

## PRODUCT CATALOG

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**Hi-Target International Group Limited**

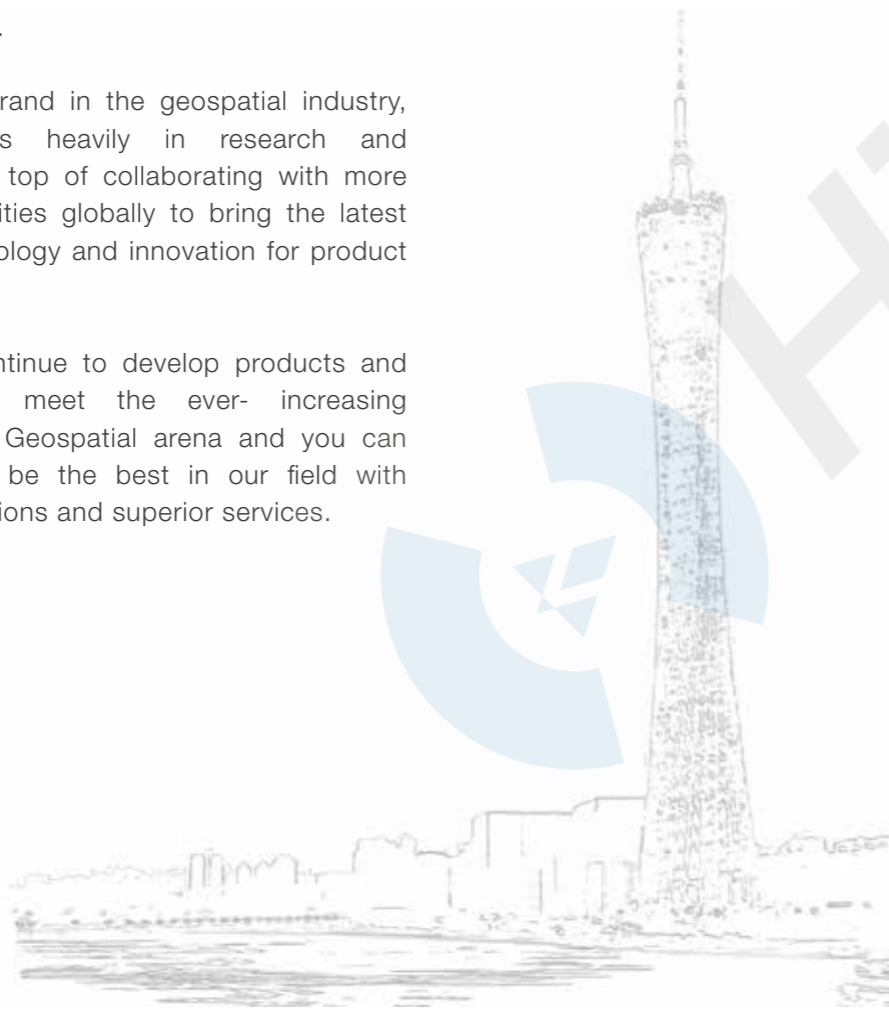
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Established since 1999, Hi-Target is the first professional high-precision surveying and mapping instrument brand to be successfully listed in China. Hi-Target produces a wide range of surveying equipment including GNSS receivers, CORS stations, TS, 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.



# Survey and Engineering

## High-precision GNSS RTK, Total Station and Other Optical Products

Land survey is an indispensable technical means in topographic survey, land monitoring and construction engineering. In order to provide more reliable and effective solutions, Hi-Target focuses on the innovations in GNSS RTK, total station and optical level technologies continuously. Advanced engines, high-precision algorithms and specific surveying technologies are the guarantees for users in the field work. Even in harsh environments, operators can obtain satisfactory measurement results with Hi-Target products. Integrated land survey solutions will greatly improve the quality of surveyors' daily work.

## 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.



#### Hi-RTP™

The Hi-Target Hi-RTP™ global correction service extends the correction source. Enables users to work in rural or remote areas anywhere in the world without a base station. No more range restrictions. Harness all constellation signals from BDS, GLONASS, GPS, GALILEO with global distribution of 220+ stations, providing centimeter-level positioning accuracy.



#### 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. Error less than 2 cm within 30° inclination. Resistance to the interference of magnetic disturbances, ensuring high accuracy. Compared with bubble leveling, boost working efficiency by 20%.



#### 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..



#### 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, do basic settings, upgrade firmware and download data, etc..



#### HD Touch OLED Screen

The newly designed HD OLED screen, which has RGB Color and is touchable, has 1.3" and 240\*240 resolutions. Users can quickly check and set the receiver status for easier fieldwork.



## 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. Provide 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 127.5mm x 57mm and weighs less than 700g (including battery), which is smaller and lighter than traditional receivers and easy to carry.

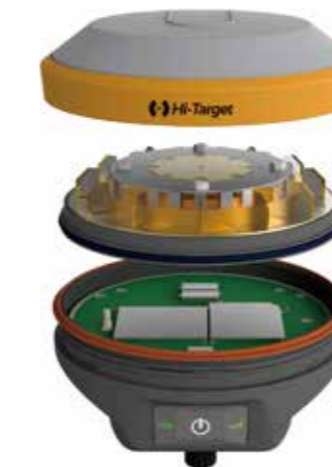


## High Performance RTK System

- 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.



#### 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 harsh environments through bespoke algorithms.

# V30 Plus

## 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 problem.

### KEY FEATURES



#### Multi-constellation GNSS engine

Auto-select 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 corner points measurement by shaking the receiver.



#### Smaller but smarter

Smaller size, 164mm x 83.5mm, built-in integrated transceiver radio, one button multi-function, perfect compatibility with various CORS systems.



#### 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.



<b>Hardware Configuration</b>	OS: Android 6.0 Processor: 1.5GHz, 4 core Storage: RAM 2G, ROM 16GB (up to 128GB extension Micro-SD) Display: 3.7", 640 x 480, sunlight readable Camera: 8MP, tag available Sensors: G-sensor, E-compass, barometer, light-field sensor, gyro
<b>Communication</b>	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
<b>Physical</b>	Weight: 440g (within battery) Size: 208mm*83mm*24mm Temperature: -20°C ~ +60°C(Operating); -30°C ~ +70°C(Storage) Free-fall: 1.2m IP67
<b>GNSS Features</b>	Channels: 20 GNSS: GPS, GLONASS, AGPS, Update rate: 1Hz
<b>Power Supply</b>	Battery: Removable 3.7V lithium battery, 5200mAh Duration: 15 hours Quick charge within 3 hours

# Product Comparison

Model	iRTK5	V100	V90 PLUS	V30 PLUS
<b>Picture</b>				
<b>Sellite Signals Tracking</b>	Channels: 336	220	220	440
	GPS: ●	●	●	●
	GLONASS: ●	●	●	●
	BDS: ●	●	●	●
	GALILEO: ●	●	●	●
	QZSS: ●	●	●	●
	SBAS: ●	●	●	●
	PPP Service: ●	—	○	—
<b>Communication</b>	Cellular Mobile: ●	—	●	●
	Wi-Fi: ●	—	●	●
	Bluetooth: ●	●	●	●
	Internal Radio: ●	—	●	●
	NFC: ●	●	●	●
<b>Physical</b>	Internal Data Storage: 16GB	8 GB	16 GB	8GB
	Dimensions: 158mm×98mm	127.5mm×57mm	153mm×83mm	164mm×83.5mm
	Weight: 1.2kg	0.7kg	1.25kg	1.4kg
	Screen: ●	—	—	—
<b>Environment</b>	Internal Battery: 6800mAh	6300mAh	5000mAh	5000mAh
	Operation Temperature: -40 C ~+75 C	-40 C ~+65 C	-40 C ~+75 C	-45 C ~+75 C
	Water/ Dustproof: IP67	IP67	IP67	IP67
<b>Others</b>	Tilt Survey: ●	—	●	●
	WebUI: ●	—	●	●

\*NOTE: ● means YES, ○ means Reserved, — means NO.

# 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.



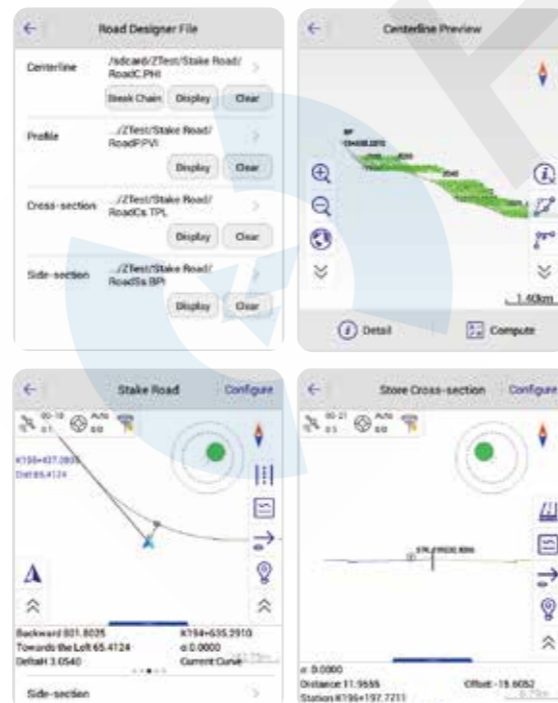
Design and apply the road in the Road Design, including the Centerline, Profile, Cross-section and Side-section.



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.



# HGO (Hi-Target Geomatics Office)

## High-precision GNSS Data Post-processing Software



- The HGO is a software 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. Provide users 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 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

Further testing and optimizing the baseline vector processing results. Combined with multi-format detailed reports of network adjustment results, users can clearly get accurate data adjustment results.



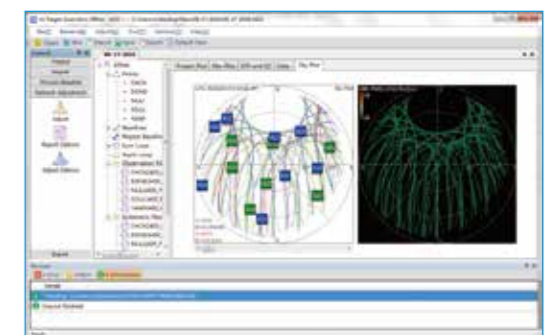
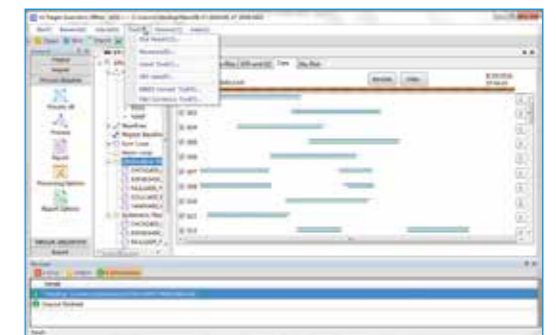
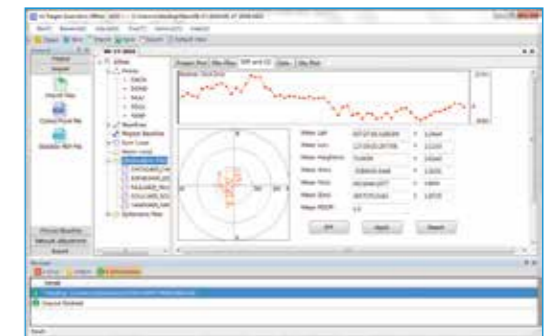
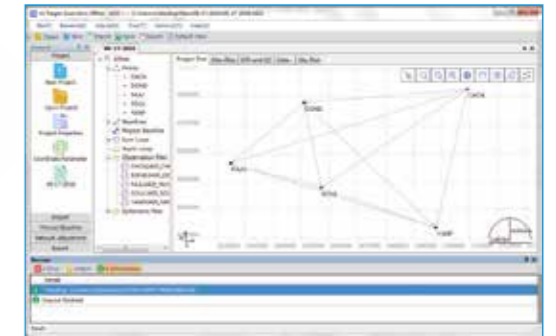
#### PPK & Hand-held Controller Projects

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..

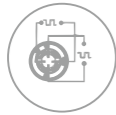


# HTS-420R Total Station

## 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 the tough all kinds of environments



# 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.

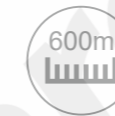
### KEY FEATURES



**Shortcut Trigger Button**  
With the trigger button users can survey the points directly once the targets are focused without turning eyes back to the panel, 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.



# 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.



### Product Specifications

		HTS-420R	ZTS-320R	ZTS-360R
Angle Measure	Accuracy	2"	2"	2"
	Distance Measurement			
Distance Measurement	Single Prism Range	3000m	3000m	3000m
	Accuracy with Prism	2mm+2ppm	2mm+2ppm	2mm+2ppm
	Reflectorless Range	600m	600m	600m
Compensator	Accuracy with Reflectorless	3mm+2ppm	3mm+2ppm	3mm+2ppm
	Working Range	Dual axis ±3'	Dual axis ±3'	Dual axis ±3'
Display	Setting Accuracy	1"	1"	1"
	Graphics	LCD 280x160	Grey Display 192x96	Grey Display 192x96
Power Supply	Sides	Dual side		
	Battery Capacity	3000mAh	3000mAh	3000mAh
Hardware	Duration	10 hours typical	10 hours typical	10 hours typical
	Weight incl. Battery	5.5 kg	5.5 kg	3.7 kg
	Bluetooth	Yes	Yes	Yes
Industry Level	Memory	20,000 points, w/ external storage		
	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  $\pm 15'$  tilting.



#### Precise and Endless Horizontal Measurement

Horizontal angles can be read directly in  $1^\circ$  with an endless clamping 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
<b>Telescope</b>	
Magnification	32X
Filed of View	$1^\circ 20'$
Objective Aperture	38mm
Minimum Focusing Distance	1m
Stadia	100
<b>Compensator</b>	
Air-damped Compensating Range	$\pm 15'$
Setting Accuracy	$\pm 0.5''$
<b>Environmental conditions</b>	
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,It could provide high precision leveling service.

### KEY FEATURES



#### Precise Leveling

$360^\circ$  horizontal and vertical leveling.



#### Flexible Rotation

Left and right spinning.



#### Slope Setting

Manual slope setting in four directions.



#### Fault Location

Up and plumbing dot.



# Qpad X8

## 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



# Mobile GIS

## Efficient GIS Data Collection and Management Solution

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.

### — TECHNICAL SPECIFICATIONS

	Product Model	Qpad X8
<b>Configuration</b>	OS & Processor	Android 8.1 2.0GHz, 8 Core high speed processor
	Storage	RAM 6GB, ROM 64GB, T-Flash Card 128GB
	Display	8 inches glare resistant, touchable screen
	Resolution	1920x1200, 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
<b>GNSS Feature</b>	Positioning Technology	GPS L1, BDS B1, GLONASS L1, Dual constellation system: GPS+GLONASS or GPS+BDS
<b>CM Module (Optional)</b>	Channels	184
	Positioning Technology	GPS L1C/A L2C, GLO L1OF L2OF, GAL E1B/C E5b, BDS B1I B2I, QZSS L1C/A L2C
	Single Constellation System	GPS+GLONASS+BDS
<b>DM Module (Optional)</b>	Accuracy	Single positioning 2m; Network RTK ≤5cm
	Channels	72
	Positioning Technology	GPS: L1; BDS: B1, GLONASS: L1; SBAS (WAAS/ EGNOS/ MSAS)
<b>Data Communication</b>	Dual Constellation System	GPS+GLONASS+SBAS or GPS+BDS+SBAS
	Accuracy	Single positioning 3m; Network RTK ≤20cm
	Network Type	Support, Nano SIM
	WIFI	TDD-LTE/TD-SCDMA/FDD-LTE/WCDMA/GSM/CDMA/EVDO
	Bluetooth	IEEE 802.11b/g/n, AP, Wapi
<b>Battery</b>	USB	Bluetooth 2.0/ 4.0, BLE
	NFC	Type C, OTG function
	Capacity	Support
	Quick Charge	3.7V, 10000mAh
<b>Physical Characteristics</b>	Size	Support
	Weight	220mm*130mm*18.5mm
	Temperature	600g (with Battery)
	Dustproof & Waterproof	-40°C ~ +75°C(Working); -50°C~+85°C(Storage)
		IP67, anti 1.2m free drop



# 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



- Multi-solution high-precision positioning modules.
- 7 inch touchable highlight screen.
- Open platform for 3rd party software applications.
- Rugged design with IP67, anti 1.5m free drop.

### TECHNICAL SPECIFICATIONS

	Product Model	Qpad X5
<b>Configuration</b>	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
	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
<b>GNSS Feature</b>	Signal Tracking	AGPS + BDS + GLONASS, AGPS, GLONASS (Optional)
	Channels	120
<b>CM Module (Optional)</b>	Signal Tracking	GPS: L1, L2, L2C; GLONASS: L1, L2; BDS: B1, B2; SBAS(WAAS/ EGNOS/ MSAS)
	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+ 1ppm
<b>DM Module (Optional)</b>	Channels	72
	Signal Tracking	GPS: L1; GLONASS: L1 (Optional); BDS: B1; SBAS (WAAS/ EGNOS/ MSAS)
	Dual Constellation System	GPS+GLONASS or GPS+BDS
<b>Data Communication</b>	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
	WIFI	IEEE 802.11b/g/n, WAPI, AP
	Bluetooth	Bluetooth 4.0
	USB	Micro-USB 2.0, support OTG function
<b>Battery</b>	NFC	Support
	Capacity	7.4V, 4000mAh, working for 8-10 hours
	Size	220mm*135mm*18mm
<b>Physical Characteristics</b>	Weight	724g (with Battery)
	Temperature	-30°C ~ +60°C(Working); -40°C +80°C(Storage)
	Dustproof & Waterproof	IP67, anti 1.5m free drop

# Qbox 8

## High-Precision GNSS Receiver for Mobile Works

- Qbox 8 is a high-precision GNSS receiver with compact and exquisite design. Based on the Bluetooth connection, it can connect to any mobile device. Integrated with a professional RTK engine, measurements will be more efficient and reliable.

### KEY FEATURES



- 2CM Professional RTK engine with 2cm accuracy.
- Portable design for carrying, smaller and lighter.
- Dual-mode Bluetooth, better device compatibility.
- One key operation makes fieldwork easier.

### TECHNICAL SPECIFICATIONS

	Product Model	Qbox 8
<b>GNSS Features</b>	GPS	L1, L2, L2C
	GLONASS	L1, L2
	BDS	B1, B2
	Galileo (Optional)	E1, E5b
	SBAS	WAAS, EGNOS, MSAS
	Time to First Fix	30s
<b>Precision</b>	Correction Format	RTCM 2.1, 2.3, 3.0, 3.1, 3.2 CMR, CMR+, RTCA
	Update Rate	1 Hz, support higher rate
	Single Positioning	2m
<b>Data &amp; Communication</b>	SBAS	1-3m
	DGPS	0.4m
	RTK	2cm+1ppm
	Static	3mm+1ppm
<b>Power Supply</b>	Storage	8GB, up to 32GB ext.
	Bluetooth	Dual mode Bluetooth 4.0
	USB	Micro USB
<b>Physical</b>	Battery Capacity	4800mAh/3.7V
	Operation Time	>10h
	Charging Time	5h
<b>Physical</b>	Size	115×85×25mm
	Weight	300g
	Temperature	-30°C ~ +60°C(Working); -40°C ~ +80°C (Storage)
	Dustproof/Waterproof	IP67
	Shockproof	Anti 2m free fall

# Qmini A5/A7

## 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
GNSS Feature	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
	Single Point Positioning	3-5m
	SBAS	1-3m
Configuration	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
Data Communication	Storage	RAM 3GB, ROM 32GB, T-Flash Card 128GB
	Display	5.5 inches glare resistant, touchable screen
	Resolution	1920×1080, readable under the sun
	Camera	13M Pixels camera, auto focus, highlight LED flash
	Network Type	TD-LTE, FDD-LTE, TD-SCDMA, CDMA(EVDO,2000), WCDMA, GSM(GPRS)
Battery	WIFI	IEEE 802.11b/g/n, AP, Wapi
	Bluetooth	Bluetooth 4.0, BLE
	USB	TypeC , OTG function
Applications	Capacity	3.7V, 5500mAh, working for 10-12 hours
	R Module Scan	QR code, RFID/NFC
Physical Characteristics	Build-in Sensor	G-Sensor, electronic compass, barometer
	Size	165mm*85mm*18mm
	Weight	320g (with Battery)
	Temperature	-40 C ~ +85 C (Working); -50 C ~ +85 C (Storage)
	Dustproof & Waterproof	IP67, anti 1.5m free drop

\* Galileo is reserved

# Hi-Q

## 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..



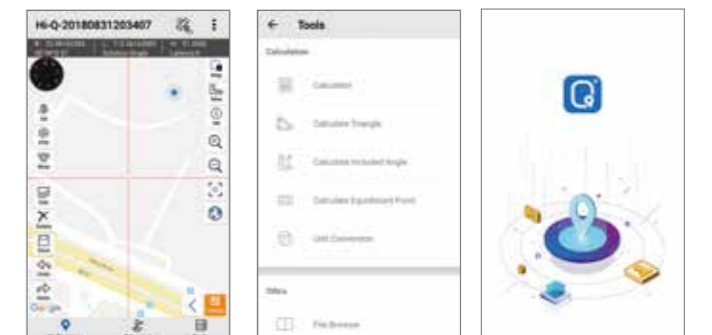
Convenient switch of skyplot satellites and CORS source data protocol formats.

- ▶ RTCM 1021-1027 check box for selection, full constellation satellites 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 A5/7, Qpad X5 (DM module), 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

Qbox 8, Qpad X5 (CM module), etc..



## Correction Service

With the development of GNSS technology, in order to get rid 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.



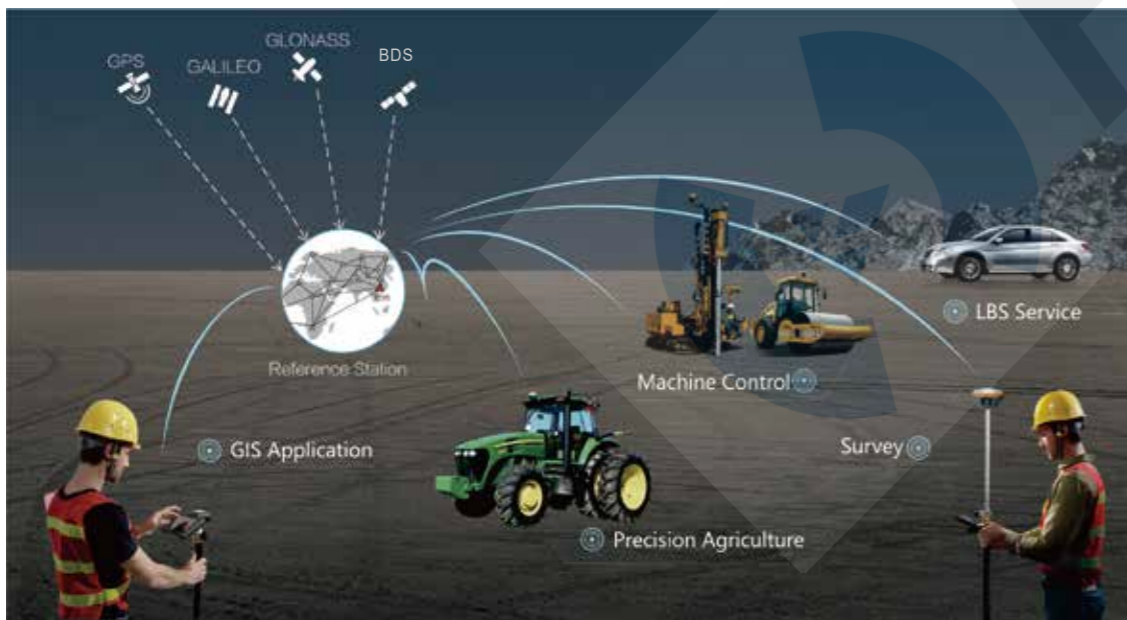
Millions of concurrent users server capacity enabling services varying from engineering to civilian applications.



Compatible with all brands base stations and terminal equipment.



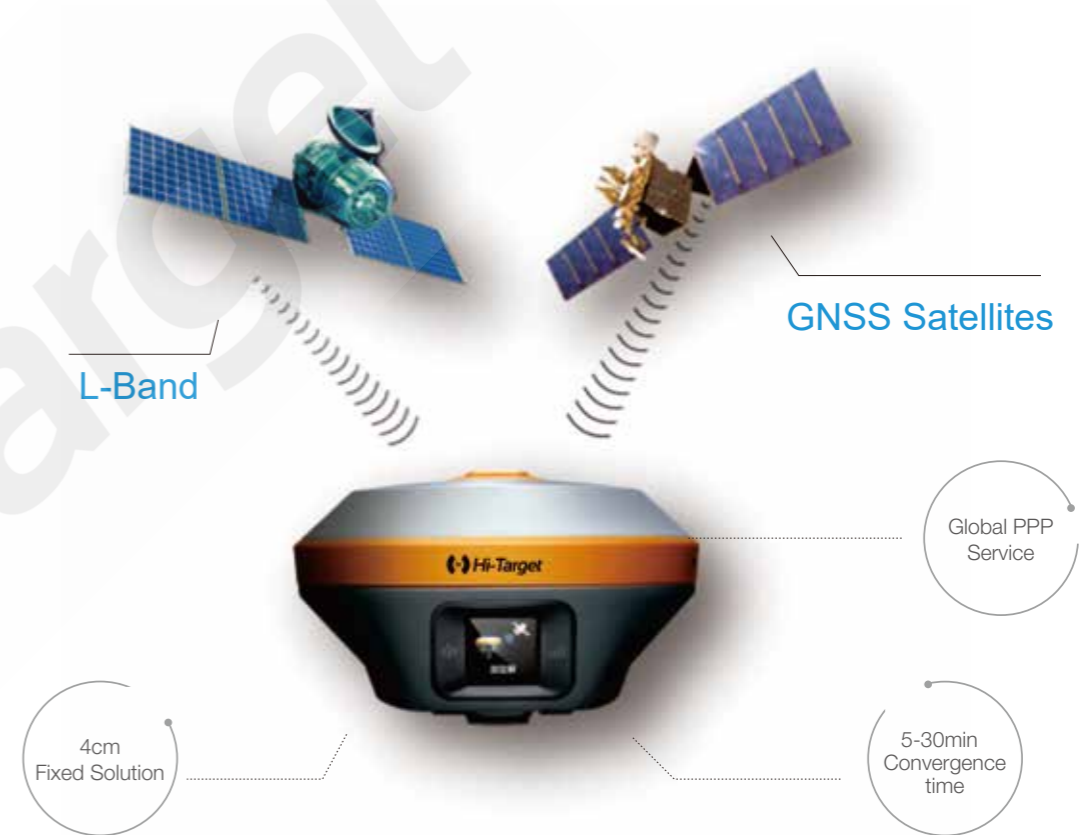
Intelligent and firewall-protected management platform



# 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.



### RTP-SM

Accuracy: Sub-meter  
Convergence time: <5min

### RTP-DM

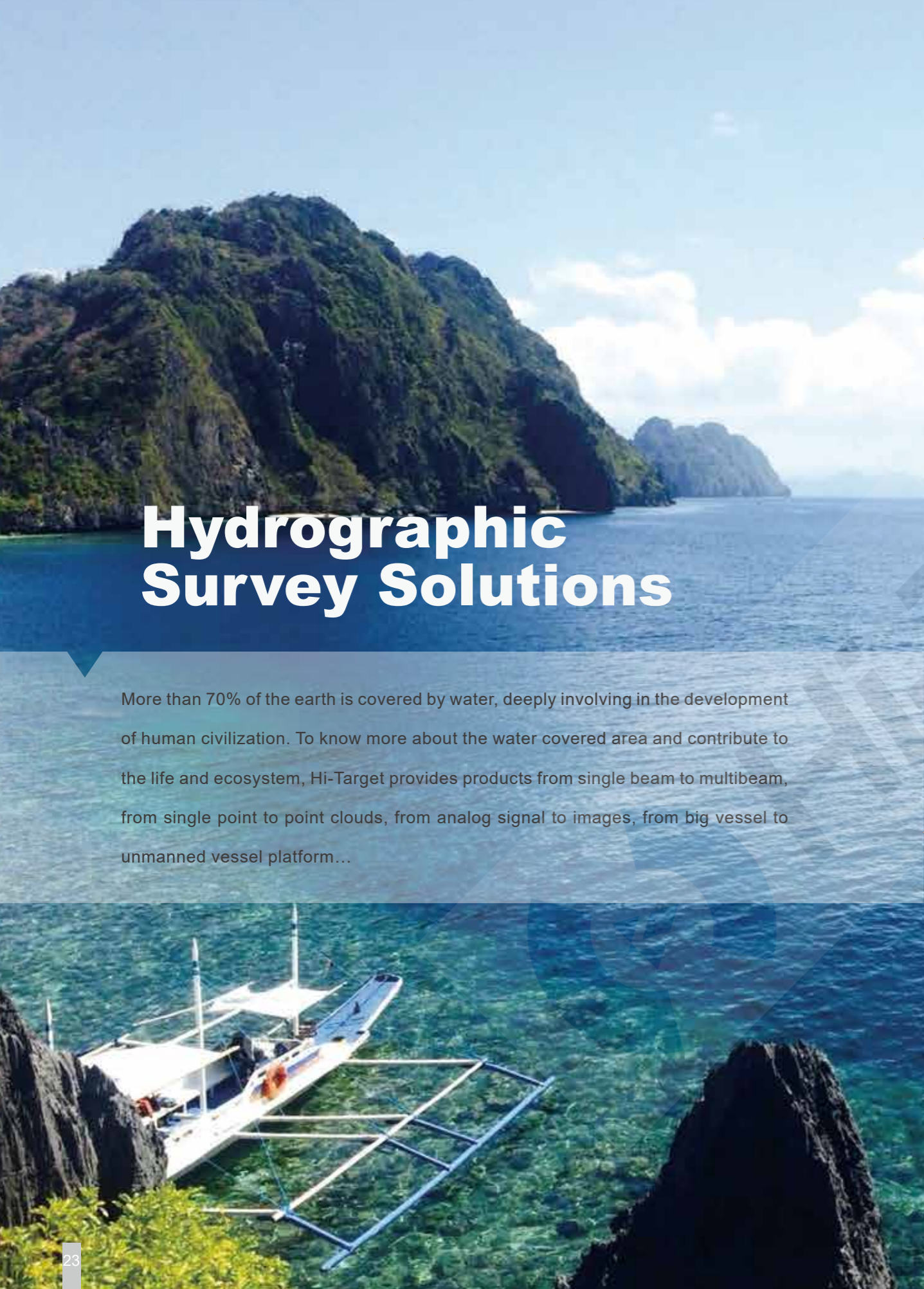
Accuracy: 10~20cm  
Convergence time: 20~30min

### RTP-CM

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

### RTP-RTK

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



# Hydrographic Survey Solutions

More than 70% of the earth is covered by water, deeply involving in the development of human civilization. To know more about the water covered area and contribute to the life and ecosystem, Hi-Target provides products from single beam to multibeam, from single point to point clouds, from analog signal to images, from big vessel to unmanned vessel platform...

## HD-MAX

### 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

## The Swift and Portable USV Survey System

- Powered by brushless DC propellers, the BS3 USV carries echo-sounder or ADCP to reach wherever you want, to get jobs done swiftly and efficiently in manual or auto-pilot mode.



### KEY FEATURES



#### Portable and Stable Body Design

The net weight of BS3 is less than 7KG while the whole body size is small enough to fit into the booth of a car while the Streamline trimaran ensure the sailing stability facing the currents.



#### Precise Auto-pilot

With the smart controlling system and powerful propellers, BS3 can reach to any targeted position within 10cm offset, provides precise survey lane.



#### Professional Survey Echosounder

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



#### Multiple Sensors Available Onboard

USV iBoat BS3 can carry not only echosounder but also ADCP as well, for multiple survey applications.

# 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.

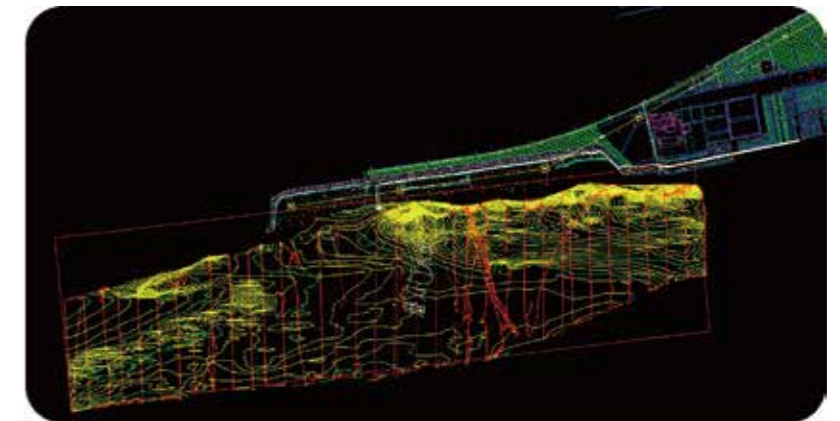
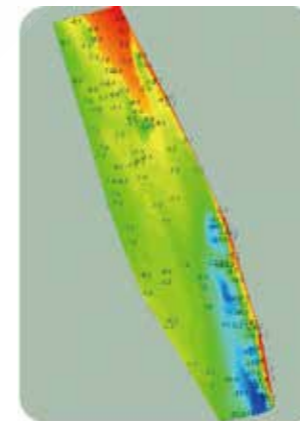
### CHALLENGES:

- ▶ 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:

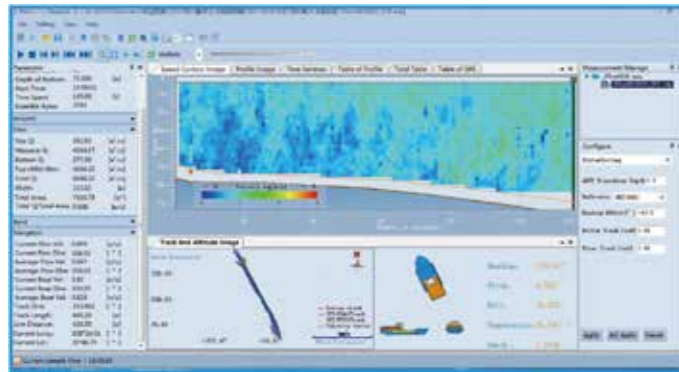


# iFlow RP600

## 600Hz Piston Acoustic Doppler Current 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 Working Mode**  
The iFlow RP600 support vessel has mounted, bottom-tracking, monitoring, DVL and self-contained modes.

**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**  
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

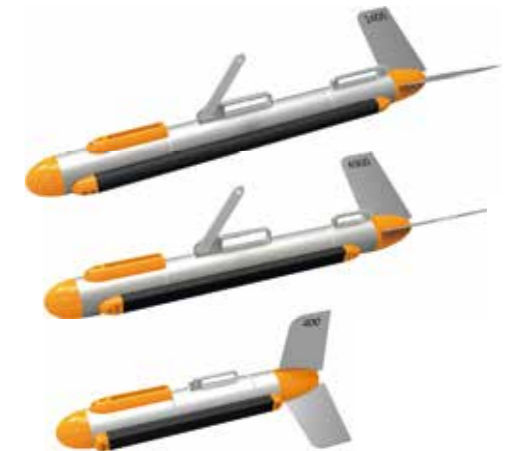
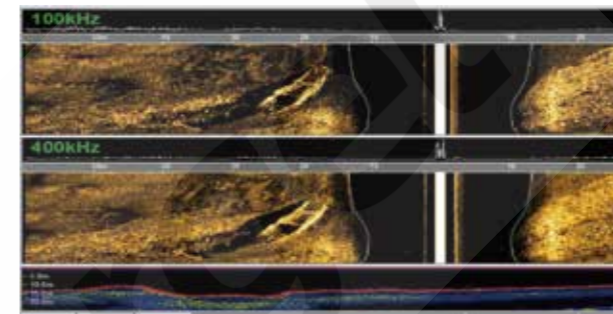
Frequency	600kHz
Type of Transducer	piston
Beam	4 beams Janus, 20°
Velocity Range	±5m/s (typical), ±20m/s (Max)
Velocity Profile Range	1~75m
Velocity Resolution	1 mm/s
Cell	1-256
Measurement Accuracy	0.25%±0.25cm/s
Working Mode	broadband
bottom-track Range	0.8-90m

# iSide 400/1400/4900

## 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 smaller objects.

**Real-time CW & CHIRP Transmitting Mode Switching**  
Real-time switching provides an adaptive solution for users, while the anti-noise performance is improved, the resolution higher and the range longer.

**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 operational safety.

### TABLE COMPARISON

	iSide 1400	iSide 4900	iSide 4900L	iSide 400
Frequency	100kHz&400kHz	400kHz&900kHz		400kHz
H. Beam Angle	0.7°@100kHz 0.2°@400kHz	0.2°@400kHz 0.2°@900kHz	0.3°@400kHz 0.2°@900kHz	0.3°
V. Beam Angle	45°			
Range Resolution	2.5cm@100kHz 1.25cm@400kHz	1.25cm		1.25cm
Max Range	600m@100kHz 200m@400kHz	200m@400kHz 75m@900kHz		200m
Depth Rating	1000m		450m	100m
Sensor	Heading, pitch, roll, pressure, depth			/

# Mapping Solutions

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.

## iFLY U0

### A Professional Mapping Drone

- Benefitting from over a decade's flight control research and development technology and over two decades' high precision RTK research and development technology, iFLY U0 can provide results of high efficiency and high accuracy. Thanks to the modular design of EPO+ carbon fiber composite material, iFLY U0 realizes tool-free installation as well as is portable and easy to maintain. With professional and customized ground station software, UAV is able to seamlessly connect with the ground station in an easy-to-operate and efficient way.

#### — KEY FEATURES



Long-endurance



Multiplexed parachute



High precision



One-person operation



Modular design

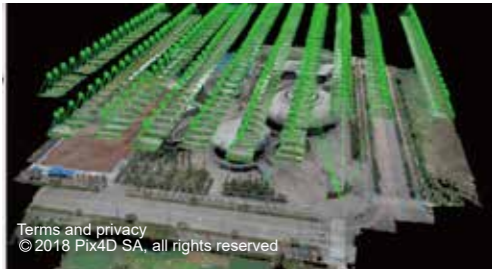


Smart battery



# SOFTWARE

## A Professional Mapping Drone



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### ▶ Pix4D mapper

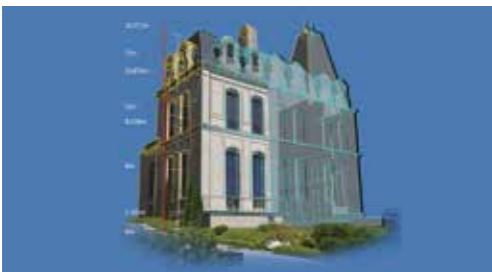
Automatic formation of 3D point cloud, model, orthophoto image and surface model



### ▶ HiData

Drawing:  
Internal and external combination

Data:  
Library integration



### ▶ DP-Modeler

Interactive monomer modeling, intelligent texture mapping, automatic retrieval of multi-angle images.



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### ▶ Smart 3D

Modular operation, high efficiency output fine 3D texture

## — INTELLIGENT ASSISTANT

▶ Intelligent planning of optimal routes, unified management of all engineering elements.

▶ Real-time monitoring of flight status, providing high-precision POS data.



# 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 proved to be a perfect solution when a massive amount of asset data needs to be collected in a short time.

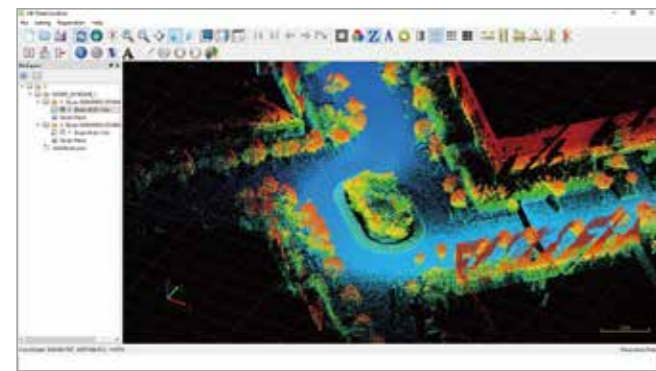
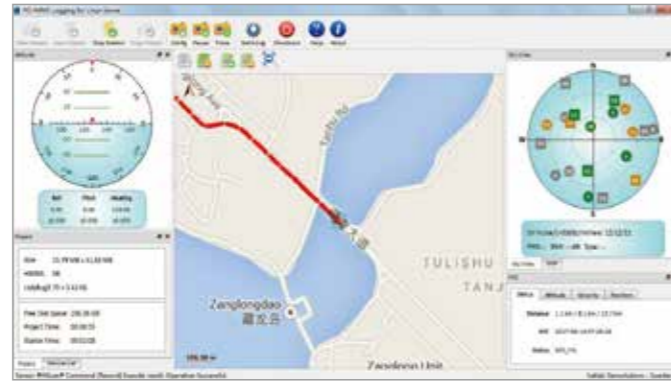


### KEY FEATURES



### ▶ HD Logging

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

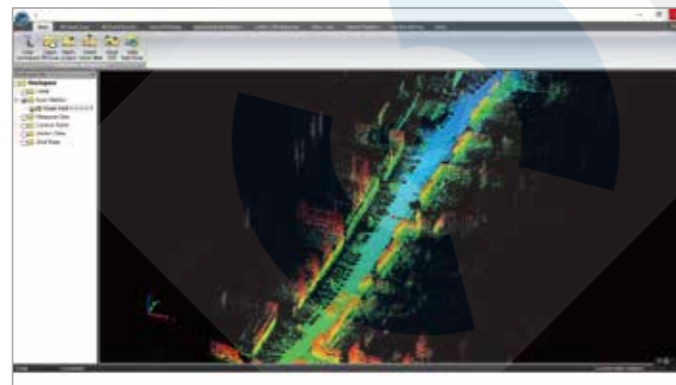


### ▶ HD Data Combine

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 iFly UAS and 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 in GNSS, optical, imaging and scanning technologies and supporting multiple carrier platforms, Hi-Target iFly UAS and HiScan MMS enable users to quickly and accurately capture the data needed to provide clients with 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 iFly UAS and HiScan MMS.