



## A1035-H

### Positioning Product

Integrated Antenna  
Low Power Consumption

## Cost-efficient and complete – an SMT GPS antenna module

The A1035-H is Maestro Wireless Solutions answer to the most critical requirements in the GPS market: high performance, new features and lowest costs. The complete GPS antenna module is designed around the low power SiRFStar III chip. With the antenna tuned to the module, the module combines high sensitivity with an extremely low current draw. The module also offers an additional input for external antennas. By changing the state of an input pin, the application can switch between this external antenna and the integrated one. Surface Mount Technology (SMT) allows for use of pick-and-place machines, so no manual operation is required.

### Features

### Benefits

- |                           |                                    |
|---------------------------|------------------------------------|
| Lowest assembly cost      | ■ Complete GPS module on SMT basis |
| Antenna select option     | ■ Integrated RF switch             |
| Small footprint           | ■ 16.5 x 30.5 mm <sup>2</sup>      |
| Low power consumption     | ■ 86 mW average in tracking mode   |
| Bench marking sensitivity | ■ -159 dBm tracking                |



# Positioning Receiver Portfolio

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:  
A1035-Hxxx  
EVA1035-H Evaluation Board

## GPS Receivers

	Supply voltage / V	Current draw @1Hz per sec / mA	Operating temperature / °C	Low Power Mode Trickle Power	Low Power Mode Push-To-Fix	Keep Ephemeris Alive	AGPS Ephemeris Push	Active antenna	Passive antenna	2nd antenna input	Antenna switch	Firmware update (Flash)	ROM	SBAS support	Back-up battery option	Shielding lid	Sensor Interface	Size / mm <sup>2</sup>
A1080-A	3.3	23	-30/85	■	■	■	■	■	■	■	■	■	■	■	■	■	■	19x16
A1080-B	3.3	23	-40/85	■	■	■	■	■	■	■	■	■	■	■	■	■	■	19x16
A1084-A	3.3	26	-30/85	■	■	■	■	■	■	■	■	■	■	■	■	■	■	15x15
A1084-B	3.3	26	-30/85	■	■	■	■	■	■	■	■	■	■	■	■	■	■	15x15
A2100-A	3.3	32	-40/85	■	■	■	■	■	■	■	■	■	■	■	■	■	■	15x15
A2100-B	1.8	64	-40/85	■	■	■	■	■	■	■	■	■	■	■	■	■	■	15x15

## GPS Receiver w/ Smart Antenna

A1035-H

Antenna Type	Circular polarisation	Linear polarisation	SMD solderable	External antenna pin	Shielding lid	Size / mm <sup>2</sup>	Based on GPS receiver
patch	■		■	■	■	30x17	A1080-A

## Technical Details A1035-H

### PERFORMANCE

<b>Channels</b>	20 parallel tracking
<b>Correlators</b>	200,000 plus
<b>Frequency</b>	L1 - 1,575 MHz
<b>Sensitivity</b>	
Tracking	- 159 dBm (external) - 158 dBm (integrated)
Acquisition (cold start)	- 142 dBm
<b>Position Accuracy (horizontal)</b>	< 2.5 m CEP (autonomous) < 2.0 m CEP SBAS
<b>Time To First Fix</b>	
Hot Start <sup>1)</sup>	< 1 s
Warm Start <sup>2)</sup>	< 32 s
Cold Start <sup>3)</sup>	< 35 s

### COMMUNICATION

<b>Standard GPS software</b>	
NMEA message Switchable	GGA, GSA, GSV, VTG, RMC, GLL
Baud rate	4,800 (default) to 115,200
<b>Serial ports</b>	3.3 V CMOS compatible
Tx0	NMEA output
Rx0	NMEA input

### ENVIRONMENT

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

### POWER

<b>Input voltage</b>	3.0 to 3.6 VDC
<b>Current draw</b>	
Acquisition	31 mA (typical)
Tracking	26 mA (typical)
Standby	20 µA (typical)
<b>Antenna supply via Vant</b>	
Voltage range	up to 5.0V
Max. allowed current <sup>4)</sup>	50 mA

### MECHANICAL

<b>Dimensions</b>	
L x W x H	30.5 x 16.5 x 5.0 mm <sup>3</sup>
L x W x H	1.2" x 0.65" x 0.2"
<b>Weight</b>	4.0 g / 0.14 oz.

1) The receiver has estimates of time/date/position and valid almanac and ephemeris data.  
2) The receiver has estimates of time/date/position and almanac.  
3) The receiver has no estimate of time/date/position, and no recent almanac.  
4) An external current limiter is suggested to avoid damage in fault conditions

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