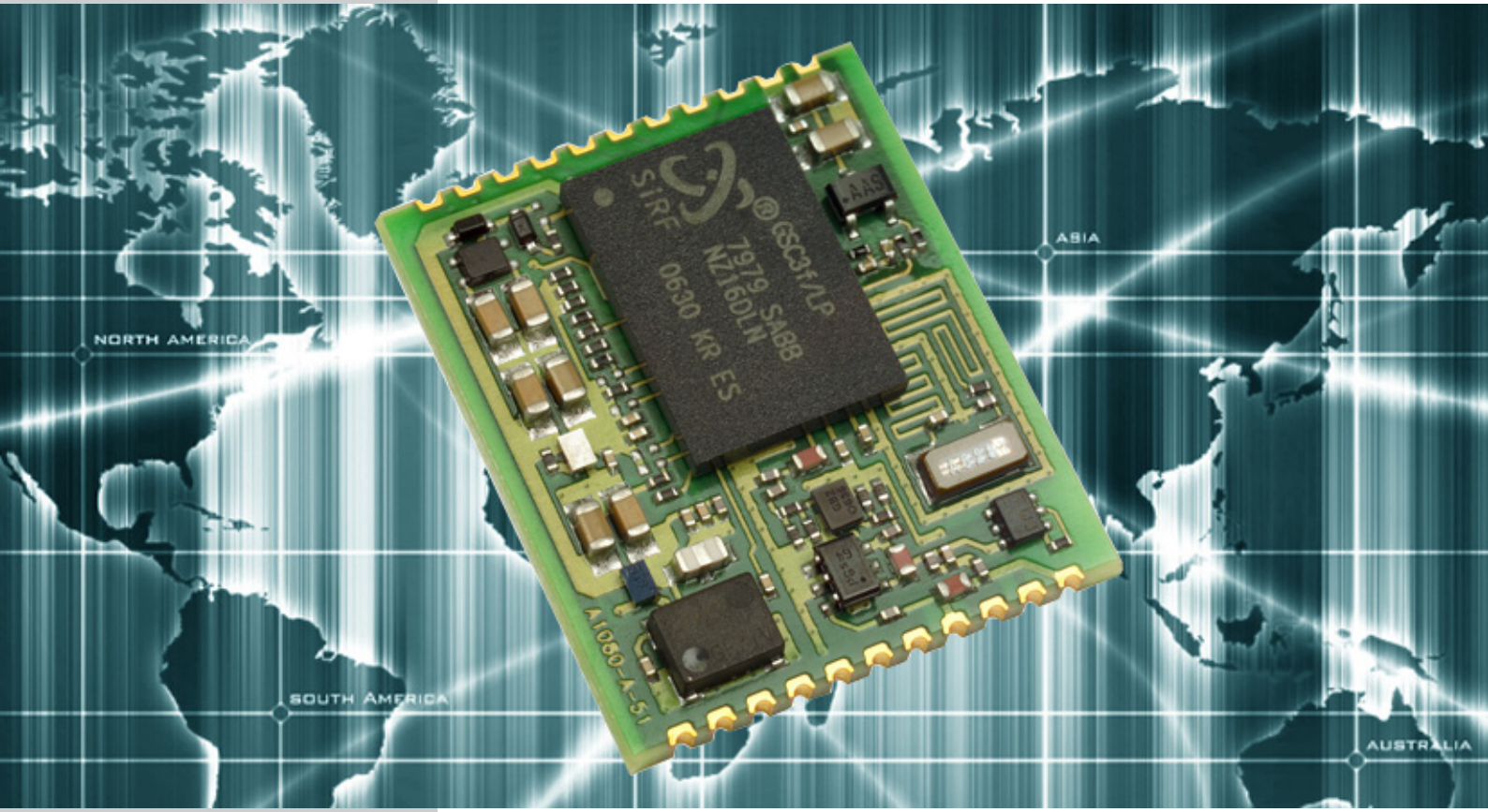
maestro
GPS receiver



A1084-A/B

Positioning Product

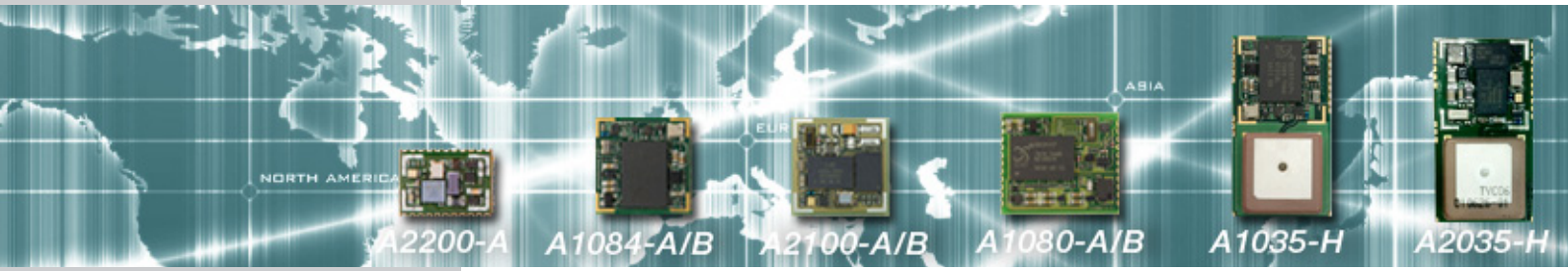
Miniaturized GPS receiver for passive and active antennas

Many GPS applications, such as portable devices or telematics units, require a built-in antenna. However, an external antenna connector is often desired for GPS performance or reliability reasons. This is what the new A1084-A GPS receiver supports with its second antenna pin and on board antenna switch, whilst the A1084-B supports both passive and active antennas on a single antenna pin. This very compact SiRFStar III based GPS receiver comes completely shielded with a lid and with benchmark-setting GPS performance on a very small footprint.

Features	Benefits
Bench marking sensitivity	-159 dBm tracking
Fasted TTFF (Time To First Fix)	< 35 s under cold start condition (typical)
Smallest footprint	15 x 15 mm^2
Antenna	Passive and active antenna supported
Dual antenna support	RF switch on A1084-A

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.



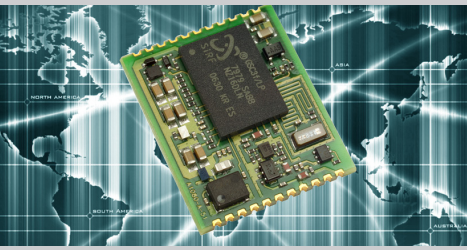
GPS Receivers

	Supply voltage / V	Current draw @1fix per sec / mA	Operating temperature / °C	Low Power Mode Trickle Power	Low Power Mode Push-To-Fix	Low Power Mode 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 / mm²
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

	Antenna Type	Circular polarisation	Linear polarisation	SMD solderable	External antenna pin	Shielding lid	Size / mm²	Based on GPS receiver
A1035-H	patch	■		■	■	■	30x17	A1080-A

Ordering information:
A1084-Axxx
A1084-Bxxx
EVA1084-A Evaluation Board



Technical Details A1084-A/B

PERFORMANCE

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

COMMUNICATION

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

ENVIRONMENT

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

POWER

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

MECHANICAL

Dimensions	
L x W x H	16.2 x 19.0 x 2.4 mm³
L x W x H	0.64" x 0.75" x 0.095"
Weight	1.2 g / 0.042 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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