

# eRTK25

# THE VISUAL GNSS RECEIVERS WITH LASER PRECISION

eSurvey eRTK25 is a high-precision GNSS receiver integrating laser ranging and a wide-angle dual-camera vision measurement system, designed for efficient operation in challenging environments such as daylight conditions, confined spaces, and extreme temperatures.





**GNSS Receiver** 

# Laser + CAD AR Dual-Tech Integration

#### • AR Stakeout:

Overlay CAD designs onto real-world environments via AR, boosting on-site efficiency by 40%.

### • Laser Precision:

Achieve centimeter-level accuracy with non-contact measurements, ideal for extreme temperatures or tight spaces.

### • High performance and stability:

The eSurvey eRTK25 integrates laser ranging technology and AR vision stakeout, enabling robust centimeter-level positioning even in harsh or constrained settings. Its multimodal sensor fusion ensures operational adaptability across diverse scenarios, including full daylight visibility, narrow spaces, and extreme temperature ranges (-30°C to 70°C), making it ideal for industrial, construction, and geospatial applications requiring precision in dynamic environments.

## Max 60° Tilt Survey

#### • No-Leveling Measurement:

Capture data while standing or moving, even with the rod tilted up to 60°.

## Adapts to Complex Terrain:

Easily access confined spaces (e.g., building corners, slopes) to boost efficiency.

### • Dynamic Stability:

Maintains precision even if the rod shakes, as long as the tip remains stationary.

# Advanced Long-Range Tx/Rx UHF Modem

Integrated with the long range UHF modem, the eRTK25 is compatible with traditional major radio protocols. The maximum communication distance can reach 10 km with 1W transmit power in urban environments.

# Multi-Constellation & Multi-Frequency Support

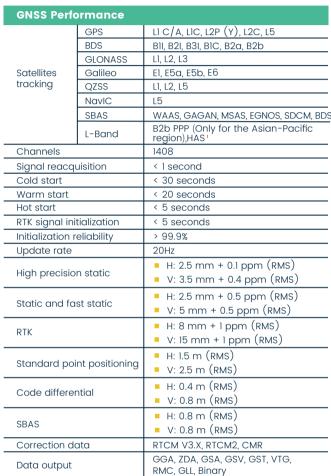
1408 GNSS Channels: Simultaneously processes signals from GPS, BDS, GLONASS, Galileo, QZSS, NavIC, SBAS, and L-Band, ensuring stable centimeter-level accuracy for global positioning.



# **Product Specification**

# eRTK25





Power Supply	
Battery	Rechargeable Built-in Lithium-ion battery x 1 3.6 V ~ 13400 mAh
Voltage	Type-C PD 12V/1.5A
Working time	10 hours as UHF with AR and Laser working
Charging time	Typically 5 hours

Internet Modem	
Supported band	Global 4G LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/ B13/B18/B19/B20/B25/B26/B28 LTE TDD: B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 GSM: 850/900/1800/1900 MHz

- 1: It will be supported through future firmware update.
- 2: It varies with the obstacle, terrain and protocols.
- 3: It is only available for radio protocol "Satel".





System	
Operation system	Linux
Internal memory	8 GB
Bluetooth	BT 5.0 BR + EDR, BLE
Wi-Fi	IEEE 802.11 a/b/g/n/ac
SIM card	√
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	Ф136 mm x H74 mm
Weight	950 g
Operating temperature	-30°C ∼ +70°C
Storage temperature	-40°C ∼ +80°C
Water / dust proof	IP67
Shock	<ul> <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, battery, Bluetooth
Button	Power button, short press to voice broadcast working mode and status
Certificate	FCC, CE, KC, ANATEL

Internal Radio	
Туре	TX and RX
Emitting power	2 W
Operation range	3-5 km typically up to 15 km with optimal conditions2
Frequency range	410 - 470 MHz
Channel spacing	6.25 kHz <sup>3</sup> / 12.5 KHz / 25 KHz
Protocol	elink_Ultra, geotalk_Ultra, FARLINK, TRIMTALK, TRIMMK III, SOUTH, TRANSEOT, GEOTALK, GEOMK3, SATEL, HITARGET, HZSZ PCCEOT, PCCEOT_SATEL, PCCFST, PCCFST_ADL, SATEL_ADL

Visual Configuration	
Pixel	Dual cameras with 5MP for the bottom and 5MP for the front
FOV	72° for the bottom and 90° for the front
Laser accuracy	Range: 0.1-50m Accuracy: ±1cm+5mm/m

