



# **GM-R307**

## ***Low-Power Receiver for GPS Applications***



The GM-R307 GPS receiver provides EverMore's latest 12-channel GPS technology, contained inside a mouse-like box with a host connection cable.

The GM-R307 pushes forward EverMore's high standard for rapid startup time and high performance in foliage and urban canyon environments. Applications will benefit from improved reliability provided by newest GPS kernel firmware. With sophisticated system design, the GM-R307 provides robust performance for users who need an economical GPS solution.

The GM-R307 feature set includes NMEA-0183 output, on USB I/O port, and position & velocity filtering. With Flash-based program memory, the firmware is upgradeable, thus protecting your GPS investment.

The GM-R307 is an all-in-one GPS receiver that is designed for the end-users with less understanding on GPS knowledge. It is ready for use with PDA, Notebook, and PC in various situations: Marine, Land Survey, travel assistance and Vehicle tracking.



# GM-R307

## Low-Power Receiver for GPS Applications

### Features

- Easy USB connector to PC/Notebook
- Built-in patch antenna
- Enhance LED indicator
- Receiver, Twelve parallel tracking channels
- Fast TTFF and low power consumption
- On-board rechargeable battery sustained real-time clock and memory for fast satellite acquisition during power-up
- Automatic cold start with no user initialization required

### Performance Specifications

<b>General:</b>	L1 1575.42MHz, C/A code, 12-channel, Carrier-Aided with HWTrack©
<b>Sensitivity:</b>	-143 dBm Minimum
<b>Update Rate:</b>	1Hz
<b>Accuracy:</b>	Position: 15m CEP without S/A Velocity: 0.1m/sec without S/A Time: $\pm 1\mu\text{s}$
<b>Acquisition:</b>	Cold start: < 120sec average Warm start: < 45sec Hot start: < 15sec
<b>Reacquisition:</b>	< 100millisecond
<b>Dynamics:</b>	Altitude: -1000m to + 18,000m Velocity: 500m/sec Acceleration: $\pm 4g$

### Environmental Specifications

<b>Operation Temperature:</b>	-30°C to + 80°C
<b>Storage Temperature:</b>	-40°C to + 90°C
<b>Operating Humidity:</b>	5% to 95%

### Physical Characteristics

<b>Primary Power:</b>	5V dc $\pm 0.5V_{p-p}$ ripple
<b>Input Current:</b>	Max. 162mA
<b>Serial Ports:</b>	USB Level
<b>Dimensions:</b>	2.29" L x 1.57" W x 0.84" H (58.2mm x 39.9 mm x 21.5 mm)
<b>Weight:</b>	2.71oz (77g)

### User Protocol

<b>Protocols:</b>	EverMore @ 4800/9600baud, 8N1 NMEA-0183 v2.20 @ 4800 baud, 8N1
<b>NMEA Messages:</b>	GGA, GLL, GSA, GSV, RMC, and VTG

### Interface Connector

<b>USB:</b>	Support host USB-to-serial driver
-------------	-----------------------------------

### Applications

- Land/Marine Navigation
- Telematics
- Fleet Management
- Asset Tracking
- Timing Reference

Preliminary Specification, Subject To Change Without Notice