

eRTK10

AR VISUAL STAKEOUT GNSS RECEIVER

The eSurvey eRTK10 is a brand new GNSS receiver integrated with visual technology by eSurvey GNSS. It supports immersive 3D stakeout under real working environment. With the AR visual positioning technology, the eRTK10 helps you do stakeout faster and improves your working efficiency. The compact design makes it easy to carry around in various complex environments. Integrated with internal radio (Rx only) and 60° inclination IMU function, the eRTK10 is a perfect choice for any rover station scenarios.



GNSS Receiver

AR Visual Stakeout: More Efficient Stakeout

There is no need to move the pole back and forth and rely on work experience during a stakeout. Follow the visual guide to precisely find the target stakeout point. Suitable for a non-experienced user and provide up to 50% more efficiency.

Multi-constellation and Multi-frequency

With 1408 channels of GNSS tracking, it provides stable and reliable accuracy. All GNSS signals come with the standard including GPS, BDS, GLONASS, Galileo, QZSS, NAVIC, SBAS and L-Band.

Max 60° Tilt Survey: A Different Way of Working

- Quickly measure accurate points while standing or walking without leveling the pole.
- Concentrate on where the pole tip needs to go, which is especially useful during a stakeout.
- Easily start a survey in environments that are hard to reach, such as building corners and slopes.
- No longer worry about the movement of the pole when measuring, provided that the pole tip is stationary.

Rugged Design

It is strongly made and capable of withstanding rough handling and no need to worry about variety tough environments.

Light Weight & Compact Design

The compact design of the eRTK10 makes it a small size and light weight GNSS receiver, it is easy to carry around by users without getting tired

Web UI

It allows users to view position status, set up working mode, download data, and update firmware from the Web user interface with any smart phone, tablet, or PC.



Website



Social media

Product Specification

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GNSS Performance		
Satellites tracking	GPS	L1 C/A, L1C, L2P(Y), L2C, L5
	BDS	B1I, B2I, B3I, B1C, B2a, B2b
	GLONASS	L1, L2, L3
	Galileo	E1, E5a, E5b, E6
	QZSS	L1, L2, L5
	NavIC	L5
	SBAS	WAAS, GAGAN, MSAS, EGNOS, SDCM, BDS
	L-Band	B2b PPP (Only for the Asian-Pacific region), HAS ¹
Channels	1408	
Signal reacquisition	< 1 second	
Cold start	< 30 seconds	
Warm start	< 20 seconds	
Hot start	< 5 seconds	
RTK signal initialization	< 5 seconds	
Initialization reliability	> 99.9%	
Update rate	20 Hz	
High precision static	<ul style="list-style-type: none"> ■ H: 2.5 mm + 0.1 ppm RMS ■ V: 3.5 mm + 0.4 ppm RMS 	
Static and Fast Static	<ul style="list-style-type: none"> ■ H: 2.5 mm + 0.5 ppm RMS ■ V: 5 mm + 0.5 ppm RMS 	
RTK	<ul style="list-style-type: none"> ■ H: 8 mm + 1 ppm RMS ■ V: 15 mm + 1 ppm RMS 	
Standard point positioning	<ul style="list-style-type: none"> ■ H: 1.5 m RMS ■ V: 2.5 m RMS 	
Code differential	<ul style="list-style-type: none"> ■ H: 0.4 m RMS ■ V: 0.8 m RMS 	
SBAS	<ul style="list-style-type: none"> ■ H: 0.3 m RMS ■ V: 0.6 m RMS 	
Correction data	RTCM V3.X, RTCM2.X, CMR	
Data output	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL, Binary	

Power Supply	
Battery	Rechargeable Built-in Lithium-ion battery x 1 3.6 V - 13600 mAh
Voltage	9 - 28V dc
Working time	Up to 21 hours as rover w/ camera
Charging time	Typically 5 hours

1: It will be supported through future firmware update.

2: It is only available for radio protocol "Satel", and the radio firmware is later than G001.02.27.

System	
Operation system	Linux
Internal memory	8 GB
Bluetooth	BT 5.0 + EDR, BLE
Wi-Fi	802.11a/b/g/n/ac
TNC	Connect internal radio with antenna
Type-C port	Charge and data transmission
Web UI	View status, update firmware, set up working mode, download data, etc.
Intelligent voice	Broadcast working mode and status
Tilt sensor	MEMS Fast initialization, dynamic tilt survey up to 60°

Physical	
Dimension	Φ152 mm x H88 mm
Weight	891 g
Operating temperature	-30°C - +60°C
Storage temperature	-40°C - +80°C
Water / dust proof	IP67
Shock	<ul style="list-style-type: none"> ■ Withstand topple over from a 2 m survey pole onto hard surfaces ■ Survive a 1.2 m free drop
Vibration	Vibration resistant
Humidity	Up to 100%
Indicators	Satellites, datalink, battery
Button	Power button, short press to voice broadcast working mode and status
Certificate	CE, FCC, NGS, IGS

Internal Radio	
Type	RX
Frequency range	410 - 470 MHz
Channel spacing	6.25 KHz ² / 12.5 KHz / 25 KHz
Protocol	TrimTalk 450s, PCC-GMSK, PCC-4FSK, Satel, Satel_ADL, HITARGET, TrimTalk, HZSZ, South, TrimMark III, GEOTALK, GEOMARK, PCCFST, PCCFST_ADL

Visual Configuration	
Pixel	2 MP
Frame	25 Hz
FOV	88°
Stakeout accuracy	3 cm