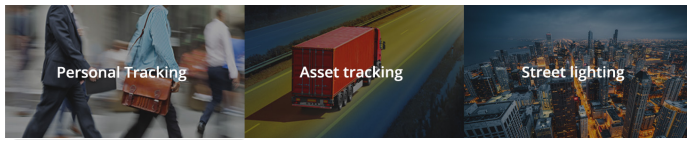
The A2235-H GPS module enables fast acquisition and tracking with SiRFstar IV technology. This small form-factor module addresses the demand for low power consumption with SiRFaware technology. The removal of jammers and high sensitivity during acquisition allows for use in many different environments and under tough operating conditions.

Product Highlights

- Simplified integration
- Efficient time to market
- Leading performance
- Lowest assembly cost
- Small footprint
- Ultra-low power consumption
- In-band jamming signal removal

Key Markets



The A2235-H provides a SiRFStar IV GPS engine with a custom-designed high directional patch antenna on board to ease the integration of leading GPS technology into designs. The A2235-H addresses the demand for extremely low power operation and ultra-fast Time-To-First-Fix. Their high level of sensitivity allows for use in the most demanding environmental conditions.

- SMT based integrated GPS antenna module
- 17.8 x 16.5 mm2
- 29 mA average tracking (full power mode)
- -163 dBm tracking
- up to 8 strongest interferes signals detected and mitigated

PERFORMANCE	**A2235-H**
Channels	48 parallel tracking
Correlators	400,000 plus
Frequency	LI – 1,575 MHz
Tracking	– 163 dBm
Navigation	– 160 dBm
Acquisition (cold start)	– 148 dBm
Position Accuracy (horizontal)	< 2.5 m CEP (autonomous) < 2.0 m CEP SBAS
Time To First Fix	

Hot Start	< 1 s
Warm Start	< 32 s
Cold Start	< 35 s
Navigation	
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
One Socket Protocol	Protocol extension for SiRFstarIV
Baud rate Switchable	57.6k (default) 1,200 to 115.2k
Ports	Tx (NMEA output) 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
Flash-based design (A2135-H only)	Prepared to store configuration and calibration data and to allow firmware updates
Internal antenna	Best matched build-in antenna for easy integration

POWER		
Input voltage	3.0 to 3.6 VDC Nominal 3.3 VDC	
Average Current Draw	**A2135-H**	**A2235-H**
Full power mode (Searching)	36 mA	36 mA
Full power mode (tracking)	24 mA	22 mA
PTF mode	0.7 mA	0.9 mA
TricklePower™ Mode	8.7 mA	7.2 mA
Hibernate	27 µA	27 µA
Antenna supply via Vant		
Voltage range	up to 5.0V	
Max. allowed current	50 mA	
MECHANICAL		
Dimensions		
L x W x H	17.8 x 16.5 x 7.1 mm	
L x W x H	0.7” x 0.65” x 0.28”	
Weight	4.0 g / 0.14 oz.	
ENVIRONMENT		
Temperature		
Operating	-40°C to +85°C	
Storage	-40°C to +85°C	
Humidity	Non condensing	