



## A2200-A

### Positioning Product

GPS Receiver Modules  
Telematics Platforms



## SiRFstarIV - GPS Module:

### The Big Performance, Small Footprint Solution

The A2200 GPS modules enable fastest acquisition and tracking with the latest SiRFstarIV 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

Complete GPS module  
Jamming detection and removal

Direct passive antenna support

Best acquisition sensitivity  
Lowest tracking power consumption  
SiRFaware™ for constant Hot Start

#### Benefits

■ Easy integration Minimal BOM  
Accurate positioning

■ Fastest design-in

■ Ideally suited for all  
small 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 SiRFstarIII and now also SiRFstarIV 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:  
A2200-A  
EVA2200-A Evaluation Board

## Technical Details A2200-A

### PERFORMANCE

<b>Channels</b>	48
<b>Correlators</b>	~ 400,000
<b>Frequency</b>	LI - 1,575 MHz
<b>Sensitivity<sup>1</sup></b>	
Tracking	- 163 dBm
Navigation	- 160 dBm
Acquisition (cold start)	- 148 dBm
<b>Position Accuracy<sup>2)</sup> (horizontal)</b>	< 2.5 m CEP (autonomous) < 2.0 m CEP SBAS
<b>Time To First Fix</b>	
Hot Start <sup>2)</sup>	< 1 s
Warm Start <sup>2)</sup>	< 35 s
Cold Start <sup>2)</sup>	< 35 s
<b>Navigation</b>	
Update Rate	1 Hz / 5 Hz Supported

### COMMUNICATION

UART - NMEA (Default)	
NMEA message Switchable	GGA, RMC, GSA, GSV, VTG, GLL, ZDA
Baud rate Switchable	4,800 (default) 1,200 to 115.2k
Ports	Tx (NMEA output) Rx (NMEA input)
UART - SiRF Specific SSB/OSP	
SiRFbinary protocol	Protocol for SiRFstar product family up to SSIII
Open Socket Protocol	Protocol extension for SiRFstarIV
Baud rate Switchable	57.6k (default) 1,200 to 115.2k
Ports	Tx (Binary output) Rx (Binary input)
SPI - NMEA/SiRF Specific	
Clock	Up to 6.8 MHz
Ports	DO (NMEA / Binary output) DI (NMEA / Binary input) SPI CLK (clock - input) SPI CS (chip select - input)

### HIGHLIGHTS

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

### POWER

<b>Supply voltage</b>	3.0 to 3.6 VDC
<b>Average Current Draw</b>	(typical)
Full power mode (Searching) Peak Current	69mA
Full power mode (Searching) Average Current	52 mA
Full power mode (Tracking) Average Current	41 mA
Micro Power Mode (SiRFaware™)	35 uA
Hibernate Status	25 uA
<b>Antenna supply via Vant</b>	
Voltage range	up to 5.0V
Max. allowed current <sup>3)</sup>	50 mA

### MECHANICAL

<b>Dimensions</b>	
L x W x H	14 x 10.2 x 2.5 mm <sup>3</sup>
L x W x H	0.55" x 0.4" x 0.1"
<b>Weight</b>	0.6 g / 0.02 oz.

### ENVIRONMENT

<b>Temperature</b>	
Operating	-40°C to +85°C
Storage	-40°C to +85°C
<b>Humidity</b>	Non condensing

1) With best matched antenna  
2) All SVs with -130dBm

3) External current limiter suggested

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