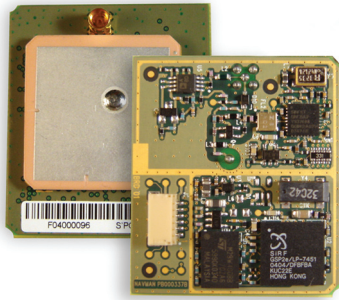


Integrated GPS Sensor Module

Integrated GPS receiver module with antenna



Navman's new Integrated Sensor Module is a 12-channel GPS receiver and patch antenna with small form factor and low power consumption. The module provides an ideal opportunity for the Original Equipment Manufacturer (OEM) to extend the capability of existing devices such as PDAs, smartphones, or infotainment equipment, to include accurate position location.

Whether incorporated into existing or new product architecture, or conveniently attached externally in customised casing, the Navman Integrated Sensor Module makes it easy to extend the functionality of your product.

Based on the SiRFstarIIe navigation engine, the module provides quick reliable position information. It has high sensitivity and operates with quick re-acquisition times, even in dense urban environments.

Communication is in the industry standard NMEA-0183 version 2.01 format. This enables communication with most digital map applications. SiRF binary protocol is also supported.

Features

- 12-channel GPS receiver for an all-in-view solution of the highest possible accuracy
- standard NMEA 0183 (v2) data output
- optimised for the best performance in dense urban environments
- stand-by power requirement, only 20 μ A (typical)
- TTL serial interface
- versatile mounting options



Custom designed flip-up enclosure

Product specifications

Receiver architecture

- 12-channel, L1 band, 1575.42 MHz
- C/A code (1.023 MHz chip rate)
- code-plus-carrier tracking (carrier-aided tracking)
- velocity, up to 500 m/s
- acceleration, up to 4 G

Tracking capability

- 12 satellites simultaneously

Accuracy

- horizontal accuracy: better than 5.0 m (CEP)
- vertical accuracy: better than 10 m (VEP)

Acquisition/re-acquisition performance

- hot start: 6 s (with valid almanac, time, position and ephemeris)
- warm start: 38 s (with valid almanac, time and position)
- cold start: 45 s (with valid almanac only)
- re-acquisition times: 200 ms (< 10 s blockage)
- update rate: once per second, continuous

Antenna

- integrated patch antenna
- connection for external antenna

Datums

- 189 standard datums, 5 user defined, default: WGS-84

Electrical

- input power range: 3.0 VDC to 3.6 VDC
- power consumption: 100 mA (maximum)
- stand-by power consumption: 20 μ A (typ) for SRAM/RTC backup

Serial interfaces

- 3 V TTL serial data I/O
- programmable baud rates
- latitude, longitude, elevation, velocity, heading, time, satellite tracking status, command/control messages, raw data via SiRF binary interface
- selected NMEA-0183 messages (configurable), standard: GGA, GLL, GSA, GSV, RMC, VTG, ZDA

Physical

Dimensions

- 39.1 x 34.0 x 6.1 mm

Weight

- 9.5 g (typ)

Connectors

- 6-pin header (JST-06P-SMD6B-SRSS-H-T8-Gold)

Environmental

- operating temperature: -10°C to $+60^{\circ}\text{C}$
- humidity: up to 95% (non-condensing)
- altitude: -300 m to 18000 m
- vibration: random IEC 68-2-64
- shock: 18 G peak, 5 ms (non-operating)

Mounting

- custom enclosure: application specific

Ordering information

- AA004250 Sensor Module (standard)

Your Navman OEM distributor:

Navman NZ Limited

Website: www.navman.com

Email: ind-support@navman.com

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