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PRODUCT CATALOG



Established since 1999, Hi-Target is the first professional high-precision surveying and mapping instrument brand to be successfully listed in China. Hi-Target produces a wide range of surveying equipment including GNSS receivers, CORS stations, TS, 3D Laser Scanners, GIS Data Collectors, UAV/UAS, and Hydrographic products to provide complete commercial solutions for various industries.

As the leading brand in the geospatial industry, Hi-Target invests heavily in research and development, on top of collaborating with more than 100 universities globally to bring the latest positioning technology and innovation for product development.

Hi-Target will continue to develop products and technologies to meet the ever-increasing demands of the Geospatial arena and you can count on us to be the best in our field with professional solutions and superior services.





iRTK 4

C-314-Target

New-Generation RTK System

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

KEY FEATURES



Next-Generation GNSS Engine

With the full-wave GNSS antenna and the next-generation GNSS engine, it supports full constellation by 336 tracking channels, enhanced initialization speed and anti-noise performance.

ProPoint (optional

Brand-New ProPoint GNSS engine allows you to expand the boundaries of GNSS performance, with at least 30 per cent improved performance in chanllenging GNSS environments.

Hi-RTP™



The Hi-Target Hi-RTPTM global correction service extends the correction source, enabling users to work in rural or remote areas in the world without a base station, getting rid of range restrictions. It can harness all constellation signals from BDS, GLONASS, GPS, GALILEO with global distribution of 220+ stations, providing centimeter-level positioning accuracy.

RTX (optional)

Connected to 3rd-party L-Band corrections services, the iRTK5 GNSS receiver provides accurate, sub-decimeter positioning in all regions where RTK Network, GSM coverage or traditional GNSS base station are not available.



Revolutionary Tilt Survey with Built-in IMU

You can benefit from the calibration-free tilt compensation technology, which means that once reaching the surveying points, you can immediately start the operation without centring and the error is less than 2 cm within 30° inclination. The function also provides resistance to the interference of magnetic disturbances, ensuring the high accuracy of data. Compared with bubble leveling, it has boosted working efficiency by 20%.



Hi-Fix Technology

It can reduce downtime in the field with continuous RTK coverage during correction outages from an RTK base station or VRS network.



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 distance of data transmitting and receiving extend to 20% longer. Multi-protocol radio, support Hi-Target, TRIMTALK450S, TRIMMARK III, TRANSEOT, SATEL-3AS, etc.



Web UI Management

A built-in Web management system for real-time controlling and free configuration of the receiver. Users can check the status and information, make basic settings, upgrade firmware and download data, etc.



HD Touch OLED Screen

The 1.3-inch newly-designed color touch screen with 240*240 resolution allows users to quickly check and set the receiver status for easier fieldwork.

A Simple but not Simplistic GNSS System

iRTK4 is a full-featured, intelligent GNSS receiver system equipped with an integrated new-generation full-frequency
antenna and advanced multi-channel engine, allowing users to attain accurate, reliable solutions. Users can also take
advantage of calibration-free tilt compensation technology without leveling the survey pole to collect point data in more
places. In addition, the Smart Base function in iRTK4 automatically pairs the Rover with the Base by using Hi-Target
global servers and ensuring communication by providing the best connection.

The iRTK4 system can maximize your productivity in unprecedentedly challenging environments with these powerful features and Hi-Survey Road Field Software.

KEY FEATURES



Advanced RTK engine





IMI

The calibration-free tilt compensation technology assists you to survey or stake out points accurately without leveling the pole, which boosts the working efficiency by 20 percent, with error that is less than 3cm within a 45° inclination.



Fast-Charge

With the fast-charge capability, it will take you only 50 minutes to charge the battery up to 50 per cent when using a 45-watt adapter, greatly saving your time.



Nehl I

It is a fast and efficient way to monitor and control hardware devices, offering accesses to the most commonly-used features via the existing web browser on your device, so there is no need to download or install any other software.

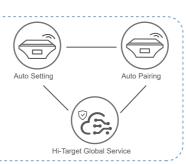


Hi-Fix Technology

It can reduce downtime in the field with continuous RTK coverage during correction outages from an RTK base station or VRS network.

Smart Base

Greatly optimizes the working mode setting, automatically pairing your Base and Rover by using the Hi-Target global service, extending your work range and saving you time.



New Generation External Radio

HDL-460A provides reliable data communications for mission-critical applications that require a combination of stability, supreme performance and long range.

Compact Network RTK System

V100 is an ultra-compact GNSS RTK receiver with exquisite design and structure. It has multi-frequency full
constellation technology, dual-mode Bluetooth and NFC, providing users with fast, efficient and reliable GNSS RTK
surveying solutions.

KEY FEATURES



Multi-constellation Tracking

It supports full constellation satellite signals tracked simultaneously with 220 channels, and can obtain stable and reliable location information in various environments.



Convenient Communication

Dual-mode Bluetooth 4.0 and NFC (Near Field Communication) technology provide a convenient way for connection and communication in field operations.



Powerful Battery

Powered by a 6300mAh high-capacity lithium-ion rechargeable battery, the V100 provides long-term uninterrupted measurement for users in data collector internet mode.



Smaller and Lighter

V100 is only sized as 127.5mm x 57mm and weighs less than 700g (including battery), which is smaller and lighter than traditional receivers and easier to carry.



V90 Plus

High-Performance RTK System

 With the highly-integrated structure and design, the V90 Plus combines network, Wi-Fi and built-in radio modules. High-Performance measurement solutions are provided by tilt measurement and quasi-dynamic acquisition techniques.



KEY FEATURES





Tilt Survey and Electronic Bubble

Achieves corner points measurement at an inclination of up to 30°. Optimized tilt survey algorithm and procedure with the electronic bubble can boost efficient fieldwork.



Various Communication Modes

Integrates various communication methods, including network, Wi-Fi, built-in radio and NFC. Different working modes for users according to the environment they work in.



Advanced Full Wave GNSS Antenna

220 tracking channels with NGS-approved full-wave GNSS antenna. The air dielectric is light and stable, designed for multipath mitigation.



Quasi-dynamic Technology

Self-developed technology of the GNSS RTK system, which greatly improves surveying accuracy in any harsh environments through bespoke algorithms.

Smart and Portable RTK System

V30 Plus GNSS RTK system adopts modularized design, so as to enable users to change into different differential
transmission modules according to various requirements. Meanwhile the designed self-diagnosis function can
automatically check the working status of all hardware and software, and arouse the problem part by its intelligent
voice messenger in case of some problems.

KEY FEATURES



Multi-Constellation GNSS Engine

Auto-selected satellite constellations, unique boundary control algorithm provide reliable location in harsh environments.



Tilt Survey and Electronic Bubble

The optimized tilt survey algorithm and procedure electronic bubble can achieve conner 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.



Practical Interface

Mini USB, USB Quick Upgrade Firmware, 8G Storage, Support OTG, NFC Quick Connection.



iHand30

Professional Field Controller

The iHand30 is a rugged field controller that is designed for data collection and GNSS device control. Based on the
Android operating system, it is compatible with Hi-Target professional software and third-party Android software.
Combining the physical keyboard with a touchscreen, it can boost efficient fieldwork and provide reliable solutions
for users.

KEY FEATURES



Ergonomically designed, lighter and easy to hold.



Industrial-grade protection that can withstand tough environments.



Convenient wireless data transmission via Bluetooth, Wi-Fi and 4G.



Quick charge, with a large capacity lithium battery to ensure a whole day work.



Hardware Configuration	OS: Android 10 Processer: MTK6762; CPU: 8 core; 4*A53 2.0GHZ, 4*A53 1.5GHZ; 2GBRAM+16GB ROM Display: 3.7", 640 x 480, sunlight readable Camera: 8MP, tag available Sensors: G-sensor, E-compass, barometer, light-field sensor, gyro		
Communication	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 Bluetooth: V2.0/4.0 USB: Type-C, supports OTG NFC		
Physical	Weight: 440g (within battery) Size: 208mm*83mm*24mm Temperature: -20°C ~ +60°C(Operating); -30°C~ +70°C(Storage) Free-fall: 1.2m		
GNSS Features	Channels: 20 GNSS: GPS, GLONASS, AGPS, Update rate: 1Hz		
Power Supply	Battery: Removable 3.7V lithium battery, 5200m/ Duration: 15 hours Quick charge within 3 hours		

Product Comparison

Model		iRTK5	V100	V90 PLUS	V30 PLUS	iRTK4
Picture			No.	Hebye I D S	the law	
	Channels	336	220	220	800 ⁺	800+
	GPS	•	•	•	•	•
	GLONASS	•	•	•	•	•
0 . 11:	BDS	•	•	•	•	•
Satellite Signal	GALILEO	•	•	•	•	•
Tracking	QZSS	•	•	•	•	•
3	SBAS	•	•	•	•	•
	PPP Service	•		0		
	Hi-Fix	•			•	•
	Cellular Mobile	•		•	•	•
	Wi-Fi	•		•	•	•
Communication	Bluetooth	•	•	•	•	•
	Internal Radio	•		•	•	•
	NFC	•	•	•	•	•
	Internal Data Storage	16GB	8 GB	16 GB	8GB	8GB
	Dimensions	158mm×98mm	127.5mm×57mm	153mm×83mm	164mm×83.5mm	156mm*77mm
Physical	Weight	1.2kg	0.7kg	1.25kg	1.4kg	1.2 kg
	Screen	•				•
	Internal Battery	6800mAh	6300mAh	5000mAh	5000mAh	6800mAh
	Operation Temperature	-40°C~+75°C	-40 °C ~+65 °C	-40°C ~+75°C	-45°C ~+75°C	-30°C ~+70°C
Environment	Water/ Dustproof	IP67	IP67	IP67	IP67	IP68
Oth	Tilt Survey	IMU		Tilt Survey 1.0	Tilt Survey 2.0	IMU
Others	WebUI	•			•	•
	Hi-Fix	•			•	•

Hi-Survey Road

Survey Data Collection Software



Hi-Survey Road 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..

ROAD ENGINEERING SURVEY

• Integrated road function that supports the LandXml format in road staking out. The Hi-Survey Road supports road design, staking out and store cross-section.



Design and apply the road in the Road Design, including the Centerline, Profile, Cross-section and



View the graphic, confirm the location of stakeout points, and stake out the road in the Stake Road.



Survey and store cross-section points in the Store cross-section to get the undulating terrain.









*NOTE: ● means YES, O means Reserved, -- means NO.

HGO (Hi-Target Geomatics Office)

High-Precision GNSS Data Post-Processing Software



 HGO is designed to store, manipulate, process, manage and present spatial data captured by the GNSS survey. It's a PC desktop software that covers complete and stable GNSS data post-processing related functional modules, including baseline processing, network adjustment and tool modules, providing you with high quality solutions through a reliable and efficient data processing algorithm.

KEY FEATURES



Advanced solution engine that focuses on GNSS data post-processing.



Stable and automatized data processing procedure for better solution results.



Concise and user-friendly operational interface to Facilitate your work.



Information visualization and quality control for data management.

FUNCTIONS



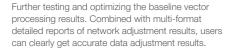
Baseline Processing



Intelligent baseline vector processing, automated data culling and ambiguity search techniques, and refined data processing stochastic models to provide high-performance baseline solutions.



Network Adjustment





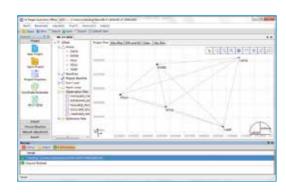
PPK & Hand-held Controller Projects

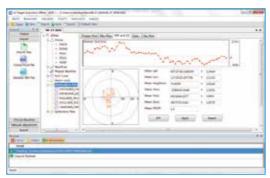
Supports the hand-held controller project and produces well-developed PPK post-processing work. An integrated dynamic GNSS data post-processing engine boosts the excellent processing work further.



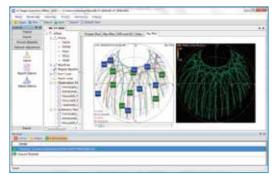
Modular Tools

A variety of built-in modular tools are available, including ephemeris forecasting, receiver management, coordinate transformation, precision ephemeris download, data quality analysis, RINEX conversion tool, etc.,









Hi-Target Business Center

All-in-One Post-Processing Desktop Software



• HBC, the all-in-one post-processing desktop software, supports processing multi-sourced data from all kinds of surveying equipment, including RTK, total station, UAV, GIS, 3D laser and levels. This one-stop service simplifies the workflow and improves the efficiency of field data processing. HBC enables you to finish the joint-operation on multiple pieces of equipment in projects more easily, helping to fix various problems, like switching between lots of different processing software and data results that are not interconnected, as well as complex, cumbersome workflows.

-JOINT WORK

HBC combines all the procedures of field survey:

Surveyor organization (team-building management), coordinate system setting, RTK project control point/stake point input, road design and DTM surface design.



GNSS static survey / RTK survey (surveying control).

Post process

GNSS static data processing, RTK Data processing, TS data processing, post mapping.

FUNCTION



GNSS Data Processing

Full constellation support:



GPS/GLONASS/Galileo/BeiDou Supports the batch processing of more than 100 baselines Greatly improved accuracy and speed

Mapping

Joint processing of various data: GNSS static data/RTK/Total station data Massive data management: Supports GB level data import and smooth the process of browsing

Total Station Data Processing

Various data compatibility: Hi-Target total station data/COSA traverse data/South

coordinate point data

Adjustment:

Plane adjustment/plane + elevation adjustment Supports visualization of traverse Export of adjustment results





RTK & Joint Work

- Multi-task management: Creates/imports multiple RTK project files
- Data preparation: Stake point/control point/graphic
- Code/CAD
- Distribution of measurement tasks
- Field data return to office
- Mapping
- Inspection/export of survey results

Road Design

- Batches multiple road designs: More convenient and efficient for data import
- Supports a variety of road file formats
- Line information is clear at a glance:
- Centerline/Profile/Cross-section
- · Compatible with a more complex road file
- Data check, pile-by-pile table output

- Variety of DTM formats: Hi-Target/Cass/LandXML
- Batch import point data
- Quick create TIN
- Earthwork calculation and result output



Hi-Target PPK GO

Post-Processing Software for UAVs

• Hi-Target PPK GO post-processing software enables consumer grade UAVs like Phantom 4 RTK, Matrice210, Matrice300 drones to achieve the most accurate and reliable camera positioning data in any coordinate system without the measure targets or GCPs. With 2cm accuracies on XYZ, the output text file with position information or geotagged images can then be used directly in major photogrammetric mapping or 3D Survey software.

STREAMLINED WORKFLOW



Phantom 4 RTK

Capture & Input

 Auto-detect and load Images/GNSS raw data/ Timestamp/IMU correction from DJI or Yuneec field project.



Georeferencina

- CORS/SBAS/Hi-RTP base data automatic matching.
- 3D lever arm correction.
- · Global coordinate system and geoid support.
- · Geotagging into image EXIF or exporting text reports for photogrammetry processing



3D Survey

Processing

· Seamlessly compatible with all major stitching, analysis, and modeling tools. (Such as Metashape, pix4D mapper etc.)

KEY FEATURES

Ultimate Efficiency to Reduced Workload

The PPK method makes it possible to perform high-precision aerial photogrammetry with a single or even zero GCP, which eliminates or shortens the duration of the RTK fix loss. This will greatly reduce the time and cost of field operations to ensure accuracy.



Smart Selection of Full Constellation

Using the free selection of GPS / GLONASS / Beidou / Galileo L1+L2+L5 for further parameter adjustments and position calculations in the PPK processing software to ensure the most reliable and accurate camera positioning even with poor single satellite system signals.



Integrated CORS/Hi-RTP Station Data *

By gradually integrating the free and commercial CORS data sources globally, the software enables users to process their PPK data without having to set-up a base station which will significantly reduce the workload and investment in the field.





PPK Engine & SDK Support

Hi-Target PPK Go's core algorithm engine and SDK can be used for secondary development to customize PPK solutions for enterprises and individuals.







HTS-420R Total Station

The New Durable Total Station

• Upgraded by a new accurate EDM and built-in temperature and air pressure sensors, the new HTS-420R is going to provide a better experience for users.

KEY FEATURES



Dual Axis Compensator

Configured with advanced dual-axis compensator for auto error elimination, within the tilting range between +3' and -3'.



Temperature and Air Pressure Sensor

A built-in temperature and air pressure sensor provides precise temperature and pressure readings, guaranteeing precise PPM for accurate measuring on demand.



Long Reflectorless Ranging

Up to 600 meter long reflectorless range surveying with just one click.



Rugged Waterproof Design

Waterproof and dustproof IP65 design handles all kinds of tough environments.



ZTS-320R Total Station

The Rugged Dependable Total Station

• The rugged design total station with easy to use on-board program, providing the accurate and reliable result in tough conditions.

KEY FEATURES



Dual Axis Compensator

Configured with advanced dual-axis compensator for auto error elimination, within the tilting range between +3' and -3'.



Long Reflectorless Ranging

Up to 600 meter long reflectorless range surveying with just one click.



Rugged Waterproof Design

Waterproof and dustproof IP65 design handles all kinds of tough environments



Large Internal Storage

The large internal capacity enables more than 20,000 points storing with 32GB maximum external storage.





ZTS-360R Total Station

The Compact Precise Mini Total Station

• Lightweight and smaller design enabling the user a better carrying experience while the shortcut trigger button improves the speed of operation.

KEY FEATURES



Shortcut Trigger Button

With the trigger button users can survey the points directly once the targets are focused without turning eyes back to the penal, making work quicker and simpler.



Dual Axis Compensator

Configured with an advanced dual-axis compensator for auto error elimination, within the tilting range of +3' to -3'.



Long Reflectorless Ranging

Up to 600 meter long reflectorless range surveying with just one click.



Rugged Waterproof Design

Waterproof and dustproof IP66 design handles all kinds of tough environments.



Product Specifications

		HTS-420R	ZTS-320R	ZTS-360R	
Angle Measure	Accuracy	2"	2"	2"	
	Single Prism Range	3000m	3000m	3000m	
Distance	Accuracy with Prism	2mm+2ppm	2mm+2ppm	2mm+2ppm	
Measurement	Reflectorless Range	600m	600m	600m	
	Accuracy with Reflectorless	3mm+2ppm	3mm+2ppm	3mm+2ppm	
Componenter	Working Range	Dual axis ±3'	Dual axis ±3'	Dual axis ±3'	
Compensator	Setting Accuracy	1"	1"	1"	
Display	Graphics	LCD 280x160	Grey Display 192x96	Grey Display 192x96	
	Sides	Dual side			
Power Supply	Battery Capacity	3000mAh	3000mAh	3000mAh	
i ower Supply	Duration	10 hours typical	10 hours typical	10 hours typical	
	Weight incl. Battery	5.5 kg	5.5 kg	3.7 kg	
Hardware	Bluetooth	Yes	Yes	Yes	
	Memory	20,000 points, w/ external storage			
Industry Level	Rugged Design	IP65	IP65	IP66	

HT-32 Automatic Level

The Accurate and Credible Auto Level

• Featuring a lightweight and easy-to-grasp compact design, the HT-32 is an air damping compensator; auto levelling provides durability and precision results for your surveying needs.

KEY FEATURES



Rapid and Stable Air-damping Compensator

The excellent engineering quality prevents the X-style air-damping compensator from being interfered with by varying air-pressure and magnetic interference within the range of ± 15 ' tilting.



Precise and Endless Horizontal Measurement

Horizontal angles can be read directly in 1° with an endless clampless and endless angle adjustments.



All Weather Durable

Operation ability in the most rugged sites and harshest conditions, like a sudden shower or torrential rainfall.



Environmental-friendly Material

Adopting environmentally-friendly materials - the whole body is RoHS- certified: the HT-32 is fully recyclingable.



Standard deviation for 1 km double levelling	1.6 MM					
Teles	Telescope					
Magnification	32X					
Filed of View	1°20'					
Objective Aperture	38mm					
Minimum Focusing Distance	1m					
Stadia	100					
Compensator						
Air-damped Compensating Range	±15'					
Setting Accuracy	±0.5"					
Environmental conditions						
Protection Level	IP66					
Net Weight	1.4KG					

HDT2 Electronic Digital Theodolite

Smart Electronic Digital Theodolite

Many functions such as measurement, calculation and display are realized by using microcomputer technology.

KEY FEATURES



Absolute Coding

Absolute coding angle measurement system, digital, intelligent, stable and reliable.



Laser Function

Perfect combination of digital theodolite and laser, with laser pointing and laser centering function.



High Quality

Highly integrated circuit board, high quality IC components, imported CCD sensor, ensure quality.



Smart Sensor

Independent tilt sensor automatically corrects tilt errors

HRL800R Rotary Laser

Entry-level and Practical Rotary Laser

• The Laser module of HRL800R will rotate freely to form a laser scanning surface, providing high precision leveling service.

KEY FEATURES



Precise Leveling

360° horizontal and vertical leveling.



Flexible Rotation

Left and right spinning.



Slope Setting

Manual slope setting in four directions.



Fault Location

Up and plumbing dot.







With the development of smart cities, precision agriculture and data visualization, GIS technology begins to play an important role in data acquisition and management. Hi-Target is dedicated to the research and development of portable GIS data collection products, including high-performance GIS handhelds, tablets and mobile GNSS receivers. Compact and rugged design greatly facilitates single person operation in the field. Hi-Target combines professional algorithms and intelligent software to provide users with more



possibilities in data collection, management, query and application through various solutions.



touchable highligh

Professional RTK engine with detachable spiral antenna.

Open platform for 3rd party

software applications.

High-Precision Rugged Tablet

• Compact and portable, the Qpad X8 integrates the high-precision GNSS RTK algorithm to provide users with a consumer-grade smart tablet experience for GIS data collection in various industries. It's rugged with exquisite design and structure to achieve industrial-grade protection that can withstand tough environments, greatly facilitates data management and application in the field.

KEY FEATURES

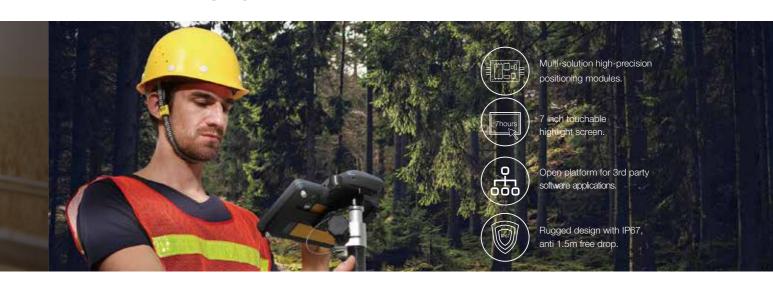


Qpad X5

High-Precision Rugged Tablet

• The QpadX5 is an industrial-grade tablet designed for GIS industry applications. Combined with the high-precision positioning module, it can provide up to 2 cm accuracy of the RTK positioning for fieldwork solutions.

KEY FEATURES



TECHNICAL SPECIFICATIONS

	Product Model	Qpad X8
	OS & Processor	Android 8.1 2.0GHz, 8 Core high speed processor
	Storage	RAM 6GB, ROM 64GB, T-Flash Card 128GB
Configuration	Display	8 inches glare resistant, touchable screen
	Resolution	1920×1200, readable under the sun
	Camera	13M Pixels rear camera, 8M pixels front camera, auto focus, highlight LED flash
	Build-in Sensor	G-Sensor, electronic compass, barometer, gyroscope, light sensor, distance sensor
GNSS Feature	Positioning Technology	GPS L1, BDS B1, GLONASS L1, Dual constellation system: GPS+GLONASS or GPS+BDS
	Channels	184
CM Version	Positioning Technology	GPS L1C/A L2C, GLO L10F L20F, GAL E1B/C E5b, BDS B1I B2I, QZSS L1C/A L2C SBAS
	Accuracy	Single positioning 2m; Network RTK≤5cm
	Dual SIM	Support, Nano SIM
	Network Type	TDD-LTE/TD-SCDMA/FDD-LTE/WCDMA/GSM/CDMA/EVDO
	WIFI	IEEE 802.11b/g/n, AP, Wapi
Data Communication	Bluetooth	Bluetooth 2.0/ 4.0, BLE
	USB	Type C, OTG function
	NFC	Support
Battery	Capacity	3.7V, 10000mAh
Battery	Quick Charge	Support
	Size	220mm*130mm*18.5mm
Physical	Weight	600g (with Battery)
Characteristics	Temperature	-40°C ~ +75°C(Working); -50°C~+85°C(Storage)
	Dustproof & Waterproof	IP67, anti 1.2m free drop

TECHNICAL SPECIFICATIONS

	Product Model	Qpad X5		
	OS & Processor	Android 5.0, 1.7GHz, 8 Core processor		
	Storage	RAM 2GB, ROM 16 GB, T-Flash Card 128GB		
	Display	7 inches glare resistant, touchable screen		
Configuration	Resolution	1280×800, readable under the sun		
	Camera	13M Pixels camera, auto focus, highlight LED flash		
	Build-in Sensor	G-Sensor, electronic compass, barometer, proximity sensor, light sensor, gyroscope		
GNSS Feature	Signal Tracking	AGPS + BDS + GLONASS, AGPS, GLONASS (Optional)		
	Channels	120		
CM Module (Optional)	Signal Tracking	GPS: L1, L2, L2C; GLONASS: L1, L2; BDS: B1, B2; SBAS(WAAS/ EGNOS/ MSAS)		
om module (optional)	Data Formats	RTCM 2.1/2.3/3.0/3.1/3.2, CMR, CMR+ and RTCA		
	Accuracy	Single positioning 2m; Network RTK≤2cm; Static (Optional) ±5mm+ 1pp		
	Channels	72		
	Signal Tracking	GPS: L1; GLONASS: L1 (Optional); BDS: B1; SBAS (WAAS/ EGNOS/ MSAS)		
DM Module (Optional)	Dual Constellation System	GPS+GLONASS or GPS+BDS		
	Data Formats	RTCM 2.3/ 3.1/ 3.2		
	Accuracy	Single positioning 2.5m; Network correction 50cm		
	Network Type	Dual SIM, FDD-LTE/TD-LTE/WCDMA/TD-SCDMA/GSM		
Data Communication	WIFI	IEEE 802.11b/g/n, WAPI, AP		
Data Communication	Bluetooth	Bluetooth 4.0		
	USB	Micro-USB 2.0, support OTG function		
	NFC	Support		
Battery	Capacity	7.4V, 4000mAh, working for 8-10 hours		
	Size	220mm*135mm*18mm		
Physical	Weight	724g (with Battery)		
Characteristics	Temperature	-30°C ~ +60°C(Working); -40°C +80°C(Storage)		
	Dustproof & Waterproof	IP67, anti 1.5m free drop		

Qmini A10

High-Precision GIS Handheld Collector (with Intercom Function)

• Qmini A10 provides a combination of Beidou high-precision positioning, dual-mode intercom, 4G smartphone, with background multi-network interconnection and other functions. It is small with complete functions and a high level of protection. Besides, it is a new type of rugged centimeter-level precision intelligent terminal product. This device can be widely used in industries, such as land and water resource inspection, land survey and electricity power inspection, etc.

High-Precision Outdoor & Indoor Positioning Solution

• With the integrated antenna of high and low frequency, the Qmini A10 (UWB) is full-equipped with the UWB technology, satisfying the needs of full-scene applications, featuring high precision and low power consumption. Besides, when combined with indoor and outdoor high-precision fusion algorithm, it can realize the automatic conversion of the spatial coordinate system with centimetre-level position accuracy.

KEY FEATURES



INDUSTRIAL APPLICATION



Land and water resource inspection



Pipeline



Forestry

Electricity power inspection



Construction



Agriculture

TECHNICAL SPECIFICATIONS

Product Model

Qmini A10

Qmini A10(CM)



Qmini A10(Pro) Qmini A10(UWB)





	Positioning Technology	GPS GLONASS BEIDOU	Channel: 184 BEIDOU: B1, B2		L10F, L20F L1C/A L2 SBA		
	Initialization	30s (Typical) 30s (Typical)					
	Autonomous	5m	3m				
GNSS Feature	SBAS			1m			
	RTK		2cm+1ppm				
	Update Rate	1Hz	Hz 1-20Hz				
	UWB			——	10cm		
	Operating System	Android 8.1					
	Processor	2.0GHz, 8 core high-speed processor					
	Storage	RAM 6GB, ROM 64GB, supports 128GB T-Flash card					
System	Display	5.5 inches outdoor FHD screen					
Configuration	Resolution	1920×1080, 550 lumens					
	Touch Screen	5-point touch, support capacitor glove operation					
	Camera	8M pixel front camera, 13M pixel rear camera, autofocus, highlight LED flash					
	Sensor	Accelerometer, distance sensor, light sensor, Angular velocity sensor, geomagnetic sensor, barometer					
	Network Type	TC	DD-LTE: Band34/Band	VDO: BC0 WCDMA: B1/ I38/Band39/Band40/Band41 Band5/Band7/ Band8/Band12			
Data	WIFI	IEEE 802.11b/g/n, AP, Wapi					
Communication	Bluetooth			oth 4.1, BLE			
	USB	USB2.0, Type-C, support OTG					
	Capacity	3.7V, 5500mAh					
= .	Fast-Charge	3 hours					
Battery Feature	Operation Time (Normal brightness, positioning and connecting internet)	10-12 hours	10-12 hours	9-10 hours	10-12 hours		
Modules	Intercom			UHF analog intercom + DMR digital intercom			
Wiodules	Encryption chip	Support					
	Proof	IP67, anti 1.5m free drop					
	Size	165 * 85* 18mm					
Physical	Working temperature	-30~+70°C					
. IIyaloal	Storage temperature	-40~+80°C					
	Weight	339g	346g	358g	353g		
E	explosion-proof certification			Exib IIB T4 Gb			

High-Precision GIS Handheld

• Compact and portable, the Qmini A5/A7 handheld integrates a helical antenna and a high-precision GNSS RTK algorithm to provide users with a consumer-grade smartphone experience for GIS data collection in various industries.



Android 6.0, 2.0GHz 8 Core processor.



Professional RTK engine with a high-precision algorithm.



High performance spiral antenna.



5500mAh battery for 12 hours continuous operation.



TECHNICAL SPECIFICATIONS

	Product Model	Qmini A5/A7		
	Channels	AGPS spiral antenna: 72 channels		
	Signal Tracking	GPS: L1 C/A; GLONASS: L1OF; BDS: B1; Galileo*: E1B/C; SBAS: L1C/A(WAAS, EGNOS, MSAS, GAGAN); QZSS: L1 C/A		
	Dual Constellation System	GPS+GLONASS or GPS+BDS		
GNSS Feature	Single Point Positioning	3-5m		
ando i catare	SBAS	1-3m		
	Network RTK	Qmini A5: ≤0.5m (RTD only); Qmini A7: ≤0.2m		
	Update Rate	1-5HZ		
	OS & Processor	Android 6.0, 2.0GHz, 8 core high speed processor		
	Storage	RAM 3GB, ROM 32GB, T-Flash Card 128GB		
Configuration	Display	5.5 inches glare resistant, touchable screen		
Comiguration	Resolution	1920×1080, readable under the sun		
	Camera 13M Pixels camera	13M Pixels camera, auto focus, highlight LED flash		
	Network Type	TD-LTE, FDD-LTE, TD-SCDMA, CDMA(EVDO,2000), WCDMA, GSM(GPRS		
Data Communication	WIFI	IEEE 802.11b/g/n, AP, Wapi		
Data Communication	Bluetooth	Bluetooth 4.0, BLE		
	USB	TypeC , OTG function		
Battery	Capacity	3.7V, 5500mAh, working for 10-12 hours		
	R Module Scan	QR code, RFID/NFC		
Applications	Build-in Sensor	G-Sensor, electronic compass, barometer		
	Size	165mm*85mm*18mm		
Physical Characteristics	Weight	320g (with Battery)		
Characteristics	Temperature	-40 °C ~+85 °C (Working); -50 °C ~+85 °C (Storage)		
	Dustproof & Waterproof	IP67, anti 1.5m free drop		

^{*} Galileo is reserved

GIS Data Collection Software



The Hi-Q is an Android software that is designed for professional GIS data collection and applications.
 It is compatible with Hi-Target professional hand-held tablets, Android phones and other third-party android devices. Integrated with advanced GNSS and GIS technology, combined with the management of attributes and layers, it provides users with efficient mapping and surveying solutions with built-in tools.

KEY FEATURES



Multiple data collection methods provide more options based on layers.

► GPS detail survey, center point collection, cross acquisition, node capture, 3rd party rangefinders, etc.



Online and offline basemap that supports various sources for diverse applications.

▶ Real-time google map, open street map, WMS, and other OGC-compliant map services.



Optimized data management modes and tools to boost efficient fieldwork.

➤ Data dictionary, attributes query and editing, precision and range reminder, cloud backup, etc..



User-friendly navigation and trajectory functions for a better user experience.

► Compass assistant, AR stakeout, real-time point or line trajectory, angle and distance calculation, etc..



Convenient switch of skyplot satellites and CORS source data protocol formats.

▶ RTCM 1021-1027 check box for selection, full constellation satellite view display switching, etc..



Customized software system settings and interface displays with easier operation.

▶ Layer properties settings, customized radius buffer, online upgrade reminder, interface styles, etc..



















GIS Applications

Decimetric Accuracy GIS Solution — Agriculture Application

Background

With the continuous development of agricultural automation, precision agriculture and intelligent management have become a common need of farmers. GIS technology has gradually penetrated into agricultural applications such as crop planting, farmland boundary division and tree management. Decimeter-level GIS data acquisition solutions provide great convenience for farmers and managers.

Implementation

Users can hold the device directly or put it on the farm machinery. Do data collection, attribute entry, layer management and information query of land objects with professional GIS data collection software (e.g. Hi-Q or third-party software).

Advantages

- Visualize properties and land for comprehensive management.
- Intelligent navigation and recording during farming and sowing.
- Lay out areas and trace boundaries with DM-level accuracy.
- Efficient one-person operation mode for the farmer.

► Applicable Products

Qmini A5/A7, Qpad X5 DM, etc.



Centimetric Accuracy GIS Solution — Railway Application

Background

In many railway applications, corresponding attribute information is indispensable, while high-precision positioning data is required. centimetric GIS surveying and mapping provides a perfect solution for railway construction, safety inspection, deformation monitoring and other applications. Combined with location and attribute information in the GIS solution, railway operators can manage field projects more efficiently.

Implementation

Users can hold the device directly or take it with a pole. Manage existing objects, collect data, stake out and gather attribute information in the railway project with professional GIS data collection software (e.g. Hi-Q or third-party software).

Advantages

- Real-time location information for the platelayer.
- More accurate station maintenance and inspection.
- Remote management of staff location and status.
- Smart and visualized railway construction and stakeout.

▶ Applicable Products

Qmini A10(CM), Qpad X8 (CM), etc..



Correction Service

With the development of GNSS technology, in order overcome the difficulty of long distance, correction service brings revolution to the industry. Hi-Target CORS offers a precision position correction service for land surveying, maritime transport, earthquake monitoring, city administration and IoT, whether for temporary or long-term usage. In desert, weak infrastructure area, poor network environment, sea, snow mountain and challenge environment, Hi-Target Hi-RTP could provide global high-precision PPP service for land survey and marine, meanwhile, for autonomous driving, Hi-RTP could provide world-class precision and service, for precision agriculture, Hi-RTP could provide basic precision service for autonomous agricultural machinery and plant protection UAS.

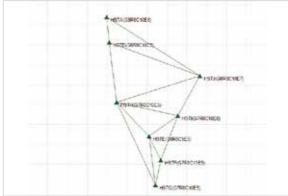


CORS

Stable and Advanced CORS System

The Hi-Target CORS is a highly integrated measurement system, providing Vnet GNSS reference receiver, 3D choke ring antenna hardware, data distribution and algorithm software and technical services, combining advanced and traditional GNSS technology to provide a complete solutions with data acquisition, processing, distribution and management.

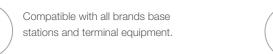




KEY FEATURES



Ultra-high precision foundation reinforcement technology of centimeter and millimeter-level precision.

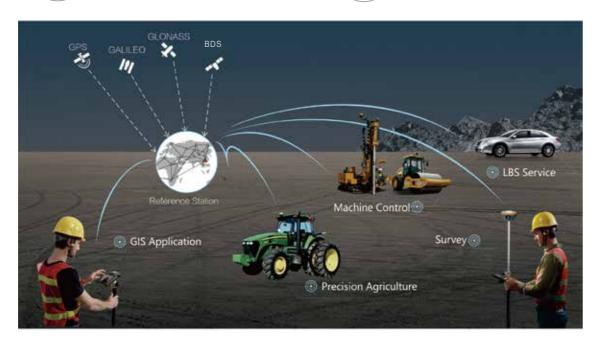




Millions of concurrent users server capacity enabling services varying from engineering to civilian applications.



Intelligent and firewall-protected management platform



Hi-RTP

Excellent Global PPP Service

Hi-RTP is a high-precision satellite-based enhanced differential positioning service with global coverage. Using
global uniform distribution with a ground-tracking network to generate high-precision real-time satellite orbits,
clock errors, and ionospheric correction products. It is broadcasted to users through L-band communication
satellites or Internet networks. Users can realize real-time dynamic decimeter level or even centimeter-level
position accuracy at any time and any place with the GNSS receiver.





Accuracy: Sub-meter Convergence time: <5min



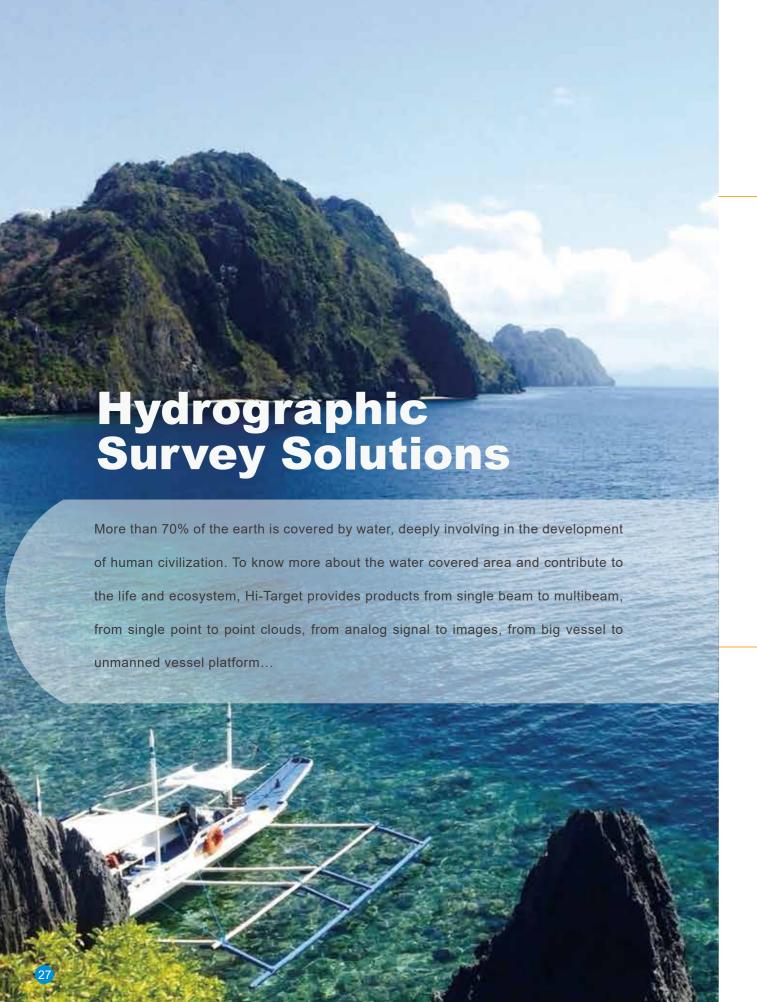
Accuracy: 10~20cm Convergence time: 20~30min



Accuracy: 5~10cm Convergence time: 15~20min



Accuracy: 3~5cm
Convergence time: <3min





The Professional Single Beam Echosounder

 HD-MAX is a PC built-in professional echosounder. Featuring a 17" large size screen, embedded computer, optimized sounder technology and professional software, HD-MAX provides an excellent solution for hydrographic surveys.

KEY FEATURES



Professional Sonar System

With a smarter algorithm and optimized internal circuit design, the sounder adapts to most environments with better echo quality and accuracy.



17" Display Built-in PC

The 32G SSD storage-based windows 7 OS boosted by dual-core 1.92GHz CPU, smoothly runs programs for versatile applications related to hydrographic surveying.



Hi-MAX Collection & PP Software

Professional bathymetric data collection and post-processing software is easy to learn and master, with innovated functions which boost the efficiency.



Compatibility & Extendability

Compatible with 3rd party software and 3rd party GNSS receiver; able to integrate the positioning module.

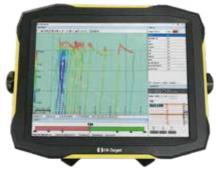


HD-Lite

The Compact Single Beam Echosounder

 HD-Lite is a rugged and compact PC built-in professional portable echosounder. Boosted by an upgraded sounder platform and enhanced hardware, HD-Lite provides users with a portable solution with accuracy and credibility.

KEY FEATURES





Professional Sonar System

With a smarter algorithm and optimized internal circuit design, the sounder adapts to most environments with better echo quality and accuracy.



15" Display Built-in PC

The 32G SSD storage-based windows 7 OS boosted by dual-core 1.92GHz CPU, smoothly runs programs for versatile applications related to hydrographic surveying.



Hi-MAX Collection & PP Software

Professional bathymetric data collection and post-processing software is easy to learn and master, with innovated functions which boost the efficiency.



Compatibility & Extendability

Compatible with 3rd party software and 3rd party GNSS receivers.



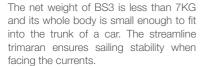
iBoat BS3

A Swift and Versatile Surface Platform

 Now our BS3 can do more than ever, whether it is bathymetry, investigation or even water current monitoring tasks.



Portable and Stable Body Design





Professional Survey Echosounder

Built-in echosounder provides excellent sounding performance, with easy-to-use data collection and post processing software onboard.



Precise Auto-pilot

With the smart controlling system and powerful propellers, BS3 can reach any targeted positions within 10 centimeter offset, providing precise survey lanes.



Robust Communication

Through the spring-mount antenna signals, iBoat BS3 reaches a longer communication range with optimized frequency and power by the stronger environmental endurance.



Perfect work with ADCP Onboard

Working with mounted Hi-Target iFlow ADCP, the system provides data you need in anywhere. Your own ADCPs can also work perfectly on BS3.



Flexible Waterbed Imaging with Portable SSS

Hi-Target iSide 900P side scan sonar can show the target even in shallow water or in any tough condition where Big boat can't access. It's easy to mount it on the bottom of BS3 and let the boat sail.

USV Application

Initialization Work of Telecom Fiber Cable Route

- BACKGROUND:

A telecom company wanted to improve the communication robust by laying more telecom fiber cables for the region in Zhujiang delta, an important industry area for the World Factory——China. Before the laying work, the terrain of the bottom, the environment of the 5 channels which the cable is going to cross is vital to be unveiled.

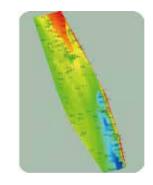
- CHALLENGES:

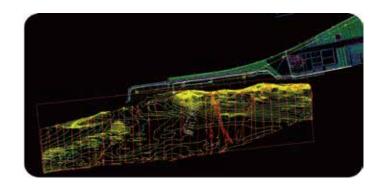
- 5 channels in total to cross, they all need to be surveyed.
- ▶ Each of them has heavy traffic, 3000 ton-level vessel transportation, daily 800 vessels pass by.

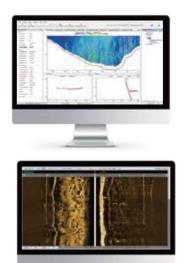
- CHALLENGES:

- ▶ 5 days, 2 men, efficient work to finish the project with sufficient data.
- > Staff safety guaranteed during the survey, risk free.

- RESULT SAMPLE:









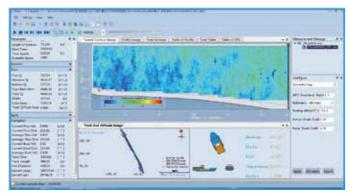
 USV can greatly expand the ADCP and side scan sonar working flexibility while all things are still being processed on your professional laptop.

iFlow RP600/1200

600kHz & 1200kHz Piston Acoustic Doppler Currnet Profiler

• Provides accurate measurement with a 75 meter range, the 600Hz frequency ADCP iFlow RP600 can be widely used for monitoring and surveying rivers, lakes, channels, etc. .

KEY FEATURES









Long Profiling Range Multiple Cells.

600Hz working frequency extends the current measurement range up to 75 meter with maximum 256 cells.



Multiple Built-in Sensors

Integrating the gyro, temperature, pressure and tilting sensor, iFlow RP600 offers mutipule source of infomation for the operation reference.



Easy to Use Software

and self-contained modes.

Multiple Working Mode

The iFlow RP600 support vessel has

mounted, bottom-tracking, monitoring, DVL

Clear software working flow and UI lower the learning curve, making it easy to use.



High Precision Current Measurement

Supported by broadband signal processing technology, the anti-noise level has been improved while the current measurement accuracy can be up to 0.25%±0.25cm/s.

SPECIFICATIONS

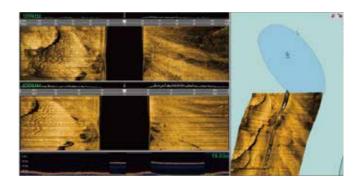
Hi-Target iFlow ADCP Specifications	RP600 RP1200		
System Frenquency	600kHz	1200kHz	
Type of Transducer	Piston		
Beam	Janus 4 beams at 20° 4 Janus beams at 20° bear beam angle 1 vertical for depth measure		
Velocity Range	Typical:±	5m/s,Max:±20m/s	
Velocity Profile Range	1-80m	0.2-25m	
Velocity Resolution	1 mm/s		
Cell Number & Cell Size	1-260 ; 0.1-4m 1-256 ; 0.1-2m		
Measurement Accuracy	0.25%±0.25cm/s		
Operation Mode	Е	Broadband	
Bootom-track Range	0.8-90m	0.15-35m	
Internal Storage	8Gb(Standard), optional for 16Gb		
Built-in Sensors	Temperature, tilt (pitch and roll), compass and pressure		
Carrier	Three hulls trimaran float, or iBoat BS3 USV		

iSide400/900P/1400/4900

The Multiple frequencies Side Scan Sonar Systems

 With the possibility to switch freely between CW and CHIRP on multiple frequencies, at 100kHz, 400kHz or 900kHz, the iSide side scan sonar system provides a clearer view of the water bottom on dual simultaneous frequency, for object searching, dredging, and other industry applications.

- KEY FEATURES







Multiple Frequency Available

There are multiple frequencies available to use according to required applications. Users can always find a suitable mode.



Ultra Small Beam Angle

Beam angle can be up to 0.2°, providing resolution up to 1.25cm, so it is easy to recognize small objects.



Real-Time CW & CHIRP

Transmitting Mode Switching

Real-time switching can provide adaptive solutions for vou, which are with improved anti-noise performance. higher resolution and wider range.



Strong and Robust Tow Fish

Adopting a fluid mechanics design, the 316 stainless steel housing can help the tow fish endure even 1000m depths.



Multiple Internal Sensors

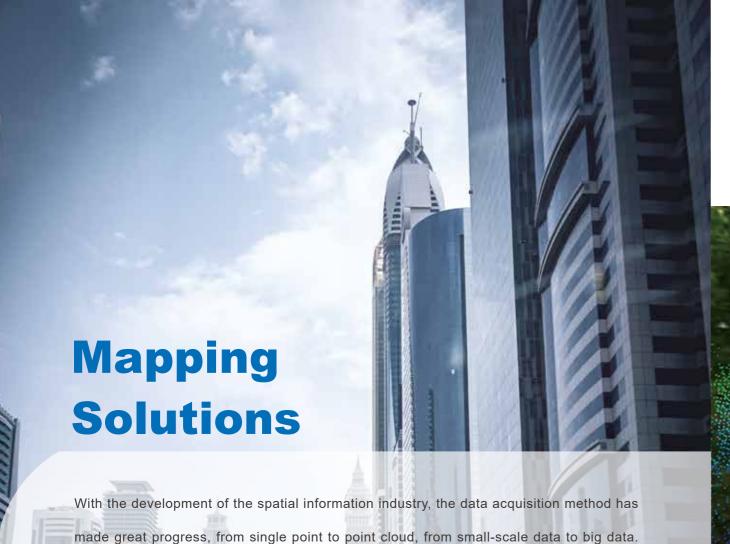
By integrating the sensor for heading, pitch, roll, depth and pressure, images are corrected in real time and related reference information can be acquired to ensure the safety of operation.

TABLE COMPARISON

	iSide 1400	iSide 4900	iSide 400	iSide 900P	
Frequency & Pulse Type	100kHz&400kHz, LFM/CW	400kHz&900kHz, LFM/CW	400kHz, LFM/CW	900kHz, LFM/CW	
H. Beam Width	0.6°@150kHz, 0.2°@400kHz	0.2°@400kHz, 0.2°@900kHz	0.3°	0.3°	
V. Beam Width	50°				
Maximum Range	450m@100kHz, 150m@400kHz	150m@400kHz, 75m@900kHz	150m	75m	
Resolution Along	0.01R@100kHz, 0.003R@400kHz	0.003R@400kHz, 0.003R@900kHz	0.005R	0.005R	
Resolution Across	2.5cm@100kHz, 1.25cm 1.25cm@400kHz				
Sensor	Pitch, rool, yaw, pres	sure, depth	1		
Desktop Software	Hi-MAX SSS for operation and processing, support NMEA0183, OTSS and XTF data				

^{*}R means the operation range





With the development of the spatial information industry, the data acquisition method has made great progress, from single point to point cloud, from small-scale data to big data. Hi-Target is committed to providing the most reliable big data and image acquisition system and platform, as well as the efficient solutions to meet the needs of large area mapping.



HISCAN-C SU1

Fully Integrated Mobile Mapping Solution

• The HiScan-C is a fully integrated mobile mapping system with Hi-Target advanced 3D laser and geo-referencing digital imagery which has been proved to be a perfect solution when a massive amount of asset data needs to be collected in a short time.



KEY FEATURES



HISCAN-C SU1

Software

► HD Logging

Plan and manage the field capture in a visible and much easier way.



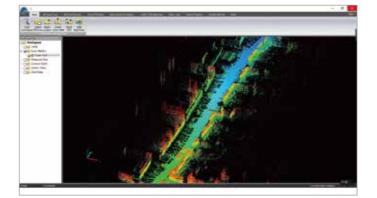
The state to provide the state of the state

► HD Data Combine

Easily fuse the data from multiple sensors and output geo-referenced point cloud with panoramic imagery in common data formats.

► HD 3LS Scene

View and edit point cloud data overlays with image to draw or extract features and send to your CAD or 3D modeling software.





Construction and Civil Engineering

With high-speed laser scanning and high-resolution imaging technology, Hi-Target HiScan MMS make it more rapid than ever to collect enormous amounts of high-accurate, geo-referenced spatial data and transform them into information-rich 3D models.

Road and Railway ____

Combining the latest innovations in GNSS, optical, imaging and scanning technologies and supporting multiple carrier platforms, Hi-Target HiScan MMS enables you to quickly and accurately capture the data needed, providing actionable deliverables to maintain and construct road & railway infrastructure or to manage transport assets.



— Quarries and Mines

How to measure a wide range of sites efficiently and accurately with reasonable cost while enjoying the safety brought by non-contact cutting-edge technology? The ideal answer is Hi-Target HiScan MMS.





Smart Monitoring Solution Providing monitoring professionals with the flexibility to swiftly analyze and understand complex projects with the highest accuracy and reliability, the Hi-target Smart Monitoring Solution is scalable and fully customizable for the specific needs of any users. The system adopts the most advanced millimeter level GNSS monitoring algorithm developed by Hi-target to overcome any monitoring challenges for continuous or periodic jobs.

Smart Monitoring Solution

Hardware

HDS102 Multi-dimensional Intelligent Sensor







Earthquake sound and vibration monitoring module



battery and storage





data transmission



HDM100 Geotechnical Data Collector Terminal





Multiple inputs with Intelligent self-test extensions available and status report





consumption with



MS302 Surface Displacement Monitoring GNSS Receiver



Full constellation



capacity lithium battery



Remote management, remote upgrade and transmit data from



other sensors



Built-in mass data storage card

transmit data from

One-piece Emergency Monitoring GNSS Receiver









Full constellation GNSS 16GB high capacity signals with small storage that supports integrated design continuous data storage



communication remote upgrade and status feedback











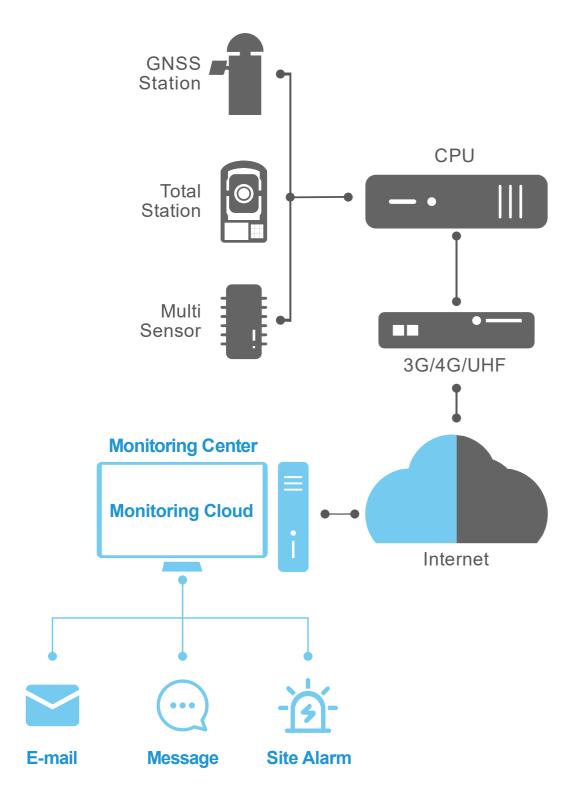
Freely switch to base or rover with access overvoltage protection transmission to ensure watchdogto ensure from CORS network

Overcurrent and

Data encryption information security continuous operation

Hi-Target Smart Monitoring Solution(HSMS)

Hardware Topology



-MONITORING SOFTWARE

Hi-Target Monitoring Cloud Platform is a very easy-to-use browser based (B/S) platform which is scalable and fully customizable for any specific needs from users, provides real-time and highly precise monitoring data inspection for natural, artificial or mining conditions.



The platform APP maximizes productivity with the possibility to manage projects anytime, anywhere.

- Remote multi-project overall management.
- Data synchrozing.
- Alarm notification and WAP push reminder.
- On-site inspection uploading.
- Monitoring data check and instrument management.



