

Eyr ER30 GNSS Receiver

Data Specifications

GNSS Signal Tracking^①	GPS (L1C/A, L1C, L2P(Y), L2C, L5) BDS (B1I, B2I, B3I, B1C, B2a, B2b) GLONASS (L1, L2, L3) Galileo (E1, E5a, E5b, E6*) SBAS(L1, L2, L5) QZSS (L1, L2, L5, L6*) IRNSS (L5*) L-BAND*(B2b-PPP*)
No. of Channels	1408
POSITIONING PERFORMANCE^② High-precision static GNSS Surveying Static and Fast Static Post Processing Kinematic (PPK / Stop & Go)	H:2.5 mm + 0.1 ppm RMS / V:3.5 mm + 0.4 ppm RMS H:2.5 mm + 0.5 ppm RMS / V:5 mm + 0.5 ppm RMS H:8mm + 1 ppm RMS / V:15 mm + 1 ppm RMS Initialization time: Typically 10 min for base and 5 min for rover Initialization reliability: Typically >99.9%
Code Differential GNSS Positioning	H:±0.25m+1ppm RMS V:±0.5m+1ppm RMS SBAS:0.5m(H) / PPP:0.1m(H), 0.2m(V)
Real Time Kinematic (RTK)	H:8 mm+1ppm RMS / V:15 mm+1 ppm RMS Initialization time: Typically <10 s Initialization reliability: Typically > 99.9%
Time to first Fix	Cold start:< 45 s Hot start:< 30 s Signal re-acquisition:< 2 s
Tilt Survey Performance^③	Additional horizontal pole-tilt uncertainty typically less than 8 mm +0.7 mm / °tilt (2.5 cm accuracy in the inclination of 60°)
Hi-Fix	H:RTK+10 mm / minute RMS / V:RTK+20 mm / minute RMS
COMMUNICATION Communication	Bluetooth: 4.2 / 2.1+EDR, 2.4 GHz / NFC Wi-Fi: frequency 2.4 GHz, Supports 802.11 b / g / n
Internal UHF Radio	Frequency: 410-470 MHz Channel: 116 Transmitting power: 0.5 W / 1 W / 2 W adjustable Supports multi-communication protocols: HI-TARGET, TRIMTALK450S, TRIMMARK III, TRANSEOT, SATEL, etc.
PHYSICAL Internal battery^④	Internal 7.2 V / 6900 mAh lithium-ion rechargeable battery. RTK Rover (Network) for 12 hours. Static: up to 15 hours Power consumption: 4.2W Dimensions (W×H): 130mm×79mm
External power	Charging:using standard smartphone chargers or external power banks.(Support 5V 2.8A Type-C USB external charging) Weight:≤0.97 kg (includes battery) Data storage:8GB ROM internal storage
Control Panel LED Lamp	Satellite, Signal, Power Physical button: 1
Camera Pixel	2MP&5MP Support real scene stakeout, image measurement, working distance 2~15m
Environment Water / Dustproof	IP68
Shock and vibration	MIL-STD-810G, Designed to survive a 2 m natural fall onto concrete
Humidity	100%, condensing
Operation temperature	-45 C ~+75 C
Storage temperature	-55 C ~+85 C
Image Accuracy Stakeout/Image Measurement	Typically 2cm/2cm~4cm
I / O Interface USB type C interface; SMA interface; Nano SIM card slot	
Data Formats Output rate	1Hz-20Hz.
Static data format	GNS Rinex Dual Format Static Data
Network model	VRS, FKP, MAC; supports NTRIP protocol
CMR & RTCM	RTCM 2.x, RTCM 3.x
Navigation outputs ASCII	NMEA-0183

*Description and Specifications are subject to change without notice.

[1]GALILEO E6, QZSS L6, IRNSS L5, L-BAND can be provided by firmware upgrade.

[2]The measurement accuracy, precision, reliability and initialization time depend on various factors, including tilt angle, number of satellites, geometric distribution, observation time, atmospheric conditions and multi-path validation, etc. The data are derived under normal conditions.

[3]Irregular operations such as rapid rotation and high-intensity vibration may affect the inertial navigation accuracy.

[4]The battery operating time is related to the operating environment, operating temperature and battery life.

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CE FC IP68



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