

Product Specification

E800

HIGH-PERFORMANCE 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	20 Hz	
High precision static	- 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	
RTK	- H: 8 mm + 1 ppm RMS - V: 15 mm + 1 ppm RMS	
Standard point positioning	- H: 1.5 m RMS - V: 2.5 m RMS	
Code differential	- H: 0.4 m RMS - V: 0.8 m RMS	
SBAS	- H: 0.3 m RMS - 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	Rechargeable Built-in Lithium-ion battery x 1 7.2V ~ 13600 mAh
Voltage	9 ~ 28V dc
Working time	Up to 40 hours as rover
Charging time	Typically 5 hours

Internet Modem	
Support 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/B19² - GSM: 850/900/1800/1900 MHz²

System	
Operation system	Linux
Internal memory	32 GB
Bluetooth	BT5.0+EDR, BLE ³
Wi-Fi	802.11 a/b/g/n/ac ⁴
SIM card	✓
TNC	Connect internal radio with antenna
5-pin port	Connect to external radio and external power; NMEA output
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	Φ154 mm x H76 mm
Weight	1500 g
Operating temperature	-30°C ~ +65°C
Storage temperature	-40°C ~ +80°C
Water / dust proof	IP67
Shock	- Withstand topple over from a 2 m survey pole onto hard surfaces - Survive a 1.2 m free drop
Vibration	Vibration resistant
Humidity	Up to 100%
Indicators	Satellites, datalink, battery, Bluetooth
Button	Power button, short press to voice broadcast working mode and status
Screen	1.45" colorful touchable screen
Certificate	CE, FCC, NGS, IGS

Internal Radio	
Type	TX and RX
Emitting Power	5 W
Operation Range	8 ~ 10 km typically 15km with optimal conditions⁵
Frequency range	410 ~ 470 MHz
Channel spacing	6.25 KHz ⁶ / 12.5 KHz / 25 KHz ²
Protocol	TrimTalk 450s, PCC-GMSK, PCC-4FSK, Satel, Satel _ADL, HITARGET, TrimTalk, HZSZ, South, TrimMark III, GEOTALK, GEOMARK, PCCFST, PCCFST _ADL

1: It will be supported through future firmware update.

2: Not support in Viet Nam.

3: In Viet Nam, BT5.0+EDR, BLE @ Power 10mW.

4: In Viet Nam, 802.11 b/g/n 2.4 GHz Band @ max 17.5dBm(eirp).

5: It varies with the obstacle and terrain.

6: It is only available for radio protocol "Satel", and the radio firmware is later than G001.02.27.