clean environment, optimal GNSS constellation configurations, along with the use of survey practices that are generally accepted for performing the highest-order surveys for the applicable application including occupation times appropriate for baseline length. Baselines longer than 30 km require precise ephemeris and occupations up to 24 hours may be required to achieve the high precision static specification.
²GPS only and depends on SBAS system performance. FAA WAAS accuracy specifications are <5 m 3DRMS.

Descriptions and specifications are subject to change without notice

HI-TARGET

V30

GNSS RTK System



HI-TARGET

Hi-Target Surveying Instrument Co. Ltd

ADD: Building 13, Tian'An Technology Zone HQ Center,

No.555, North of Panyu RD, Panyu District, 511400

Guangzhou, China

www.hi-target.com.cn +86-20-28688296 info@hi-target.com.cn

Hi-Target AUTHORIZED DISTRIBUTION PARTNER





V30 GNSS RTK SYSTEM

The V30 GNSS RTK system is designed to meet high quality standards at an affordable price. It is outstanding in its class, with a rugged design and user-friendly functions.

Key Features

Multi-constellation tracking

- 220 tracking channels.
- Supports GPS, GLONASS, BDS, SBAS.
- NGS approved GNSS antenna.

Intelligent operation

- Equipped with a smart speaker guiding the whole operation.
- Multi one-button functions make fieldwork easier, such as auto base setup by one button, the rover can get fix solution once it is turned on.

Diversify RTK application

Optional transceiver UHF radio

- The transceiver UHF radio enables the working mode to be switchable between base and rover.
- Removable internal UHF radio enables users to fix or exchange simply.

Seamless operation in CORS system

- Built-in GPRS/GSM/3G module ensures that the V30 works perfectly with network RTK positioning.

Long-life battery

- Powered by 5000mAh Li-ion battery.
- Static working time 13 - 15 hours.
- RTK Rover (UHF/GPRS/GSM) working time 10 - 12 hours.
- RTK Base working time 8 - 10 hours.

Rugged and unique design

- IP67 dust/water protection.
- Withstands 3-meter natural fall onto concrete.
- Rapid tracking and perfect avoidance or reduction of obstruction and multipath effect to ensure superior positioning capability.

iHand20 Field Controller

- Android 4.2 OS.
- Durable keyboard.
- Lightweight and anti-drop design, IP68 dust/water protection.
- Preinstalled intelligent Hi-Survey software.
- Ultralong battery life.

Omini MP Field Controller

- Microsoft Windows Mobile 6.5 OS.
- Preinstalled free and user-friendly Hi-RTK software.
- Fully compatible with Carlson SurvCE, MicroSurvey FieldGenius, Digiterra Explorer, Esri ArcPad, etc.
- Lightweight and anti-drop design, IP65 dust/water protection.

Post-processing Software

HI-TARGET Geomatics Office (HGO) software

- Provides total GPS/GLONASS/BDS processing solution.
- Standard Rinex data format and Hi-Target raw data format can be processed flexibly and easily.
- Easy to operation.



CONTROLLER PERFORMANCE SPECIFICATIONS

	OS: Android 4.2 Processor: MT6589, 1.2GHz, 4core RAM: 1GB Flash memory: 4 GB	OS: Windows Mobile 6.5 Processor: 806MHz RAM: 256MB Flash memory: 8 GB
Communication interface	Bluetooth Mini USB WIFI: 802.11b/g MicroSD card slot, support up to 32 GB Dual Sim Dual Standby, support 2G and 3G	Bluetooth Mini USB WIFI: 802.11b/g MicroSD card slot, supports up to 32GB Built-in 3G module
	3.7V, 6300mAh lithium battery, up to 25 hours continuous work.	3.7V, 3100mAh lithium battery, up to 8 hours continuous work.
	Physical keyboard. Size: 213mm x 89mm x 35mm Weight: 520g (with battery) Operating temperature: -30°C to +65°C Storage temperature: -45°C to +75°C Water/dustproof: IP68 Anti-shock: 1.2m natural fall	10 keys, include the four arrow keys Size: 152mm x 82mm x 32mm Weight: 315g (with battery) Operating temperature: -20°C to +70°C Storage temperature: -30°C to +80°C Water/dustproof: IP65 Anti-shock: 1.5m natural fall