The GPS 18 USB, GPS 18 PC and GPS 18 LVC sensors are designed for a variety of OEM system applications, including car navigation, wireless communications, marine navigation, mapping and more. Because they’re WAAS capable, these sensors can provide position accuracy of less than 3 meters without the use of an external DGPS beacon receiver. They also offer excellent EMI/RFI performance for easy integration into systems that will be operated near mobile computing devices and wireless communications equipment.

Powerful 12-channel GPS engine with WAAS
GPS 18 series specifications

Electrical

Input voltage:
18 USB: 4.4 - 5.5 V
18 PC: 5 V +/-10%
18 LVC: 4.0 - 5.5 V

Input current:
18 USB: 53 mA @ 5 V
18 PC: 57 mA @ 5 V
18 LVC: 65 mA @ 5 V

Sensitivity: -105 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 (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:
18 USB: 2.0 Full Speed
18 PC & LVC: Asynchronous serial input compatible with RS-232 or TTL voltage levels, RS-232 polarity

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

Serial format:
18 USB: Garmin USB format
18 PC & LVC: Selectable between NMEA 0183 v2.00, NMEA 0183 v3.00, and GARMIN binary formats; Approved output sentences: GPRMC, GPGGA, GPGSA, GPGSV, GPRMC, GPVTG, Proprietary sentences: PGRMB, PGRME, PGRMF, PGRMM, PGRMT, PGRMV

PPS output:
1 Hz pulse, programmable width, ±<1 microsecond accuracy

Environmental

Temperature:
Operating: -30° to 80°C
Storage: -40° to 60°C

Physical

Size: 61.0 mm diameter x 19.5 mm height

Weight:
18 USB: 104.4 g
18 PC: 194.6 g
18 LVC: 115.6 g

Connectors:
18 USB: type A connector
18 PC: DB-9 connector

Part number:
18 USB: 010-00321-01
18 PC: 010-00321-04
18 LVC: 010-00321-05

Maps:
18 USB: 108 predefined, 1 user

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

** Selective Availability Program.