maestro
GPS receiver


# A5100-A

**Positioning Product**

**GPS Receiver Modules**
Telematics Platforms

# SiRFstarV - GNSS Module:

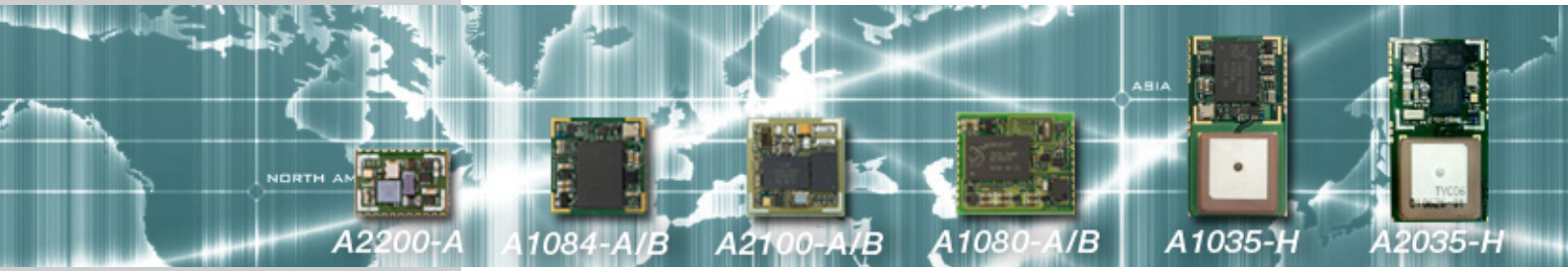
## The Big Performance, Small Footprint Solution

The A5100 GNSS modules enable fastest acquisition and tracking with the latest SiRFstarV technology. This small form-factor module fully addresses the demand for lowest power consumption with, amongst other features, SiRFaware™ technology. The removal of jammers does not only facilitate designs of new products, but guarantees operation even in hostile environments. High sensitivity during acquisition or while tracking allows for use in many different environments and under toughest operating conditions.

| Features | Benefits |
|---|---|
| Complete GNSS module | Improved availability and accuracy in urban canyon environments |
| Pin-to-pin compatible with A2200-A | Fastest design-in |
| Lowest tracking power consumption SiRFaware™ for constant Hot Start | Ideally suited for battery powered GPS applications |

# GPS Solutions for Many Applications

With the mission to support our customers in implementing GPS functionality into their systems, Maestro Wireless Solutions is offering a distinct product portfolio to address a wide area of applications. These range from traditional telematics solutions to latest highly integrated consumer devices, all of them having their special requirements towards a GPS module. Based on SiRFstarIV and now also SiRFstarV chip sets, Maestro Wireless Solutions GPS module solutions address different specific needs and combine high performance, low power consumption, and simplified integration effort. Our modules comply with the RoHS standard and are 100% electrically and functionally tested prior to packaging, thereby assuring the guarantee of the highest quality products.




Ordering information:
A5100-A
EVA5100-A Evaluation Board

## Technical Details A5100-A

### PERFORMANCE

| | | |
|---|---|---|
| **Channels** | 52 | |
| **Frequency** | LI - 1,575 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)<br>< 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 (default)** | |
| SiRFbinary protocol | Protocol for SiRFstar product family up to SSIII |
| Open Socket Protocol | Protocol extension for SiRFstarV |
| Baud rate Switchable | 115.2k (default)<br>1,200 to 115.2k |
| Ports | Tx (Binary output)<br>Rx (Binary input) |
| **UART - NMEA** | |
| NMEA message Switchable | GGA, RMC, GSA, GSV, VTG, GLL, ZDA |
| Baud rate Switchable | 1,200 to 115.2k |
| Ports | Tx (NMEA output)<br>Rx (NMEA input) |

### HIGHLIGHTS

| | |
|---|---|
| **SiRFnav™** | High availability and coverage; improved TTFF in weak signal environments |
| **SiRFaware™** | Keeps module in a state of readiness for rapid navigation (hot start) |
| **Jammer remover technology** | Detects and removes up to 8 in-band jammers with minimal loss of sensitivity |
| **A-GPS** | Embedded Extended Ephemeris (SiRFInstantFix1) and Ephemeris Push support |
| **MEMS I2C interface** | Prepared to use additional sensor information for improved navigation |

### POWER

| | |
|---|---|
| **Supply voltage** | 3.0 to 3.6 VDC |
| **Average Current Draw** | (typical) |
| Full power mode (Searching) Peak Current | - |
| Full power mode (Searching) Average Current | 25mA |
| Full power mode (Tracking) Average Current | 24mA |
| Micro Power Mode (SiRFawareTM) | - |
| Hibernate Status | - |

### MECHANICAL

| | |
|---|---|
| **Dimensions** | |
| L x W x H | 14 x 10.2 x 2.5 mm |
| L x W x H | 0.55" x 0.4" x 0.1" |
| **Weight** | 0.6 g / 0.02 oz. |

### ENVIRONMENT

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

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