

**RUIDE**

GNSS POSITIONING SYSTEM

**R90-X**



## FEATURES



The dual-frequency antenna with high performance is ready to run for a complete range of GNSS applications by inhibiting multipath effect and enhancing searching quality of satellite signals.



Powered by State-of-the-art motherboard Pacific Crest BD970, R90-X provides outstanding performance. All satellites including GPS, GLONASS, GALILEO and BEIDOU can be tracked and fixed fast and stably in any challenging environment.



Dual Bluetooth enables the receiver a wireless communication with controller for realtime connection and data transfer.



R90-X integrates an internal receiving and transmitting radio MDS TRM 450. By using the TRIMTALK protocol, R90-X provides the maximum flexibility and compatibility in various surveying modes.



With the integrated module of GSM/GPRS, R90-X can be easily swapped from RTK mode to regional reference station network to implement the data correction.



## WORKING MODE

1+1

Using 2 receivers R90-X 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, R90-X 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.

## FIELD SOFTWARE

**RLIDE**  
**EGstar**



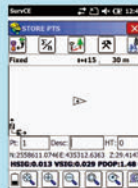
Egstar supports all RTK surveying tasks including data collection, road design, stake-out, etc. Enhanced graphic display, tab-based menu structure and standard industrial input/output data format ensures you're working at optimal efficiency. tools in the industry.

**MicroSurvey**  
**FIELDGenius**



FieldGenius is featured by graphic user interface, one-screen graphical stakeouts, an easy deciphered raw field 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**



Carson 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.

## CONTROLLER



**TEKLOGIX**  
**workabout Pro<sup>3</sup>**

<b>CPU</b>	624MHz
<b>RAM</b>	256MB
<b>OS</b>	Windows CE 5.0
<b>Screen</b>	3.7" VGA Touch
<b>Keyboard</b>	Alphanumeric
<b>Camera</b>	None
<b>IP</b>	IP65



**Getac**  
**PS 336**

<b>CPU</b>	1GHz
<b>RAM</b>	256MB
<b>OS</b>	Windows Mobile 6.5
<b>Screen</b>	3.5" VGA Touch
<b>Keyboard</b>	Numeric
<b>Camera</b>	5.0MP
<b>IP</b>	IP68



**RLIDE**  
**S10**

<b>CPU</b>	624Hz
<b>RAM</b>	256MB
<b>OS</b>	Windows Mobile 6.5
<b>Screen</b>	3.5" VGA Touch
<b>Keyboard</b>	None
<b>Camera</b>	3.0MP
<b>IP</b>	IP65

# SPECIFICATION

## R90-X

<b>No. of Channel</b>	220	
<b>Configuration</b>	Dual frequency for GPS, GLONASS, BEIDOU and SBAS	
<b>Single Tracked</b>	<i>GPS</i>	L1C/A, L2E, L2C, L5 (reserved)
	<i>GLONASS</i>	L1C/A, L1P, L2C/A (GLONASS M only), L2P
	<i>BEIDOU</i>	B1, B2
<b>Position Accuracy</b>		
<b>Code Differential</b>	<i>Horizontal</i>	25cm+1ppm RMS
	<i>Vertical</i>	50cm+1ppm RMS
	<i>SBAS</i>	Typically <5m 3DRMS
<b>Realtime Kinematic</b>	<i>Horizontal</i>	8.0mm+1.0ppm RMS
	<i>Vertical</i>	15.0mm+1.0ppm RMS
	<i>Time to Work</i>	<8s
<b>Static Performance</b>	<i>Horizontal Accuracy</i>	3.0mm+0.5ppm RMS
	<i>Vertical Accuracy</i>	5.0mm+0.5ppm RMS
<b>Communication</b>	UHF RXTX antenna port	
	GPRS/GSM signal antenna port	
	9-pin serial port (baud rate up to 115,200kbps)	
	5-pin LEMO interface	
	Multicable with USB interface for connecting with PC Bluetooth 2.4GHz Class II, maximum range 50m	
<b>Internal Radio</b>	<i>Frequency</i>	410-430MHz
		430-450MHz
		450-470MHz
		RX & TX
	<i>Output Power</i>	0.5W
<b>GSM/GPRS Modem</b>	<i>Protocol</i>	NTRIP
<b>Bluetooth</b>	2.4GHz Bluetooth, Stollmann's BlueMod+B20 functioned	
<b>Power</b>	<i>Internal Battery</i>	7.4V, 2500mAh, Li-on battery, 12-15VC power input
	<i>Battery Running Tim</i>	6-10 hours on average (2 batteries)
<b>Weight</b>	1.2kg with internal battery	
<b>Dimension</b>	184mm x 184mm x 96mm	
<b>Environmental</b>	<i>Operation Temp</i>	-40°C to 75°C (-49°F to 167°F)
	<i>Storage Temp</i>	-55°C to 85°C (-67°F to 185°F)
	<i>Shoc/Drop</i>	2m
<b>Waterproofing</b>	IP67	
<b>Data Output</b>	<i>Internal</i>	4GB
		Update rate: 1Hz, 2Hz, 5Hz, 10Hz, 20Hz (optional)
		Reference outputs: CMR, CMR+, RTCM 2.1, RTCM 2.2, RTCM 2.3, RTCM 3.0, RTCM 3.1

Measurement accuracy and operation range might vary due to atmospheric conditions, signal multipath, obstructions, observation time, temperature, signal geometry and number of tracked satellites.  
Specifications subject to change without prior notice.

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### 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-intensive 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 level, surveying accessories, etc.

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