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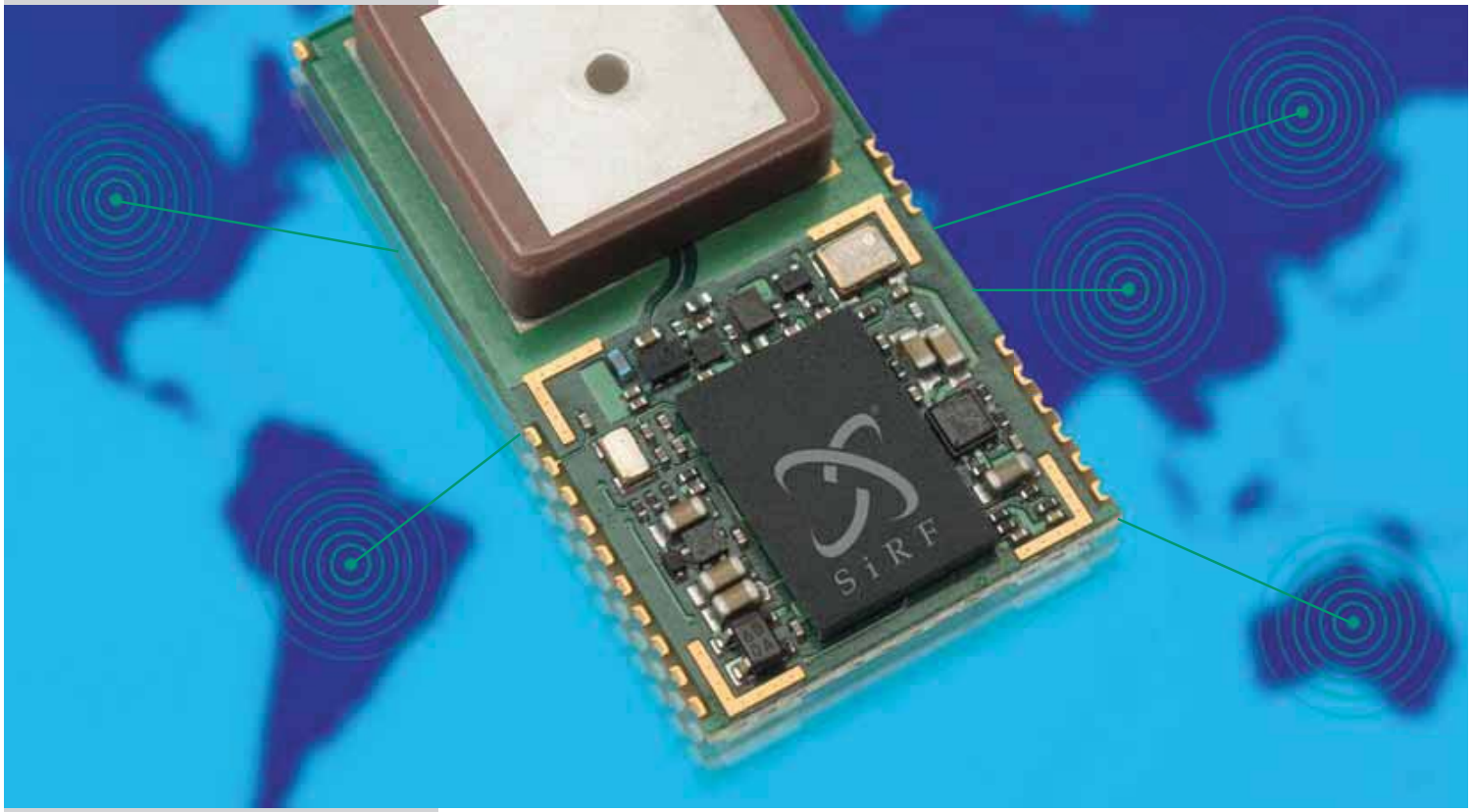


A1035-H

Positioning Products

SiRF

Cost-efficient and complete – an SMT GPS antenna module

The A1035-H is Vincotech's 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.

Lowest assembly cost	■	Complete GPS module on SMT basis
Antenna select option	■	Integrated RF switch
Very small footprint	■	16.5 x 30.5 mm^2
Ultra-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, Vincotech is offering a large product portfolio to cover almost all integration possibilities in an easy way. A dedicated R&D team located in the Munich region, Germany, develops sensitive positioning solutions based on state of the art technologies. All GPS products are manufactured in our ISO9001 and TS16949 certified factory in the EU. Our modules comply to the RoHS standard and are 100% electrically and functionally tested prior to packaging. This way we constantly guarantee high quality products.

PRODUCTS SHOWN IN ACTUAL SIZE

GPS Receivers

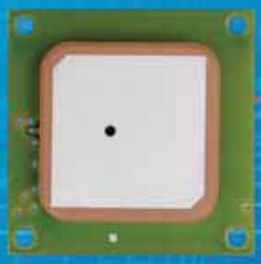
A1080-A

A1082-A

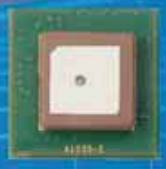
A1084-A

A1088-A

Smart Antenna Modules



A1035-D



A1035-E

A1035-H

GPS Receivers

	Supply voltage / V	Current draw @ 1 fix 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	Internal antenna supply	Firmware update (Flash)	ROM	SBAS support	Back-up battery option	Shielding lid	AEC-Q compliant components	Size / mm²
A1080-A	3.3	23	-30/85	■	■		■	■			■	■		■	■			19x16
A1080-B	3.3	23	-40/85	■	■		■	■			■	■		■	■			19x16
A1082-A	1.8	35	-30/85			■		■					■		*			14x12
A1084-A	3.3	26	-30/85	■	■		■	■	■	■	■	■		■	■	■		15x15
A1084-B	3.3	26	-30/85	■	■		■	■	■		■	■		■	■	■		15x15
A1088-A	3.3	30	-40/85	■	■		■	■			■	■		■	■	■	■	28x19

*SRAM backup possible with Enable pin

Smart Antenna Modules

	Antenna type	Circular polarisation	Linear polarisation	Plug-in module	SMD solderable	External antenna pin	Shielding lid	Size / mm²	Based on GPS receiver
A1035-D	patch	■		■			■	35x35	A1080-A
A1035-E	patch	■		■				21x21	A1082-A
A1035-H	patch	■			■	■	■	30x17	A1084-A
A1085-A**	chip		■		■		■	31x17	A1080-A
A1086-A**	meander		■		■	■	t.b.d.	25x15	A1084-A
A1086-B**	meander		■		■		t.b.d.	25x15	A1084-A

**product planned

Technical Details A1035-H

PERFORMANCE

Channels	20 parallel tracking
Correlators	200,000 plus
Frequency	L1 - 1,575 MHz
Sensitivity	
Tracking	-159 dBm (external) -158 dBm (integrated)
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	-30°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 5.0 V
Max. allowed current[4)]	50 mA

MECHANICAL

Dimensions	30.5 x 16.5 x 5.0 mm³
	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

YOUR PARTNER

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