



BRx7

GNSS Receiver

GNSS Receiver Specifications

Receiver Type: Multi-Frequency GPS, GLONASS, BeiDou, Galileo, QZSS, IRNSS, and Atlas L-band
Signals Received: GPS L1CA/L1P/L1C/L2P/L2C/L5
 GLONASS G1/G2/G3, P1/P2
 BeiDou B1i/B2i/B3i/B10C/B2A/B2B/ACEBOC
 GALILEO E1BC/E5a/E5b/E6BC/ALTB0C
 QZSS L1CA/L2C/L5/L1C/LEX
 IRNSS L5
 Atlas
Channels: 800+
RTK Formats: RTCM2.1, RTCM2.3, RTCM3.0, RTCM3.1, RTCM3.2 including MSM
Recording Intervals: Selectable from 1, 2, 4, 5, 10 Hz (20 Hz or 50 Hz optional)

Accuracy

Positioning:	RMS (67%)	2DRMS (95%)
Autonomous, no SA: ¹	1.2 m	2.4 m
SBAS: ¹	0.3 m	0.6 m
Atlas (H10): ^{1,3}	0.04 m	0.08 m
RTK: ^{1,2}	8 mm + 1 ppm	15 mm + 2 ppm
Static Performance: ¹	2.5 mm + 1 ppm	5 mm + 1 ppm
Tilt Compensation (within 30°):	2 cm (with 1.8 m pole)	
Tilt Compensation (within 60°):	5 cm (with 1.8 m pole)	
Initialization Time:	< 10 s	

L-Band Receiver Specifications

Receiver Type: Single Channel
Frequency Range: 1525 to 1560 MHz
Sensitivity: -130 dBm
Channel Spacing: 5.0 kHz
Satellite Selection: Manual and Automatic
Reacquisition Time: 15 seconds (typical)

Communications

Bluetooth: Bluetooth 2.1+EDR / 4.0 LE
Wi-Fi: 802.11 b/g
Network: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
 LTE TDD: B38/B39/B40/B41
 UMTS: B1/B2/B4/B5/B6/B8/B19
 GSM: B2/B3/B5/B8
Radio: Frequency range: 410MHz ~ 470MHz and 902.4MHz ~ 928MHz
 Channel Spacing: 12.5 KHz / 25 KHz
 Protocol: TrimTalk 450S, PCC EOT, TrimMark III(19200)
WebUI: To upgrade software, manage status and settings, data download, via smartphone, tablet or other electronic device, configure advanced radio settings

Connector Ports

TNC: For connecting to UHF radio antenna
LEMO 5-pin: For connecting to external power supply, external radio
LEMO 7-pin: For serial port, USB
Card Slots: For Micro SIM card and Micro SD card

Data & Storage

Storage Type: 8 GB internal, SD card up to 32 GB

Physical

Weight: 1.3 kg (with battery)
Dimensions: 156 x 76 mm

Environmental

Operating Temperature: -30°C ~ +65°C
Storage Temperature: -40°C ~ +80°C
Protection: IP67. Protected from temporary immersion to a depth of 1 m
Shock Resistance: MIL-STD-810G, method 516.6. Designed to survive a 2 m pole drop on concrete floor. Designed to survive a 1 m free drop on hardwood floor
Humidity: Up to 100%
Vibration: MIL-STD-810G, method 514.6E-I
Inflammability: UL recognized, 94HB Flame Class Rating (3) 1.49
Chemical Resistance: Cleaning agents, soapy water, industrial alcohol, water vapor, solar radiation (UV)

Electrical

Input Voltage: 9 to 28 V DC
Battery: With removable dual battery, for single battery parameter: 7.2 V, 3400 mAh, 24.48 Wh
Working Time: More than 9 hours in Rover UHF mode

User Interface

Button: Switch receiver on/off, broadcast current operation mode and status
LEDs: Power, Satellite, Data Link, Bluetooth
WebUI: Supports software updates, receiver status and settings, and data downloads via smartphones, tablets, or other Wi-Fi capable devices.

1. Depends on multipath environment, number of satellites in view, satellite geometry, and ionospheric activity
 2. Depends also on baseline length
 3. Requires a subscription from Hemisphere GNSS