RUIDE

GNSS POSITIONING SYSTEM

NOVA R6

FEATURES

Smallest size in industry and innovative design with 12.9cm X 11.2cm. Using Aeronautical material Magnesium alloy with sophisticated industrial design, providing a unique advantage compared to other materials: light weight, resistance to external impact and shock absorption, and good electromagnetic shielding.

Intelligent platform provides an excellent solution for the interaction between the receiver and user, such as power management, voice broadcast, and self-inspection.

The internal tilt sensor helps to survey without leveling the receiver, in order to improve survey efficiency. Tilt angle is allowed up to 30°. Built-in tilt compensator corrects the coordinates according to the direction and tilt angle.

The internal electronic bubble sensor can display the leveling status of the receiver on the controller in real time. You don't even need a leveling bubble on the pole anymore.

WORKING MODE

1+1

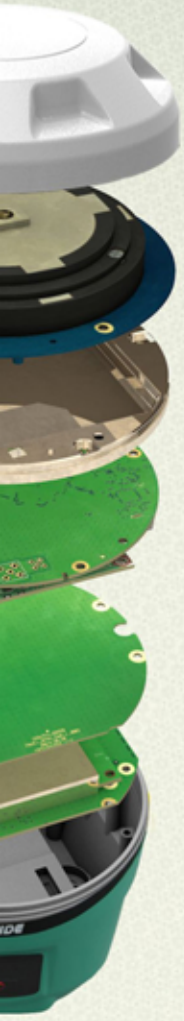
Using 2 receivers NOVA R6 as base and rover, you can establish a complete and accurate RTK surveying system. Your working range will be extended to 20km with an external radio. Wireless technology enables you to handle your work free from cables.

1+?

Already have a receiver? Connecting through TRIMTALK protocol, NOVA R6 can be either a base or a rover to work together with your receivers of other brands which also complies with TRIMTALK protocol, providing absolute flexibility and convenience to your field work.

1+ CORS

With the integrated GSM/GPRS modem, you can connect to the regional realtime reference station network at anytime, anywhere. One receiver handles all your work.



Equipped with Bluetooth 4.0 module, which supports receiver to work seamlessly with smart phone, tablet from Bluetooth 2.1 to 4.0, and also making Bluetooth communication faster and more stable. NFC is also available for fast connection.

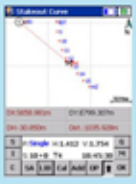
Pacific Crest BD970 GNSS mainboard board is a compact multi-constellation receiver designed to deliver centimeter accuracy to a variety of applications. That enables NOVA R6 to support a wide range of satellite signals, including GPS L2C and L5, GLONASS L1/L2 signals, and also Galileo and BEIDOU signals for improving accuracy and speed of positioning.

Integrated with powerful data-link system, NOVA R6 is compatible with current radio protocols in the market from 410-470MHz, supporting all kinds of network types to access CORS seamlessly. The protocol can switch between TRIMTALK protocol and SOUTH protocol as needed.

NOVA R6 employs a WiFi module, which enables PC and cell phone to connect to the receiver and read the survey data directly through the software.

FIELD SOFTWARE

RUIDE EGstar



Egstar supports all RTK surveying tasks including data collection, road design, stake-out, etc. Enhanced graphic display, tab-based menu structure and standard industrial input/output data format ensures you're working at optimal efficiency.

MicroSurvey FIELDGenius

FieldGenius is featured by graphic user interface, one-screen graphical stakeouts, an easy deciphered raw file that you can edit, powerful COGO tools, DXF file support (read, coordinate and write), streamlined connection to your instrument or computer, multi-point resections, roading, training movies, and the easiest most powerful linework tools in the industry.

CARLSON SURVCE

Carlson SurvCE, a user friendly fieldwork solution to meet diverse needs. Provides comprehensive data manipulation but no experience needed, combined advanced functionality with easy-to-use interface, supports LandXML points, DTM, graphics, alignments, profiles and sections.

SPECIFICATION

Surveying Performance		
Channel	220 Channels	
Signal Tracking	BDS B1, B2, B3	
	GPS L1C/A, L1C, L2C, L2E, L5	
	GLONASS L1C/A, L1P, L2C/A, L2P, L3	
	SBAS L1C/A, L5 (only for the satellites supporting L5)	
	Galileo GIOVE-A, GIOVE-B, E1, E5A, E5B	
	QZSS, WAAS, MSAS, EGNOS, GAGAN, SBAS	
GNSS Features	Positioning output rate:	1Hz-50Hz
	Initialization time:	< 10s
	Initialization reliability:	>99.99%
Positioning Precision		
Code Differential GNSS Positioning	Horizontal:	±0.25 m + 1 ppm
	Vertical:	±0.50 m + 1 ppm
	SBAS positioning accuracy:	typically<5m 3DRMS
Static GNSS Surveying	Horizontal:	±2.5 mm + 0.5 ppm
	Vertical:	±5 mm + 0.5 ppm
Real-Time Kinematic Surveying	Horizontal:	±8 mm + 1 ppm
(Baseline<30km)	Vertical:	±15 mm + 1 ppm
Network RTK	Horizontal:	±8 mm + 0.5 ppm
	Vertical:	±15 mm + 0.5 ppm
	RTK initialization time:	2-8s
Physical		
Dimension	12.9 cm X 11.2cm	
Weight	970g (including installed battery)	
Material	Magnesium aluminum alloy shell	
Environmental		
Operating	-45℃ - +60℃	
Storage	-55℃ - +85℃	
Humidity	Non-condensing	
Waterproof/Dustproof	IP67 standard, protected from long time immersion to depth of 1m	
	IP67 standard, fully protected against blowing dust	
Shock and Vibration	OFF Status:	Withstand 2 meters pole drop onto the cement ground naturally.
	ON Status:	Withstand 40G 10 milliseconds sawtooth wave impact test.
Electrical		
Power Consumption	2W	
Battery	Rechargeable, removable Lithium-ion battery	
Battery Life	Single battery:	7h (static mode)
		5h (internal UHF base mode)
		6h (rover mode)
Communications and Data Storage		
I/O Port	5PIN LEMO external power port + RS232	
	7PIN LEMO RS232 + USB	
	1 network/radio data link antenna port	
	SIM card slot	
Wireless Modem	Integrated internal radio receiver and transmitter 0.5W/1W	
	External radio transmitter 5W/25W	
Working frequency	410-470MHz	
Communication protocol	TrimTalk450s, TrimMark3, PCC EOT, SOUTH	
Cellular Mobile Network	WCDMA 3.5G module, GPRS/EDGE compatible, CDMA2000/EVDO 3G optional	
Double Module Bluetooth	BLEBluetooth 4.0 standard, supports connection with Android and iOS.	
	Bluetooth 2.1 + EDR standard	
WiFi	802.11b/g	
NFC Communication	Realizing close range (<10cm) automatic pair between NOVA R6 and controller	
	(controller equipped with NFC wireless communication module is required.)	
Data Storage/Transmission	4GB internal storage, more than 3 years' raw observation data (about 1.4M/day),	
	based on recording from 14 satellites plug and play mode of USB data transmission.	
Data Format	Differential:	CMR+, CMRx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2
	GPS output:	NMEA 0183, PJK plane coordinates, binary code
	Network model support:	VRS, FKP, MAC, supporting NTRIP protocol
Inertial Sensing System		
Tilt Survey	Built-in tilt compensator, correcting coordinates automatically according to the tilt direction and angle of the centering rod	
Electronic Bubble	Controller software display electronic bubble, checking leveling status of the centering rod real time	
User Interaction		
Buttons	One-button operation, visual operation	

ACCESSORIES

Carrying Case
2 Internal Batteries
Charger & Adapter
450MHz All-direction Antenna
GPRS Antenna
Communication Cable
Tribrach & 30cm Mounting Pole
Carbon Fiber Pole (only for rover)
Software CD
User Manual
Quick Guide Leaflet
Bracket (only for specific controller)

SUPPORTABLE RADIO

Pacific Crest ADL Sentry
Produced by Pacific Crest.
0.1/4W Power Output
390-430/430-450/450-470MHz
TRIMTALK/SOUTH Protocol

Pacific Crest ADL Vantage Pro
Produced by Pacific Crest.
35W Power Output
390-430/430-450/450-470MHz
TRIMTALK/SOUTH Protocol

RUIDE HX-U202
Produced by Harxon
5/35W Power Output
410-470MHz
TRIMTALK Protocol

DEALER

RUIDE

Established in 1995, RUIDE SURVEYING INSTRUMENT CO., LTD. is an R&D and production-oriented enterprise focusing on technology-intenssive mechanical and optical-electrics measuring instruments. Aimed to meet a wide range of precise and cost-effective requirements, RUIDE offers a complete product line of GNSS, total stations, theodolites, handheld distance meter, digital level, auto leve, survying accessories, etc.

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