

TECHNICAL SPECIFICATIONS

GNSS Performance ⁽¹⁾	
Channels	1608 channels
GPS	L1C/A, L2C, L5
GLONASS	L1, L2
Galileo	E1, E5a, E5b, E6*
BeiDou	B1I, B2I, B3I, B1C, B2a, B2b
QZSS	L1, L2, L5, L6*
PPP	B2b-PPP
SBAS	L1, L2

GNSS Accuracies ⁽²⁾	
Real time kinematic (RTK)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS Initialization time: < 10 s Initialization reliability: > 99.9%
Post - processing kinematics (PPK)	Horizontal : 3 mm + 1 ppm RMS Vertical : 5 mm + 1 ppm RMS
Post - processing static	Horizontal: 2.5 mm+ 0.5 ppm RMS Vertical: 5 mm+ 0.5 ppm RMS
High-precision static	H : 2.5 mm + 0.1 ppm RMS V : 3.5 mm + 0.4 ppm RMS
Static and rapid static	H : 2.5 mm + 0.5 ppm RMS V : 5 mm + 0.5 ppm RMS
Code differential	Horizontal: 0.4m RMS Vertical: 0.8 m RMS
Autonomous	Horizontal: 1 m RMS Vertical: 1.5 m RMS
Positioning rate	Up to 10 Hz
Time to first fix ⁽³⁾	Cold start: < 45 s , Hot start: < 30 s Signal re-acquisition: < 2 s
IMU update rate	200 Hz, AUTO-IMU
Tilt angle	0-60°

RTK tilt-compensated	Additional horizontal pole-tilt uncertainty typically less than 8 mm + 0.7 mm/° tilt down to 30°
Hardware	
Size (L x W x H)	Φ 160.5 mm x 103 mm (Φ 6.32 in x 4.06 in)
Weight	1.73 kg (3.81 lb)
Environment	Operating: -40°C to +65°C (-40°F to +149°F) Storage: -40°C to +85°C (-40°F to +185°F)
Humidity	100% non-condensation
Ingress protection	IP67 waterproof and dustproof, protected from temporary immersion to depth of 1 m
Shock	Survive a 2-meter pole drop
Front panel	2 LED 0.96" OLED Display

Communication	
Network modem	Integrated 4G modem LTE (FDD): B1,B2,B3,B4,B5,B7,B8,B20 DC - HSPA+/HSPA+/HSPA/UMTS: B1, B2, B5, B8 EDGE/GPRS/GSM850/900/1800/1900MHz
Wi-Fi	802.11 n, access point mode
Bluetooth®	V 5.0
Others	NFC
Ports	1 x 7-pin LEMO port (external power, RS -232) 1 x UHF antenna port (TNC female)
EcoLink technology ⁽⁴⁾	The new-generation UHF radio data transmission mode of EFIX enables GNSS RTK Base all-day operation and long-distance range. Standard Internal Rx/Tx: 410 - 470 MHz Transmit Power: up to 5 W Protocol: EFIX, EcoLink, Transparent, TT450, Satel Link rate: 9600 bps / 19200 bps Range: Typical 8 km to 12 km, optimal up to 30 km with EcoLink. Typical 5 km to 8 km, optimal up to 25 km with other protocols.
UHF radio ⁽⁵⁾	
Ultra Base ⁽⁶⁾	Simultaneous radio and network differential data transmission
Data formats	RTCM2.x, RTCM3.x, CMR input / output ECN, RINEX2.11, 3.02 NMEA 0183 output NTRIP Client, NTRIP Caster
Data storage	8 GB memory
Electrical	
Power consumption	12 W (depending on user settings)
Li-ion battery capacity	2 x 7000 mAh, 7.4 V
Operating time on internal battery ⁽⁷⁾	UHF base: up to 13 h (EcoLink). 8 h to 10 h (other protocols) Static: up to 25 h
External power input	9 V DC to 28 V DC



*All specifications are subject to change without notice.
(1) Compliant, but subject to availability of BDS ICD and Galileo commercial service definition. Galileo E6 and QZSS L6 will be provided through future firmware upgrade.
(2) Accuracy and reliability are determined under open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. Performances assume minimum of 5 satellites, follow up of recommended general GPS practices.
(3) Typical observed values.
(4) All test values above are from EFIX internal labs under typical conditions. Actual results may vary due to product differences, software versions, usage, and environmental factors.
(5) The use of UHF datalink may be subject to local regulations. Users must ensure that the device is not operated without the permission of the local authorities on frequencies or power output other than those specifically reserved and intended for use without required permit.
(6) Will be enabled in a future firmware upgrade, dependent on existing server coverage availability.
(7) Battery life is subject to operating temperature, environment, and working mode.



eBase leads the way,
long range all day



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EFIX
eBase leads the way,
long range all day

eBase
FULL-DAY RUNTIME GNSS BASE

**ECOLINK
TECHNOLOGY**

**30 KM
FULL RANGE**

ULTRA BASE

13+ HOURS



FULL-DAY RUNTIME GNSS BASE

Engineered for endurance, the eBase offers over 13 hours of continuous operation with EcoLink technology and a data compression algorithm. Under the same correction age, EcoLink transmits in 2 seconds what previously required 3 seconds, allowing the radio to spend more time in low-power states. It delivers reliable 30 KM full range in complex environments. Its AI-powered Ultra Base mode ensures instant, seamless stability for uninterrupted, all-day efficient surveying without midday interruptions or extra batteries.

13+ HOURS OF CONTINUOUS FIELD OPERATION

- ▶ The eBase features an upgraded next-generation radio with optimized transmission strategies that cut power consumption by 33%. With a runtime exceeding 13 hours, the base station operates through entire workdays without requiring mid-job battery changes or spare batteries.

30 KM FULL RANGE, UNINTERRUPTED IN COMPLEX ENVIRONMENTS

- ▶ The proprietary EcoLink technology works seamlessly with the EFIX advanced GNSS differential data compression algorithm to significantly reduce airborne data transmission volume. This enhancement improves rover signal reception sensitivity by 30% and enables reliable operation at distances up to 30 km from the base station.

Note: The above data are all from EFIX Laboratory and field tests, obtained only under typical test environments.

ULTRA BASE: SEAMLESS SWITCHING FOR INSTANT FIX

- ▶ The Ultra Base mode of eBase supports simultaneous transmission of both radio and network differential data. Equipped with AI-powered intelligent selection, it automatically pairs with the optimal radio channel and network server upon startup, delivering an instant fixed solution. When the rover moves beyond radio range, it transitions seamlessly to network mode, enabling continuous, uninterrupted surveying without manual switch.