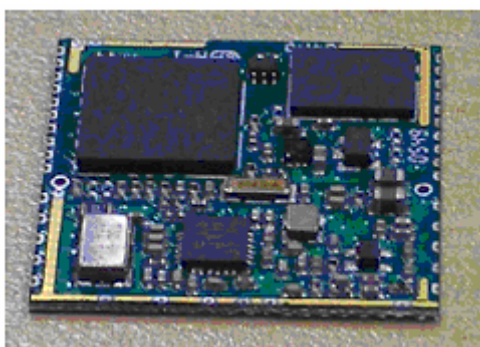




GPS Module Series
Flash version

Model: GT-310FS

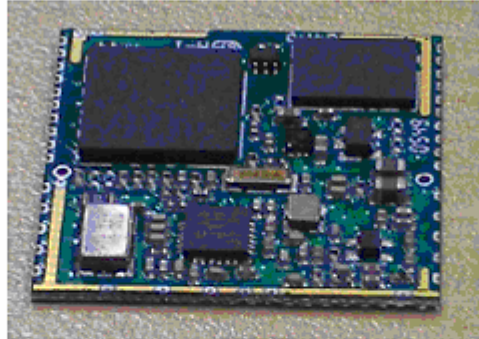


Data Sheet

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MADE IN TAIWAN

1.0 Features



GT-310FS is a miniature 16-channel 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.

16 parallel channels and 4000+ correlators provide fast satellite signal acquisition and short start-up time. Acquisition sensitivity of -143 dBm and tracking sensitivity of -155 dBm offers good performance even under difficult environments.

The GT-310FS provides two 3.3V UART serial I/O and seven GPIO pins. With on-board LNA, passive antenna is supported directly.

Below 130mW power consumption makes the GT-310FS 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.

Features

- 16 parallel channel
- 4000+ correlators
- -143 dBm acquisition sensitivity
- -155 dBm tracking sensitivity
- < 5sec hot start
- 35sec warm start
- 45sec cold start
- 5m CEP accuracy
- < 130mW
- SBAS (WAAS, EGNOS) support
- Small size 25.4mm x 25.4mm x 3.4 mm

2.0 Technical Specifications

Table 2-1 Technical Specifications

Receiver Type	16 parallel channel, L1 C/A code
Accuracy:	Position 5m CEP
	Velocity 0.1m/sec
	1PPS Timing +/- 1us
Startup Time	< 5sec hot start
	35sec warm start
	45sec cold start
Reacquisition	1s
Sensitivity	-143 dBm acquisition
	-155 dBm tracking
Update Rate	1Hz
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	LVTTTL Level
Protocol	NMEA-0183 V3.01
	GPGGA, GPGLL, GPGSA, GPGSV, GPRMC, GPVTG, GPZDA
	4800,9600,19200,38400 baud (default 4800), 8, N, 1
Datum	WGS-84 or on demand
Input Voltage	3.3V DC +/- 10%
Power Consumption	< 130 mW
Dimension	25.4mm (L) x 25.4mm (W) x 3.4mm (H)
Weight	3g
Operating Temperature	-40°C ~ +85°C
Humidity	5% ~ 95%

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