e-survey

# eRTK60

## FULL-FEATURED VISUAL GNSS RECEIVER


The eSurvey new eRTK60 GNSS receiver integrates high performance GNSS, IMU and dual-camera technologies to provide more reliable and diverse measurement results. Visual survey technology enables you to measure the point without physically reaching it, thereby giving you more flexibility in the field and maximizing productivity in your projects. The upgraded built-in radio supports longer communication distances. The extended working endurance of the eRTK60 is guaranteed by its hot-swap batteries. Its colorful LED screen also offers a more intuitive working status and operation interface.

GNSS Receiver

### Visual Survey: Measuring What You See

Visual survey technology provides accurate positioning coordinates from images captured in seconds. Measure what you see, get the coordinates of previously unreachable and signal-blocked points.

### Colorful LED Display

View the primary status and basic information, set the work mode, and operate the device, allowing for more convenient and direct interactive actions.

### CAD AR Stakeout: Improved Efficiency

CAD drawings are directly marked on the interface, thus there is no need to choose each point individually. The CAD AR stakeout is a highly effective tool for optimizing stakeout operations and simplifying complex construction tasks in a variety of construction scenarios.

### Advanced Long-Range Tx/Rx UHF Modem

Integrated with the long range UHF modem, the eRTK60 is compatible with traditional major radio protocols. The maximum communication distance can reach 10 km with 1W transmit power in urban environments.

### Hot-Swap Batteries: Providing Uninterrupted Service

Designed with a symmetric battery compartment and driven by sufficient charged batteries on hand, the hot-swap battery power system of the eRTK60 is meant to improve power availability while eliminating power-related downtime.

Website & Social media

# Product Specification

# eRTK60


## FULL-FEATURED VISUAL GNSS RECEIVER

| 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 | | 20Hz |
| High precision static | | ■ H: 2.5 mm + 0.1 ppm (RMS)<br>■ V: 3.5 mm + 0.4 ppm (RMS) |
| Static and fast static | | ■ H: 2.5 mm + 0.5 ppm (RMS)<br>■ V: 5 mm + 0.5 ppm (RMS) |
| RTK | | ■ H: 8 mm + 1 ppm (RMS)<br>■ V: 15 mm + 1 ppm (RMS) |
| Standard point positioning | | ■ H: 1.5 m (RMS)<br>■ V: 2.5 m (RMS) |
| Code differential | | ■ H: 0.4 m (RMS)<br>■ V: 0.8 m (RMS) |
| SBAS | | ■ H: 0.3 m (RMS)<br>■ 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 | Removable and rechargeable Hot-swappable Lithium-ion battery x 2 7.2 V ~ 3400 mAh x2 |
| Voltage | 9-28V DC |
| Working time | 10 hours as UHF base |

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

1: It will be supported through future firmware update.
2: It varies with the obstacle, terrain and protocols.

| System | |
|---|---|
| Operation system | Linux |
| Internal memory | 8 GB |
| Bluetooth | BT5.0+EDR, BLE |
| Wi-Fi | 802.11a/b/g/n/ac |
| SIM card | ✓ |
| TNC | Connect internal radio with antenna |
| 5-pin port | Connect to external radio and external power |
| Type-C port | 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<br>Fast initialization, dynamic tilt survey up to 60° |

| Physical | |
|---|---|
| Dimension | Φ156 mm × H74.5 mm |
| Weight | 931 g |
| Operating temperature | -30℃ ~ +65℃ |
| Storage temperature | -40℃ ~ +80℃ |
| Water / dust proof | IP67 |
| Shock | ■ Withstand topple over from a 2 m survey pole onto hard surfaces<br>■ Survive a 1.2 m free drop |
| Vibration | Vibration resistant |
| Humidity | Up to 100% |
| Indicators | Satellites, datalink |
| Button | Power button, function button |
| Screen | 1.1" colorful screen |
| Certificate | CE, FCC, NGS, IGS |

| Internal Radio | |
|---|---|
| Type | TX and RX |
| Emitting power | 1W/2W |
| Operation range | 3-5 km typically up to 15 km with optimal conditions[2] |
| Frequency range | 410 - 470 MHz |
| Channel spacing | 12.5 kHz / 25 kHz |
| Protocol | TRIMTALK, TRIMMK III , SOUTH, TRANSEOT, GEOTALK, GEOMK3, SATEL, HITARGET, HZSZ, PCCEOT, PCCEOT_SATEL, PCCFST, PCCFST_ADL, SATEL_ADL, FARLINK, elink_Ultra, geotalk_Ultra |

| Visual Configuration | |
|---|---|
| Visual stakeout | |
| Pixel | 2 MP |
| FOV | 72° |

| Visual Configuration | |
|---|---|
| Visual survey | |
| Pixel | 2 MP |
| FOV | 88° |
| Image accuracy | 2~4 cm, range 2~15 m |

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