

MightyGPS

BT GPS Receiver Series

Super Thin Size

Model: MGBT-311R

Version 1.01



MGBT-311R (Super Thin Size)

Fast Acquisition Enhanced Sensitivity 12 Channel Bluetooth-GPS Module

FEATURES

- Super thin size 80x60x10 mm
- 12 parallel channel GPS receiver
- 4000 simultaneous time-frequency search bins
- SBAS (WAAS, EGNOS) support
- Support connection to active antenna
- -140dBm acquisition sensitivity
- -150dBm tracking sensitivity
- < 10 second hot start
- < 50 second cold start
- 5m CEP accuracy
- Bluetooth version 1.1 compliant
- Compatible with Bluetooth devices with Serial Port Profile (SPP)
- Charger circuitry and connector interface for BLC-2 Li-ION battery
- More than 15 hours of operation
- Compatible with Bluetooth devices with Serial Port Profile (SPP)

The MGBT-311R is a single board of Bluetooth-GPS receiver for customers who require easy system integration and minimal development risk.

The MGBT-311R is optimized for good performance and low cost. Its 12 parallel channels and 4000 search bins provide short start-up time and fast signal acquisition. Having fast time-to-first-fix and enhanced sensitivity, the MGBT-311R offers good navigation performance even in urban canyons.

Satellite-based augmentation systems, such as WAAS and EGNOS, are supported to yield improved accuracy.

The onboard patch antenna provides good signal reception. In situations where the MGBT-311R is integrated into an application where the patch antenna has limited view of the sky, external active antenna may be directly connected via the MMCX connector to provide improved signal reception.

Class 2 Bluetooth offers up to 30 meters of wireless operation with Bluetooth-enabled devices such as PDA, Tablet-PC or Smart mobile phone.

MGBT-311R

TECHNICAL SPECIFICATIONS

Receiver Type	12 parallel channel, L1 C/A code
Accuracy	Position 5m CEP Velocity 0.1m/sec
Startup Time	< 10sec hot start < 35sec warm start < 50sec cold start
Signal Reacquisition	< 1s
Sensitivity	-140dBm acquisition -150dBm tracking
Update Rate	1Hz
Dynamics	4G (39.2m/sec ²)
Operational Limits	Altitude < 18,000m or velocity < 515m/sec (COCOM limit, either may be exceeded but not both)
Protocol	NMEA-0183 V3.01 GPGGA, GPGLL, GPGSA, GPGSV, GPRMC, GPVTG, GPZDA 4800 baud, 8, N, 1
Datum	Default WGS-84 User definable
RF Connector	MMCX
Bluetooth Interface	SPP compatible, version 1.2 compliant, class-2 operation, 4dBm output level Up to 10m of operation
LED Indicator	Blue - Bluetooth status Red - Battery low Green - Charging battery
Switch	Push button ON / OFF
Battery Connector	For BLC-2 type Li-ION rechargeable battery (1000 mA)
Power Consumption	<65 mA
Input Voltage	5.0V
DC Input Connector	1.3mm MINI DIM USB interface
Dimension	80x60x10 mm
Operating Temperature	-20°C ~ +65°C
Humidity	5% ~ 95%

Accessories

- Rechargeable battery (Optional)
- Car charger (Optional)
- Travel charger (Optional)
- Cigarette lighter adaptor with USB female plug (Optional)
- Carrying pouch (optional)
- MMCX external antenna (Optional)
- User manual CD
- Color Box

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