

Features

- 12 parallel channel GPS receiver
- 4100 simultaneous time-frequency search bins
- SBAS (WAAS, EGNOS) support
- -140dBm acquisition sensitivity
- -150dBm tracking sensitivity
- < 10 second hot start
- < 50 second cold start
- 5m CEP accuracy

GT-320R

Fast Acquisition Enhanced Sensitivity 12 Channel GPS Sensor Module

The GT-320R is a compact all-in-one GPS module solution intended for a broad range of Original Equipment Manufacturer (OEM) products, where fast and easy system integration and minimal development risk is required.

The receiver continuously tracks all satellites in view and provides accurate satellite positioning data. The GT-320R is optimized for applications requiring good performance, low cost, and maximum flexibility; suitable for a wide range of OEM configurations including handhelds, sensors, asset tracking, PDA-centric personal navigation system, and vehicle navigation products.

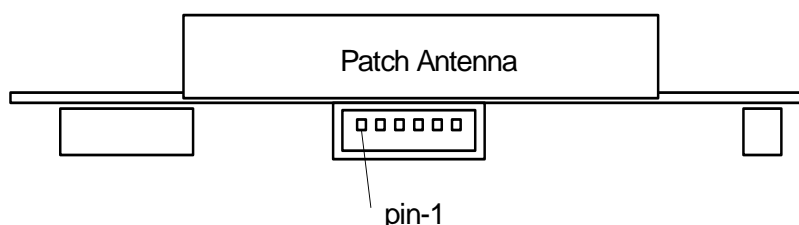
Its 12 parallel channels and 4100 search bins provide fast satellite signal acquisition and short startup time. Acquisition sensitivity of -140dBm and tracking sensitivity of -150dBm offers good navigation performance even in urban canyons having limited sky view.

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

Both the LVTTTL-level and RS232-level serial interface are provided on the interface connector. Supply voltage of 3.8V~8.0V is supported.

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
Reacquisition	1s
Sensitivity	-140dBm acquisition -150dBm 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 and RS-232 level
Protocol	NMEA-0183 V3.01 GPGGA, GPGLL, GPGSA, GPGSV, GPRMC, GPVTG, GPZDA 4800 baud, 8, N, 1 (Default)
Datum	Default WGS-84 User definable
Interface Connector	One 1.0mm pitch WTB S/R wafer 87213 SMT R/A type connector
Input Voltage	3.8V ~ 8.0V
Current Consumption	<100mW
Dimension	34 mm L x 34 mm W x 8.6 mm H
Weight:	14g
Operating Temperature	-40°C ~ +85°C
Humidity	5% ~ 95%



GT-320R Lateral View

PINOUT DESCRIPTION

Pin Number	Signal Name	Description
1	Serial Data Out 1	Asynchronous serial output at LVTTTL level, to output NMEA message
2	Serial Data In 1	Asynchronous serial input at LVTTTL level, to input command message
3	Serial Data Out 2	Asynchronous serial output at RS-232 level, to output NMEA message
4	Serial Data In 2	Asynchronous serial input at RS-232 level, to input command message
5	Power	3.8V ~ 8.0V DC input
6	Ground	Power and signal ground

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