



A5135-H

Positioning Product

GNSS Receiver Modules

Telematics Platforms
Vehicle / Asset tracking
Timing and Synchronization
Road & Traffic Management
Security & Surveillance
Insurance Telematics
Automotive
Personal trackers
Recreational devices
Mobile Gaming
Marine

Concurrent GNSS Module:

The A5135-H is a compact high-sensitivity concurrent GNSS modules that integrates CSR's latest SiRFstarV technology into a single, compact and easy to integrate SMT device. By supporting simultaneous GLONASS, GPS, QZSS and SBAS measurements with the industry's best sensitivity engine, the highest accuracy, ground tracks and fastest time-to-first-fix (TTFF) are ensured even under tough operating conditions. The jammers removal algorithm not only facilitates integration in today's ever more complex communication devices, but guarantees performance even in hostile situations. SiRFaware's advanced low power management modes, high level of integration and multiple communication ports in a small form-factor makes the A5135-H suitable for a broad spectrum of GNSS applications where performance, cost and time to market are prime considerations.

Features

GPS / GLONASS
concurrent GNSS module

BeiDou / Galileo ready

Pin-to-pin compatible with A2235-H

Lowest tracking power consumption
SiRFaware™ for constant Hot Start

Benefits

■ Improved availability and accuracy
in urban canyon environments

■ Future-proof design

■ Fastest design-in

■ Ideally suited for battery powered
GPS applications

GNSS solutions for many applications

With the mission of facilitating our customers' implementation of GNSS functionality into their systems, Maestro Wireless Solutions offers a distinct product portfolio that addresses a wide area of applications. These range from traditional telematics solutions to latest highly integrated consumer devices, all of which dictate distinct requirements for GNSS modules. Based on SiRFstarIV and SiRFstarV chipsets, Maestro Wireless Solutions' GNSS module solutions address different specific needs and combine high performance, low power consumption, and simplified integration effort. Our modules comply with the RoHS standard, are submitted to tough reliability processes and are 100% test, both electrically and functionally prior to packaging, thereby guaranteeing the highest of quality products.



The A5135-H module is housed in a 17.78 x 16.01 x 2.5 mm 22-pin SMD package with castellated edge that includes all RF matching elements, antenna DC control, RF SAW filtering, various thermal and peripheral components and the TCXO crystal reference.

Ordering information:

Part number: A5135-H

MOQ: 1 reel / 500pcs

Evaluation Kit:

Part number: EVA5135-H

MOQ: 1 piece

Technical Details A5135-H

PERFORMANCE

| | | |
|---|--|-----------|
| Channels | 52 | |
| Frequency | GPS L1 - 1,575 MHz GLONASS - 1,602 MHz | |
| Sensitivity ¹ | GPS | GLONASS |
| Tracking | - 165 dBm | - 163 dBm |
| Navigation | - 160 dBm | - 159 dBm |
| Acquisition (cold start) | - 147 dBm | |
| Position Accuracy ²⁾ (horizontal) | < 2.5 m CEP (autonomous) < 2.0 m CEP SBAS | |
| Time To First Fix | | |
| Hot Start ²⁾ | < 1 s | |
| Warm Start ²⁾ | < 30 s | |
| Cold Start ²⁾ | < 35 s | |
| Navigation | | |
| Update Rate | 1 Hz / 5 Hz Supported | |

COMMUNICATION

| | |
|----------------------------|---|
| UART - OSP | |
| Open Socket Protocol | Protocol extension for SiRFstarV |
| Baud rate Switchable | 115.2k (default) 1,200 to 115.2k |
| Ports | Tx (Binary output) Rx (Binary input) |
| UART - NMEA (default) | |
| NMEA message Switchable | GGA, RMC, GSA, GSV, VTG, GLL, ZDA |
| Baud rate Switchable | 1,200 to 115.2k Default 9600 |
| Ports | Tx (NMEA output) Rx (NMEA input) |

HIGHLIGHTS

| | |
|---------------------------|--|
| SiRFnav™ | High availability and coverage; improved TTFF in weak signal environments |
| SiRFaware™TM | |
| Jammer remover technology | Detects and removes up to 8 in-band jammers with minimal loss of sensitivity |
| A-GPS | Embedded Extended Ephemeris (SiRFInstantFix) and Ephemeris Push support |
| MEMS I2C interface | Prepared to use additional sensor information for improved navigation |

POWER CONSUMPTION GPS + GLONASS

| | |
|--|----------------|
| Supply voltage | 3.0 to 3.6 VDC |
| Average Current Draw | (typical) |
| Full power mode (Searching) Peak Current | 42mA |
| Full power mode (Searching) Average Current | 36mA |
| Full power mode (Tracking) Average Current | 31mA |
| Trickle Power Mode | 29mA |
| Hibernate Status | 27uA |

MECHANICAL

| | |
|------------|------------------------|
| Dimensions | |
| L x W x H | 17.78 x 16.01 x 2.5 mm |
| L x W x H | 0.7" x 0.65" x 0.1" |
| Weight | 4 g / 0.14 oz. |

ENVIRONMENT

| | |
|-------------|----------------|
| Temperature | |
| Operating | -40°C to +85°C |
| Storage | -40°C to +85°C |
| Humidity | Non condensing |

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