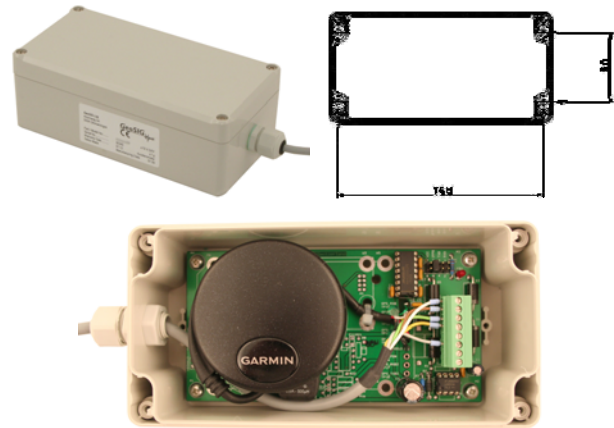


## GMS-GPS Receiver

### Features

- 1 microsecond time accuracy
- < 3 m position accuracy DGPS  
15 m position accuracy Non-DGPS
- < 2 seconds re-acquisition  
15 seconds warm acquisition  
45 seconds cold acquisition
- Programmable update rate  
from 1 second to 15 minutes
- Built in antenna
- Rugged, water resistant housing



### Outline

The GMS-GPS is a state of the art GPS receiver module which employs GARMIN GPS-18 that is a complete GPS receiver and embedded antenna designed for a broad spectrum of system applications.

The GPS-18 tracks up to twelve satellites at a time while providing one-second navigation updates and low power consumption. Its far-reaching capability meets the sensitivity requirements of seismic applications.

The GPS-18 design utilizes the latest technology and high level

circuit integration to achieve superior performance while minimizing space and power requirements.

The GMS-GPS is housed in a water-resistant case and designed to withstand rugged operating conditions. The host system may communicate with the GMS-GPS via a dedicated, compatible, bi-directional communication channel. Internal memory backup allows the GMS-GPS to retain critical data such as satellite orbital parameters, last position, date, and time.

### Specifications

#### General Characteristics

Receiver	Differential-ready 12 parallel channel receiver tracks and uses up to twelve satellites to compute and update.
Cable	20 m standard, up to 70 m possible
Antenna	Built in

#### Cable Specifications

Conductor	Bare copper 5 x 0.25, fine wire VDE 0295 class 5
Conductor marking	DIN 47100
Outer jacket	PVC UL Style, grey
Temperature range	-30°C to +80°C
Min. bending radius	10 x cable-Ø
Diameter Ø	5.1 mm

#### Acquisition Times

Update Rate	1 sec, continuous
Acquisition*	< 2 sec; re-acquisition 15 sec; warm (all data known) 45 sec; cold (position, time and almanac known) 5 min; AutoLocate (almanac known, position and time unknown) 5 min; SkySearch (no data known)

#### Interfaces

RS-232 compatible

#### Accuracy

Time 1 microsec

#### Position

Differential GPS (DGPS): < 3 m  
Non-differential GPS: < 15 m  
Subject to accuracy degradation to 100m 2DRMS under the Selective Availability Program.

#### Power

Input Voltage 4 - 5.5 VDC, typically 65 mA @ 12 VDC

#### Backup Power

Internal rechargeable battery to maintain the real-time clock for upto 3 weeks.

#### Environment/Housing

Size 80 mm x 160 mm x 60 mm  
Weight 200 g, not including cable  
Operating Temperature -30°C to +80°C (internal temperature)  
Storage Temperature -40°C to +80°C  
Index of Protection IP 65

