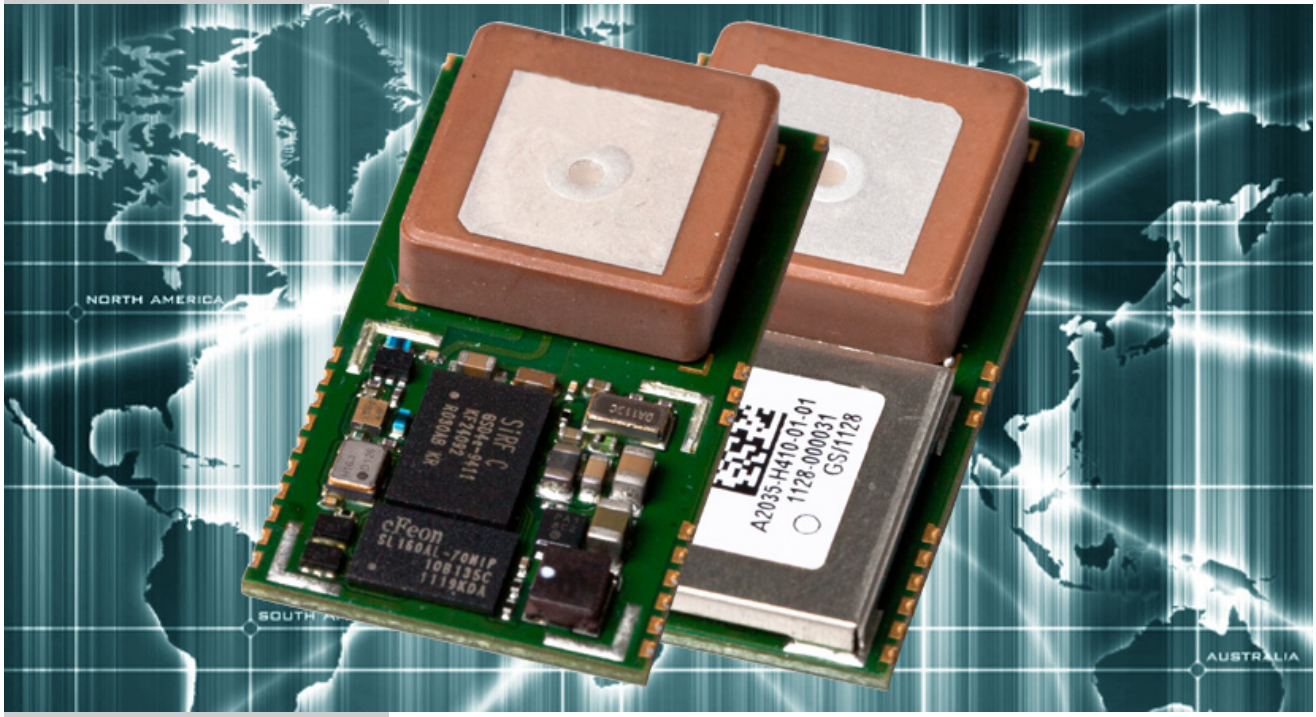
Datasheet

maestro GPS receiver



A2035-H

Positioning Product

Fleet management
Asset Tracking
Vehicle Tracking
Personal Tracking
People monitoring
Portable Device

Integrated Antenna
Low Power Consumption
MEMS support
A1035H backward compatible

Cost-efficient and complete – an SMT GPS antenna module

The A2035-H is Maestro Wireless Solutions answer to the most critical challenges in the GPS market: high integration, high performance, and a reduce time to market. The combination of a fully enhanced SiRFStar IV GPS engine and a custom-made high directional patch antenna ease engineers integration job in tough electrical environment. The A2035-H fully addresses the demand for extreme low power operation and ultra fast TTFF. Its highest sensitivity, allows for use in the most demanding conditions.

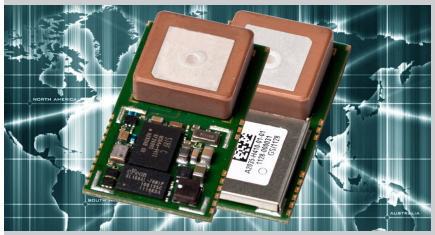
Features	Benefits
Lowest assembly cost	SMT based integrated GPS antenna module
Small footprint	16.5 x 30.5 mm^2
Ultra Low power consumption	29 mA average tracking (full power mode)
Bench marking sensitivity	-163 dBm tracking
In-band jamming signal removal	up to 8 strongest interferes can be detected and excised

Your Global Source for
RF, Wireless & Energy Technologies

RichardsonRFPD
An Arrow Company

www.richardsonrfpd.com | 800.737.6937 | 630.208.2700

Ordering information:
A2035-H410
EVA2035-H Evaluation Board



Technical Details A2035-H

PERFORMANCE

Channels	48 parallel tracking
Correlators	400,000 plus
Frequency	L1 - 1,575 MHz
Sensitivity	
Tracking Navigation Acquisition (cold start)	- 163 dBm - 160 dBm - 148 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

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
One 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

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
Flash-based design	Prepared to store configuration and calibration data and to allow firmware updates
Internal antenna	Best matched build-in antenna for easy integration

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 Nominal 3.3 VDC
Average current draw	
Full power mode (searching)	40 mA (TBC)
Full power mode (tracking)	29 mA (TBC)
PTF mode	4.1 mA (TBC)
MPM / SiRFaware	40 µA (TBC)
Hibernate	23.5 µA (TBC)
Antenna supply via Vant	
Voltage range	up to 5.0V
Max. allowed current[4]	50 mA

MECHANICAL

Dimensions	
L x W x H	30.5 x 16.5 x 5.0 mm³
L x W x H	1.2" x 0.65" x 0.2"
Weight	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