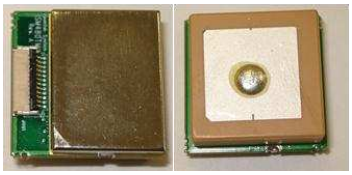
ISM480 SiRFstarIV™ 5 Hz & 1Hz SIP GPS Module



Introduction

Inventek Systems would like to announce a new SiRFstar IV SIP GPS Receiver Module with **twice** the sensitivity of the SiRFstar III. Several key features about this module are:

- The module is capable of generating and storing extended ephemeris data to an external device for much faster hot starts in weak signal environments.
- Built-in jamming detection and mitigation to permit fast and accurate navigation solutions in high noise environments.
- Integrated 15x15 mm RHCP ceramic antenna
- An addition 4 dB in tracking sensitivity and 5 dB navigation sensitivity over the world class SiRFstar III devices.
- < 10 mW @ 1.8 volts required to maintain fixes in TricklePower mode for the ultimate in low power requirements.

The Inventek ISM480 is a 48 channel global positioning system (GPS) receiver with fully integrated antenna in a very compact package with a low cost / rugged connection scheme. The fully integrated GPS has high sensitivity, high gain, and low power. The small form factor GPS receiver is designed for a broad spectrum of OEM applications and is based on the fast and deep GPS signal search capabilities of CSR SiRFstarIV™ architecture.

Ordering Information

Device	Description	Ordering Number
ISM480F1	GPS Module, Form Factor 1, Commercial Temp	ISM480F1-C4.1
ISM480EVB	Evaluation Board, UART/SDIO/SPI, ISM480	ISM480F1-EVB

Features

- Host UART or SPI or I^2C interface
- High sensitivity navigation engine (PVT) tracks as low as -162dBm
- 48 track verification channels
- SBAS (WAAS or EGNOS)
- Client Generated Extended Ephemeris
- Input I/O +3.3 V tolerant
- Single power supply voltage 1.8V.
- Programmable 1 or 5Hz true navigation
- Auto dismissal of jamming signals through enhanced Continuous Wave (CW) detection.
- Anti-jamming Features dismissal of jamming signals
- Removes in-band jammers up to 80 dB-Hz
- Tracks up to 8 CW jammers
- Incremental ephemeris collection allowing quicker time-to-first-fix TTFF.
- Lead Free / compliant with ROHS

Applications

- Industrial Handhelds
- Hand-held Device for Personal Positioning and Navigation
- PDA, Pocket PC, computing devices
- Fleet Management / Asset Tracking
- AVL and Location-Based Services
- Cellular handsets
- Cameras, Asset tracking

Package

- 16.5 mm x 16.51 mm x 7.3 mm
- 12-pin I-pex connector

Power Ratings

- Single supply voltage: 1.8VDC ±5%
- Trickle Power : <10 mW
- Current: 45mA with LNA at full power

Temperature Range

- Operating: -30℃ to +85℃
- Storage: -40℃ to +85℃
- Humidity: 10% to 95%, Non-condensing

Receiver Sensitivity

- Tracking Mode: -162 dBm
- Coarse-aided : -157 dBm
- Autonomous Mode: -147 dBm

Tracking and Autonomous Acquisition Sensitivity specs were determined through the use of 12 Channel Spirent GPS Simulator in a controlled RF Laboratory Environment (Open sky).

Performance

- Time to first Fix Hot Start: 1 sec.
- Time to first Fix Warm Start : <35 sec.
- Time to first Fix Cold Start: <35 sec.
- Re-Acquisition (Valid EE): 100 ms

Host Interface

- SPI or UART or I^2C
- NMEA-0183 or SiRF OSP

Please check www.inventeksys.com for the latest support.

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