Eyr 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) QZSS (L1, L2, L5, L6*) NavIC (L5) SBAS(L1, L2, L5) PPP(B2b-PPP, Galileo E6-HAS)
No. of Channels	1408
POSITIONING PERFORMANCE[2]	
High-precision static GNSS Surveying	H:2.5 mm + 0.1 ppm RMS / V:3.5 mm + 0.4 ppm RMS
Static and Fast Static	H:2.5 mm + 0.5 ppm RMS / V:5 mm + 0.5 ppm RMS
Post Processing Kinematic	H:8mm + 1 ppm RMS / V:15 mm + 1 ppm RMS
(PPK / Stop & Go)	Initialization time: Typically 10 min for base and 5 min for rover Initialization reliability: Typically>99.9%
PPP	H: 10cm / V: 20cm
Code Differential GNSS Positioning	H:±0.25m+1ppm RMS I V:±0.5m+1ppm RMS I SBAS:0.5m(H)
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%
Positioning rate	1 Hz, 5 Hz and 10 Hz
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 (0° ~ 60°)
Hi-Fix[4]	H:RTK+10 mm / minute RMS / V:RTK+20 mm / minute RMS
COMMUNICATION	
Communication	Bluetooth: 4.0 / 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 I Channel: 116 Transmitting power: 0.5 W / 1 W / 2 W adjustable Supports multi-communication protocols: HI-TARGET, TRIMTALK450S, TRIMMARK III, TRANSEOT, SATEL, etc. Working Range: Typically 3~5km, optimal 8~15km
PHYSICAL	
Internal battery[5]	Internal 7.2 V / 6900 mAh lithium-ion rechargeable battery. RTK Rover (UHF/Cellular) for 15 hours.
External power	Power consumption: 4.2W I Dimensions (W×H): 130mm×79mm 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 I 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	-40℃~+75℃
Storage temperature	-55℃~+85℃
Image Accuracy	
Image Stakeout	Typically 1cm
Image Measurement	2cm~4cm(range 2~15 m)
I / O Interface	
USB type C interface; SMA interface; Nano SIM card slot	
Data Formats	
Output rate	1Hz-20Hz.
Static data format	GNS, Rinex
Network model	VRS, FKP, MAC; supports NTRIP protocol
Real Time Kinematic (RTK)	RTCM 2.x, RTCM 3.x, CRM
Navigation outputs ASCII	NMEA-0183

*Description and Specifications are subject to change without notice.

[1]QZSS L6 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]Accuracies are dependent on GNSS satellite availability. Hi-Fix Positioning ends after 5 minutes without differential data.Hi-Fix is not available in all regions, check with your local sales representative for more information.
[5]The battery operating time is related to the operating environment, operating temperature and battery life.

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Eyr
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