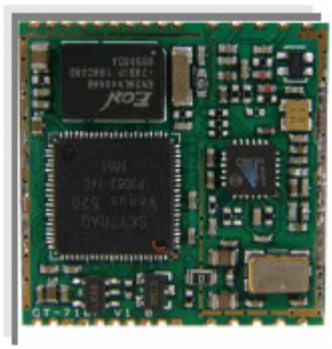


BG-710FS

Datasheet

MightyGPS International Corp.
2007, Version 1.1

RoHS compliance.

BG-710FS

Fast-Acquisition High-Sensitivity 44-Channels SMD GPS Receiver Module

FEATURES

- Acquires and track 44 satellites simultaneously
- SMD type packaging
- Industry-leading TTFF speed
- Signal detection better than -158 dBm
- 0.5 PPM TCXO for quick cold start
- Integral LNA with low power control
- SBAS (WAAS/EGNOS) capable
- Selectable User Profiles with ability to change and save configuration to Flash
- Cold start < 40sec @ -137dBm
- Hot start < 1sec under open sky
- 5m CEP Accuracy
- 25.4 mm L x 25.4 mm W x 3.3 mm
- Power consumption <50mA
- RoHS compliance

BG-710FS is a miniature 44-channels OEM GPS receiver module. It is optimized for high-performance, ease-of-use, flexibility, and low-cost. The GPS receiver is suitable for a wide range of navigation and tracking applications.

44 parallel channels and 20000+ correlators provide fast satellite signal acquisition and short start-up time. Acquisition sensitivity of -150dBm and tracking sensitivity of -158 dBm offer good performance even under difficult environments.

The **BG-710FS** provides two 1.8V UART serial I/O. Self-contained LNA supports direct connection to passive or active antenna. On-board Flash-based program memory allows firmware upgrade and

Sub-150mW power consumption makes the **BG-710FS** ideal for battery-operated portable devices.

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

Small size and SMD mounting allow standard SMT assembly process, making it ideal for high volume production.

BG-710FS Development kit

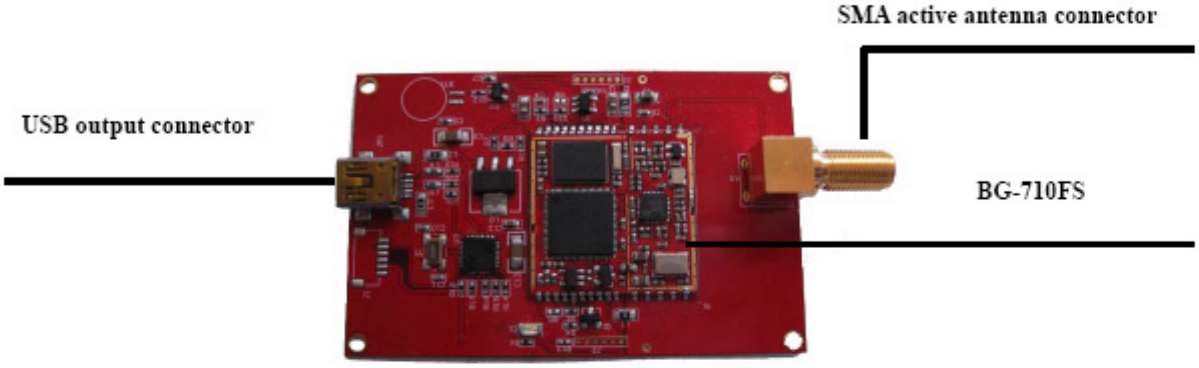
- BG-710FS
- USB output adapter board for PC/Notebook
- USB power/signal cable
- GPS active antenna (SMA, 3.3V)
- CD user manual and MightyGPS testing programming

TECHNICAL SPECIFICATIONS [1]

Receiver Type	44 parallel channels, L1 C/A code
Accuracy	Position 5m CEP Velocity 0.1m/sec 1PPS Timing +/-1us
Startup Time	< 1 sec hot start < 10 sec warm start < 40 sec cold start
Signal Reacquisition	1s
Sensitivity	-150dBm acquisition -158dBm tracking
Update Rate	1Hz standard (5Hz special order)
Dynamics	4G (39.2m/sec^2)
Operational Limits	Altitude < 18,000m or velocity < 515m/s (COCOM limit, either may be exceeded but not both)
Serial Interface	LVTTL level
Protocol	NMEA-0183 V3.01 GPGGA, GPGLL, GPGSA, GPGSV, GPRMC, GPVTG, GPZDA 4800 baud, 8, N, 1
Datum	Default WGS-84 User definable
Input Voltage	3.3V DC +/-10%
Current Consumption	< 50mA @ Tracking
Dimension	30 mm L x 25 mm W x 3.3mm H
Weight:	3g
Operating Temperature	-40°C ~ +85°C
Humidity	5% ~ 95%

Development Kit

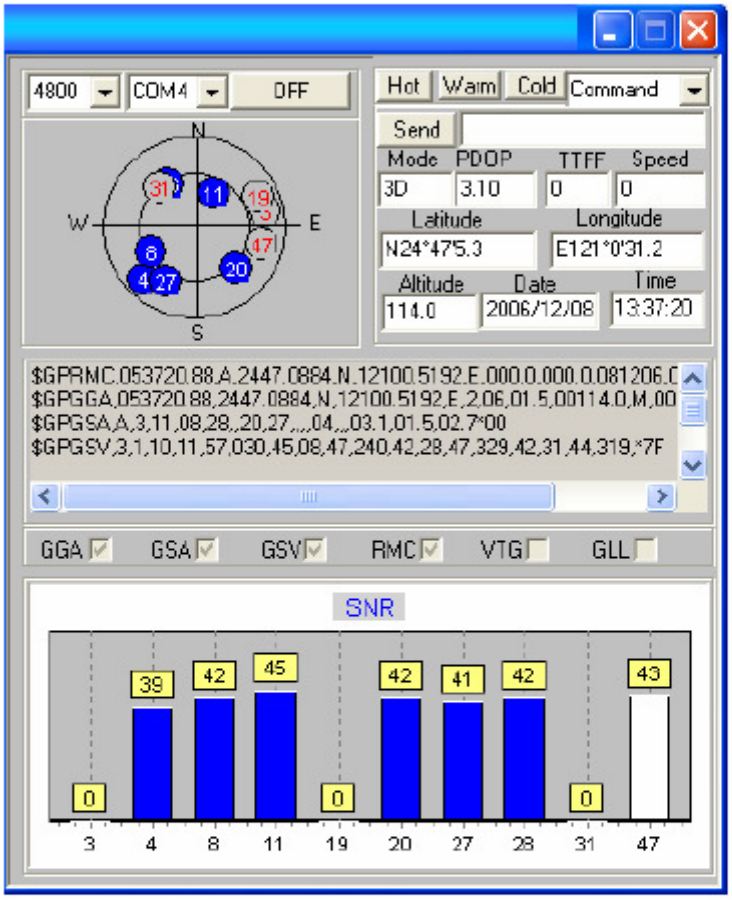
1. Adapter board



2. USB Output Cable

3. GPS SMA Active Antenna

MightyGPS Testing Programming



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