

Whatever your OEM application,  
the Garmin GPS 16 and GPS 17 will

## Rugged GPS receiver and antenna modules with WAAS

deliver the accuracy you need for  
precise position reporting. These GPS  
sensors have an integrated antenna  
housed in a rugged, waterproof design.

The 12-channel receiver allows for  
continuous tracking of all visible satellites.

And it's WAAS capable, which means it  
can provide position accuracy of less than

3 meters. This incredible accuracy is  
possible without the use of an external  
DGPS beacon receiver. The GPS 16 and

GPS 17 also offer excellent EM/RFI  
performance for easy integration into

systems that will be operated near  
mobile computing devices and wireless

communications equipment.



## Electrical

**Input voltage:**  
 GPS 16 LVS: 3.3 to 6 Vdc regulated to <100 mV ripple  
 GPS 16/17 HVS: 8 to 40 Vdc unregulated

**Input current:**  
 GPS 16 LVS: 65 mA (typical)  
 GPS 16/17 HVS: 60 mA @ 8 Vdc; 40 mA @ 12 Vdc;  
 15 mA @ 40 Vdc

**Sensitivity:** -165 dBW minimum

## GPS performance

**Receiver:** WAAS enabled; 12 parallel channel GPS receiver continuously tracks and uses up to 12 satellites to compute and update your position

## Acquisition times:\*

**Reacquisition:** Less than 2 seconds  
**Warm:** Approximately 15 seconds  
**Cold:** Approximately 45 seconds  
**AutoLocate™:** 5 minutes  
**SkySearch:** 5 minutes

**Update rate:** 1 to 900 seconds between updates; programmable in 1 second increments

## GPS accuracy:

**Position:** < 15 meters, 95% typical\*\*  
**Velocity:** 0.1 knot RMS steady state

## DGPS (USCG) accuracy:

**Position:** 3-5 meters, 95% typical  
**Velocity:** 0.1 knot RMS steady state

## DGPS (WAAS) accuracy:

**Position:** < 3 meters, 95% typical  
**Velocity:** 0.1 knot RMS steady state

**Dynamics:** 999 knots, 6g's

**Map datums:** 108 predefined, 1 user

## Interfaces

### Serial interface:

**Port 1:** True RS-232 output, asynchronous serial input compatible with RS-232 or TTL voltage levels, RS-232 polarity

**Port 2:** Asynchronous serial input only, compatible with RS-232 or TTL voltage levels, RS-232 polarity

**Baud rates:** 300/600/1200/2400/4800/9600/19200/38400

### Serial format:

**Port 1:** Selectable between NMEA 0183 v2.00, NMEA 0183 v3.00, and Garmin binary formats; NMEA 0183 v2.0 (ASCII); Approved output sentences: GPALM, GPGGA, GPGLL, GPGSA, GPGSV, GPRMC, GPVTG; Proprietary sentences: PGRMB, PGRME, PGRMF, PGRMM, PGRMT, PGRMV

**Port 2:** RTCM input only; RTCM SC-104 differential input message types 1, 2, 3, 7 and 9

**PPS output:** 1 Hz pulse, programmable width, 1 microsecond accuracy

**Power control:** OFF — open  
 ON — pull down to less than 0.3 Vdc

## Environmental

**Temperature:**  
**Operating:** -30° to 80°C  
**Storage:** -40° to 80°C

## Physical

**Size:**  
 GPS 16: 3.58" (91 mm) diameter, 1.65" (42 mm) high  
 GPS 17: 3.58" (91 mm) diameter, 3.6" (91.5 mm) high

**Weight:**  
 GPS 16: 6.4 oz. (181 g) without cable  
 11.7 oz. (332 g) with 5 meter cable  
 GPS 17: 7.1 oz. (201 g) without cable;  
 16.8 oz. (476 g) with 30 foot cable

**Cable:** Foil-shielded 8 conductor 28 AWG RJ-45  
 GPS 16: RJ-45  
 GPS 17: JST ZHR-8 connector housing with 8 JST SZH-002T-PO.5 pin socket contacts

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GPS 16



GPS 17



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Specifications are preliminary and subject to change without notice.

\* Warm = all data known. Cold = position, time and almanac known. AutoLocate = almanac known, position and time unknown. SkySearch = no data known.

\*\* Subject to accuracy degradation to 100m 2DRMS under the U.S. Department of Defense imposed Selective Availability Program.