



**GPS Module Series**  
**FLASH version**

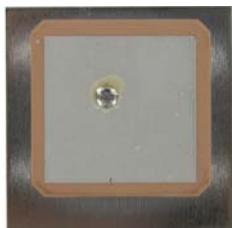
**Model: GT-320FW(AS)**



# Data Sheet

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MADE IN TAIWAN



## GT-320FW(AS)

### Fast Acquisition Enhanced Sensitivity 48 Channels GPS Module

The **GT-320FW(AS)** 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-320FW(AS)** 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 48 channels provide fast satellite signal acquisition and short startup time. Acquisition sensitivity of -145dBm and tracking sensitivity of -159dBm offer 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 of the LVTTTL-level and RS232-level serial interface are provided on the interface connector. Supply voltage of 3.7V~6V is supported.

Users can modify NMEA sentences or Binary code by the extra flash memory.

## FEATURES

- 48 channels GPS receiver
- SBAS (WAAS, EGNOS) support
- -145dBm acquisition sensitivity
- -159dBm tracking sensitivity
- Hot start < 2 second
- Cold start < 33 second
- Power consumption < 45mA
- 5m CEP accuracy
- RoHS compliance

## TECHNICAL SPECIFICATIONS

Receiver Type	48 channels, L1 C/A code
Accuracy	Position 5m CEP Velocity 0.1m/sec
Startup Time	< 2sec hot start < 29sec warm start < 33sec cold start
Sensitivity	-145dBm acquisition -159dBm tracking
Update Rate	1Hz
Dynamics	4G (39.2m/sec <sup>2</sup> )
Max altitude/velocity	Altitude<2,5000m(82,021ft) / Velocity<514m/s(1,000knot/hour)
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	3.7V ~ 6V
Power Consumption	< 45mA
Dimension	34 mm L x 34 mm W x 8.6 mm H
Weight:	14g
Operating Temperature	-20°C ~ +60°C
Humidity	5% ~ 95%

(Note: \*Firmware special supports altitude > 25KM with adjusted algorithm for space application, but not for very high dynamic\*.

\* Not for comerial airplane and land application. If it is used in both cases, large position error may occur due to bad satellite signal.\*)

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