

## PERFORMANCE SPECIFICATIONS

### Satellite Signals Tracked Simultaneously

Channels.....	336
GPS.....	L1C/A, L2E, L2C, L5
BeiDou.....	B1, B2, B3 <sup>1</sup>
GLONASS.....	L1C/A, L1P, L2C/A, L3 CDMA <sup>2</sup>
Galileo <sup>3</sup> .....	E1, E5A, E5B, E5AltBOC, E6 <sup>2</sup>
IRNSS.....	L5
SBAS.....	L1C/A, L5(QZSS, WAAS, MSAS, GAGAN, EGNOS)
Global correction service.....	Hi-RTP (optional)

### POSITIONING PERFORMANCE

#### High-Precision Static

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

##### Single Baseline

Horizontal.....	8mm+1ppm RMS
Vertical.....	15mm+1ppm RMS

##### Network RTK(VRS,FKP,MAC)

Horizontal.....	8mm+0.5ppm RMS
Vertical.....	15mm+0.5ppm RMS
Initialization time.....	Typically 2-10s
Initialization reliability.....	Typically > 99.99%

#### Tilt Survey Performance

2cm accuracy in the inclination of 30 degree

## HARDWARE

### Physical

Dimensions (W x H).....	158mm x 98mm (6.22inch x 3.86inch)
Weight.....	lighter than 1.3kg (2.65lb) within internal battery
Operation temperature.....	-40°C~+75°C (-40°F~+167°F)
Storage temperature.....	-50°C~+85°C (-58°F~+185°F)
Temperature control.....	Auto-adjust the working power to maintain the temperature
Humidity.....	100%, condensing
Water/dustproof.....	IP67 dustproof, protected from temporary immersion to depth of 1m (3.28ft)

Shock and vibration.....	MIL-STD-810G, 514.6
Anti-salt spray.....	MIL-STD-810G, 509.4, 96h
Free fall.....	MIL-STD-810G, 516.6, designed to survive a 2m(6.56ft) natural fall onto concrete

### Electrical

6V to 28V DC external power input(5-pin port), with over-discharge protection power consumption 4.4W Automatic switching between internal power and external power

### Control Panel

Physical button.....	1
Display.....	240 x 240 pixel, 261ppi
Touchscreen.....	Support glove mode and wet-finger mode

### Internal Battery

7.4V, 6800mAh lithium-ion rechargeable and removable battery.  
RTK rover(UHF/Cellular) for 10 hours.  
Power indicator embedded.  
Quick charge within 3.5 hours.

### I/O Interface

Bluetooth 4.0/2.1+ EDR, 2.4 GHz. USB 2.0 port with OTG function. 1 SMA antenna connector. 1 DC power input(5-pin). 1 SIM card slot  
Near Field Communication(NFC)

### Communication

#### Network Communication

Full band support for cellular mobile network(LTE, WCDMA, EDGE, GPRS, GSM).  
2.4GHz Wi-Fi, supports the standard protocol 802.11 b/g/n. Network RTK(in CORS) range is 20-50km.

#### Internal UHF Transceiver Radio

Frequency.....	403~473MHz
Transmitting power.....	1~4W Hi-Target Advanced Radio
Supports protocols:	HI-TARGET, TRIMTALK450S, TRIMMARK III, SATEL-3AS, TRANSEOT, etc.
Working Range.....	Typically 3~5km, optimal 5~8km

#### External UHF Radio

Frequency.....	410~470MHz
Transmitting power.....	5W / 25W
Compatible with third party radio	
Working Range.....	Typically 8~10km, optimal 15~20km

## SYSTEM CONFIGURATION

### System

Data storage.....	Circulating 16GB Internal storage
	Record GNS and RINEX format simultaneously

### Data Formats

1Hz positioning output, up to 50Hz. CMR, RTCM2.X, RTCM3.0, RTCM3.1, RTCM3.2, Navigation outputs ASCII: NMEA-0183 GSV, AVR, RMC, HDT, VGK, VHD, ROT, GGK, GGA, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GRS, GBS. Binary: Trimble GSOF, NMEA2000

- 1.The hardware of this product is designed for Beidou B3 compatibility (trial version) and its firmware will be enhanced to fully support such new signals as soon as the officially published signal interface control documentation (ICD) becomes available.
  - 2.There is no public GLONASS L3 CDMA or Galileo E6 ICD. The current capability in the receivers is based on publicly available information. As such, Trimble cannot guarantee that these receivers will be fully compatible.
  - 3.Developed under a License of the European Union and the European Space Agency.
  - 4.Input only network correction.
- Descriptions and Specifications are subject to change without notice



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19S120

CE IP67 MIL-STD 810G

## Hi-Target Surveying Instrument Co. Ltd

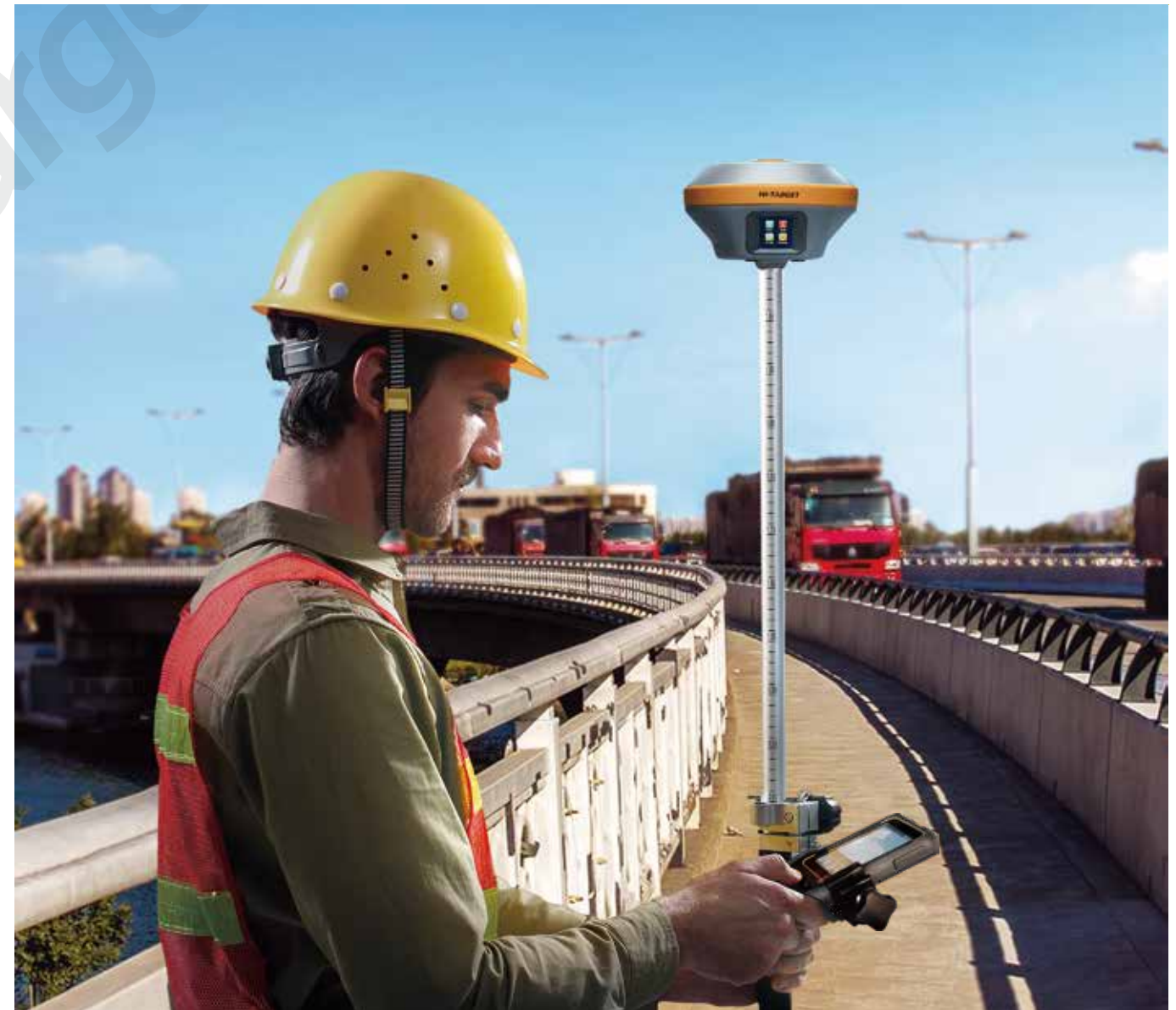
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# iRTK5 New



## iRTK 5 GNSS RTK SYSTEM

Benefiting from the next-generation GNSS engine, unlimited communication technology and innovative designs, iRTK5, the high quality scalable GNSS receiver, provides an industry-leading GNSS RTK surveying solution.



### Hi-RTP™ Global PPP Service

The correction source has been extended by Hi-RTP™ global correction service provided by Hi-Target. Enabling users to work without a base-station in rural or remote areas anywhere in the world.

- Provide centimeter-level global precision
- Harness all constellation signals from BDS, GLONASS, GPS, GALILEO
- More than 220 reference stations
- L band satellite radio/ internet broadcast



### Unlimited Communication 360° Omni-directional Antenna and Multi-protocol Radio

The top-mounted radio antenna extends the radio working range and enables full omni-directional communication, making the transmitting and receiving distance more than 20% longer. Multi-protocol radio, support Hi-Target, TRIMTALK450S, TRIMMARK III, TRANSEOT, SATEL-3AS, etc.

## Revolutionary Tilt Survey with Built-in IMU

Customer benefit from calibration free for tilt survey without centering. Once you reach the surveying points, immediately start the operation. Compared with bubble leveling, boost working efficiency by 20%.



Error less than 2 cm within 30° inclination



Resistance to the interference of magnetic disturbances, ensure high accuracy.

## Innovative Design



Reddot design award



Waterproof Touchscreen



Power Indicator



3rd Party Software



Web UI

## Hi-Survey Software



Brand new UI, easier to understand and use



Professional programs in road application such as side slop settingout, DTM stakingout etc



Basemap from online maps, DXF and SHP data



## iHand30

- Android 6.0
- Type C USB port
- 1.5GHz 64-bit CPU, 2G RAM, 16G Internal Storage
- WiFi & Cellular simultaneous working
- IP 67

Hardware Configuration	Communication Interface	Physical Features
OS: Android 6.0 Processor: MTK6737, 1.5GHz, 4 core RAM: 2G Storage: 16GB(up to 128GB external storage) Display: 3.7" , 640 x 480, sunlight readable Camera: 8MP, tag available Sensors: G-sensor, E-compass, barometer light-field sensor, gyro	Cellular mode: Dual SIM card, dual stand-by Cellular network: 4G TDD-LTE, FDD-LTE, WCDMA, GPRS Wi-Fi: IEEE 802.11b/g/n, 2.4GHz/5GHz Bluetooth: V2.0/4.0 USB: Type-C, supports OTG NFC	Weight: 440g(within battery) Size: 208mm*83mm*24mm Operating temperature: -20°C~+60°C Storage temperature: -30°C ~+70°C Free fall: 1.2m IP67