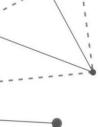
Specification

A90 GNSS RTK

	Product model	A90 ZX	A90 ZH		
	Channels	336 channels	800 channels		
GNSS	Satellite Signals	GPS: L1 C/A, L2E, L2C, L5 BDS: B1, B2, B3 GLONASS: L1 C/A, L2 C/A, L3 Galileo: E1, E5A, E5B, E5AltBOC, E6 QZSS: L1 C/A, L1 SAIF,L1C, L2C, L5, LEX SBAS: L1 C/A, L5 MSS L-Band: Trimble RTX IRNSS L5	GPS: L1C/A,L1C,L1P,L2C,L2P,L5; GLONASS:G1P1,G1OC,G2OC,G2P2,G3OC BDS: B11, B2I, B3I, B1C, B2a, B2b, ACEBOC; Galileo: E1BC, E5a, E5b, ALTBOC, E6 QZSS: L1C/A, L1C, L2C, L5, LEX; SBAS: L1, L5; IRNSS: L5; L-Band		
	Static	H: ± (2.5mm+0.5 x10 ^{-6.} D) RMS , V: ± (
	RTK	H: \pm (8mm+0.5 x10 ⁻⁶ D) RMS , V: \pm (15mm+0.5 x10 ⁻⁶ D) RMS			
	DGNSS	<0.5m			
Accuracy	ATLAS H10	8cm			
	Initialization Time	8s			
	Initialization Reliable	99.9%			
	OS	Linux			
	Memory	8GB, support expandable MicroSD 32G			
Quatant	Wi-Fi	802.11 b/g/n, support WebUI management: update, data download, operation setting and etc.			
System	Bluetooth	V2.1+EDR/V4.1Dual, Class2			
	E-Bubble	Support			
	IMU Tilt Survey	Fusion positioning, 400Hz refresh rate, 2cm (@60°Tilt degree)			
	Audio	support TTS audio broadcast			
Datalink	UHF radio	Tx/Rx Internal Radio, 0.5W/2W adjustable, 410-470MHz			
	Radio protocol	Support GeoTalk, SATEL, PCC-EOT, TrimTalk 450S, TrimMark III, South, Hi- Target and etc.			
2 0101111	Network	4G-LTE, TE-SCDMA, CDMA(EVDO 2000), WCDMA, GSM(GPRS)			
	Reference	RTCM2.3, RTCM3.2, RTCM3.X, CMR,CMR+,ROX and etc.			
	outputs				
Physical Power supply	Interface	1*TNC Radio Antenna, 1*5Pin(Power & RS232),1*7Pin (USB 81 RS232)			
	Button	1 Power Button			
	Indication Light	4 Indication Lights			
	Size	Ф156mm×H76mm			
	Weight	1.2kg			
	Battery capacity Life Timer	7.4V, 24.5Wh(standard two batteries:3400mAH*2)			
	Life Timer	Static Survey: 15 hours, Rover RTK survey: 12h			
	External power source	DC 9-18V, with overvoltage protection			
Environment	Work Temperature	-35℃~+65℃			
	Storage Temperature	-55°C~+85℃			
	Waterproof & dustproof	IP68			
	Humidity	100% anti-condensation			

Accuracy and reliability specifications may be affected by multipath, satellite geometry and atmospheric Conditions. Performances assume minimum of 5 satellites, follow up of recommended general GPS practices.
Operating time varies based on temperature. Specifications are subject to change without notice.







GNSS RTK Receiver





A90 Features

Since A90 launch, A90 has been recognized by the majority of users for its excellent quality and excellent performance, and has become a star product in the RTK market. Now, the A90 is newly upgraded, the A90 is launched, and a new inertial navigation technology is added to support the fusion positioning.



The A90 ZH Extreme Edition is equipped with a new generation of highprecision positioning boards, 800 super channels, supporting 4-satellites full-band satellite signal reception, and fully supports the fourthgeneration GNSS positioning technology.

· Support "aRTK" technology, maintain a fixed resolution for a period of time in the case of a differential data link interruption.

Smart Base Station

Real-time reminder of base station offset, real-time display of base station power, Even your base station is near the sky, it is almost in front of you



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IMU Tilt Survey

Newest IMU Tilt Survey technology, New algorithm, no need calibration. Using fusion positioning technology, built-in highprecision IMU inertial navigation module, patented IMU inertial navigation and GNSS fusion positioning algorithm, Support 400Hz positioning data output, tilt 60 degrees positioning accuracy 2cm, can do tilt measurement, Surveying at any time.

As solid as a rock



High purity magnesium alloy material + independent closed space capsule design. Make independent loops between different RF modules. Minimize internal crosstalk, the internal noise control of the instrument reaches the world's top level.

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Based on intelligent operating system, the newly designed new generation WebUI makes RTK operation as simple as the Internet; intelligent TTS voice prompts support user DIY settings; UniCloud private cloud service, remotely control the working status, make your instrument smarter!

Beyond, because I don't believe in perfection

Easy Surveying

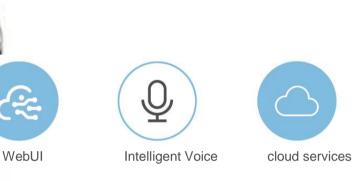
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Combined Antenna

A new generation of combined antennas, GNSS, WiFi, Bluetooth, 4G. The antenna is integrated, the system level is optimized, and the signal strength is improved Up 30%!

Dual Batteries Dual insurance

Dual battery + dual battery compartment double insurance design, unique ingenuity, battery selfcontained power intelligent detection chip, remaining power, one click know!



Intelligent System





Brand new UI design, support CAD mapping, stake out, support direct import of road curve feature table, built-in 11 commonly used projection methods worldwide and more than 1600 coordinate systems in hundreds of countries. Professional function modules and one-click help design help you efficient measurement

Mobile CAD platform	Internationalized Global Coordinate System	
Powerful CAD function, field connection of field measurement data, direct calculation and drawing of various CAD images in the field, straight line processing of complex line field CAD, support for import and export of DXF files.	Supports 11 commonly used projection methods worldwide, with more than 1,600 coordinate systems built in hundreds of countries.	
Powerful road function module	Graphical photo annotation	
Support direct import of road straight curve table, support line element method, intersection method input, cross section, slope stake out, map preview, etc.	The measurement points are taken and marked in real time, attribute recording is more convenient, and finding points in the field is easier.	
Convenient parameter QR code sharing	Easy earthmoving calculations	
It supports sharing of two-dimensional codes such as conversion parameters, coordinate systems and configuration sets, which is convenient and quick.	A variety of earthmoving measurement algorithms.	
Practical National 2000 Frame Conversion	One-click help	
Support frame conversion of Atlas and National 2000 coordinate system. Atlas can directly measure national 2000 coordinate results.	The software has a built-in guide-type help module, and one- click help for various functions. The software is no longer complicated and measurement is easier.	
New UI design		
More reasonable page function distribution, simple and beautiful software operation interface, support interface style switching, icon hiding and other functions		

P9III Controller

- Operating System Android 9.0
- Built-in Bluetooth, WIFI module
- 4.3 inches, readable in sunlight, touch screen
- 13 megapixels built-in camera Protection level IP67

GNSS Performa	nce (Option)	Power Supply	
Satellite Tracked	MTK support GPS/BDS/GLONASS	Internal Battery	22.8Wh
Update Rate	1Hz		
Position accuracy	2.5 m CEP (Autonomous)	Operating Time	No less than 12 hours
	2.0m CEP (SBAS)	Charging Time	Typically 4 hours
Cold Start	30 seconds		PE quick charge 9V/2A
Hot Start	1 second	Data Interface	
Communication	1	Display	4.3 inch
Memory	2 GB		480 x 800
Storage	16 GB		Sunlight readable
Bluetooth	BT2.1 + EDR/3.0/4.1/4.2 BLE		
WIFI	2.4G/5G, 802.11 a/b/g/n/ac	Keypad	Alphanumeric key and function key
		Connectors	Type C(For charging and data transfer, OTG)
NETWORK			
	FDD-LTE :B1//B3/B5/B8	Operating System	Android 9.0
	TDD-LTE B34/B38/ B39/B40/B41	Processor	Qualcomm 506, 8 cores
	EVDO/CDMA:BC0	Micro SD Card Slot	Up to 256 GB
	WCDMA B1/B8	SIM Card	SIM card
	GSM/EDGE:900/1800MHz	Environment	
Physical		Operating Temperature -20°C ~ 55°C	
Dimensions	215x82x26mm	Storage Temperature	-40°C ~ 70°C
Weight	470g	Water/Dust Proof	IP67
		Drop Resistance	1.5m to concrete
		Humidity	0-95% RH, no-condensing

