

# eRTK10 mini

## POCKET-SIZE GNSS RECEIVER

The eSurvey eRTK10 mini is a pocket-size IMU-based GNSS receiver equipped with a high-performance and high-precision GNSS module. It integrates IMU tilt technology for efficient staking out, features a compact and lightweight design for easy portability, and serves as an ideal high-precision GNSS positioning sensor for seamless integration into various industry application solutions.



GNSS Receiver

### Easy to be Integrated

With its configuration of voice prompts, indicator lights, a universal Type-C interface, and Bluetooth 5.0 EDR & BLE for seamless interaction and integration, this device provides stable high-precision GNSS positioning data. It is suitable for various industry solutions requiring high-precision GNSS positioning.

### 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.

### Ultra-portable

Palm-sized and weighing just 380g, this receiver is incredibly light and easy to carry. Its sleek design allows seamless integration into portable solutions, delivering stable high-precision GNSS data for a variety of industries.

### 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.



# 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 <sup>1</sup>
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		20Hz
High precision static		<ul style="list-style-type: none"> <li>H: 2.5 mm + 0.1 ppm (RMS)</li> <li>V: 3.5 mm + 0.4 ppm (RMS)</li> </ul>
Static and fast static		<ul style="list-style-type: none"> <li>H: 2.5 mm + 0.5 ppm (RMS)</li> <li>V: 5 mm + 0.5 ppm (RMS)</li> </ul>
RTK		<ul style="list-style-type: none"> <li>H: 8 mm + 1 ppm (RMS)</li> <li>V: 15 mm + 1 ppm (RMS)</li> </ul>
Standard point positioning		<ul style="list-style-type: none"> <li>H: 1.5 m (RMS)</li> <li>V: 2.5 m (RMS)</li> </ul>
Code differential		<ul style="list-style-type: none"> <li>H: 0.4 m (RMS)</li> <li>V: 0.8 m (RMS)</li> </ul>
SBAS		<ul style="list-style-type: none"> <li>H: 0.3 m (RMS)</li> <li>V: 0.6 m (RMS)</li> </ul>
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 3.65 V ~ 5800 mAh
Voltage	Type-C PD 12V/1.5A
Working time	Up to 12 hours as rover
Charging time	Typically 1.5 hours

1: It will be supported through future firmware update.

System	
Operation system	Linux
Internal memory	8 GB
Bluetooth	BT5.0+EDR, BLE
Wi-Fi	802.11 a/b/g/n/ac
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	Φ98 mm x H45.5 mm
Weight	380 g
Operating temperature	-30°C ~ +60°C
Storage temperature	-40°C ~ +80°C
Water / dust proof	IP67
Shock	<ul style="list-style-type: none"> <li>Withstand topple over from a 2 m survey pole onto hard surfaces</li> <li>Survive a 1.2 m free drop</li> </ul>
Vibration	Vibration resistant
Humidity	Up to 100%
Indicators	Satellites, datalink
Button	Power button, short press to voice broadcast working mode and status
Certificate	CE, FCC, NGS, IGS

Visual Configuration	
Visual stakeout	
Pixel	2 MP
Frame Rate	25 FPS
FOV	88°