

Get your Position!



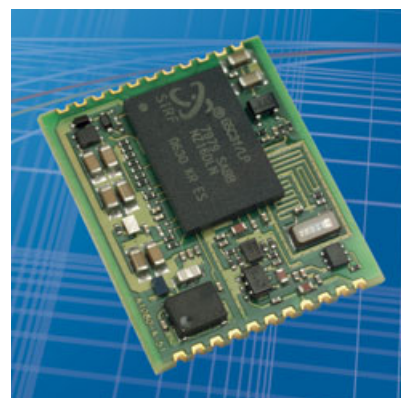
A1080-A Full NMEA **GPS** Modules

Optimized for Indoor and Battery Powered Applications

Developed for indoor use and based on the SiRF Star III low power chip, the A1080-A will benchmark not only sensitivity and power consumption. Being 100% compatible to Tyco Electronics A1037-A GPS module it will guarantee smallest footprint and easy implementation even in handheld devices and other size optimized battery powered applications.

Get your Evaluation Kit and check the outstanding performance of Tyco Electronics' A1080-A!

Benchmarking sensitivity	■ -159 dBm tracking
Fastest TTFF (Time To First Fix)	■ < 35 s under cold start condition (typical)
Very small footprint	■ 19 x 16 mm
Ultra-low power consumption	■ Max. 50 mA during acquisition
A-GPS support	■ For fastest start up behavior
SBAS support	■ For most accurate position calculation



Performance

Channels	20 parallel tracking
Correlators	200,000 plus
Frequency	L1 – 1575 MHz
Sensitivity	
Tracking	-159 dBm
Acquisition (cold start)	-144 dBm
Position Accuracy	< 10 m CEP autonomous < 5 m CEP SBAS support
Time To First Fix	
Obscuration recovery ¹	1 s
Hot start ²	< 2 s
Warm start ³	< 32 s
Cold ⁴	< 35 s

Communications

Standard GPS Software	
NMEA Message	GGA, GSA, GSV, VTG, RMC, GLL
Switchable	
Baudrate (in baud)	4,800 (default) to 38,400
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	
Operation	< 52 mA (typical)
Standby	Supercap (for around 36h)
Antenna Supply via VANT	
Voltage range	up to 5.2 V
Max. allowed current ⁵	50 mA

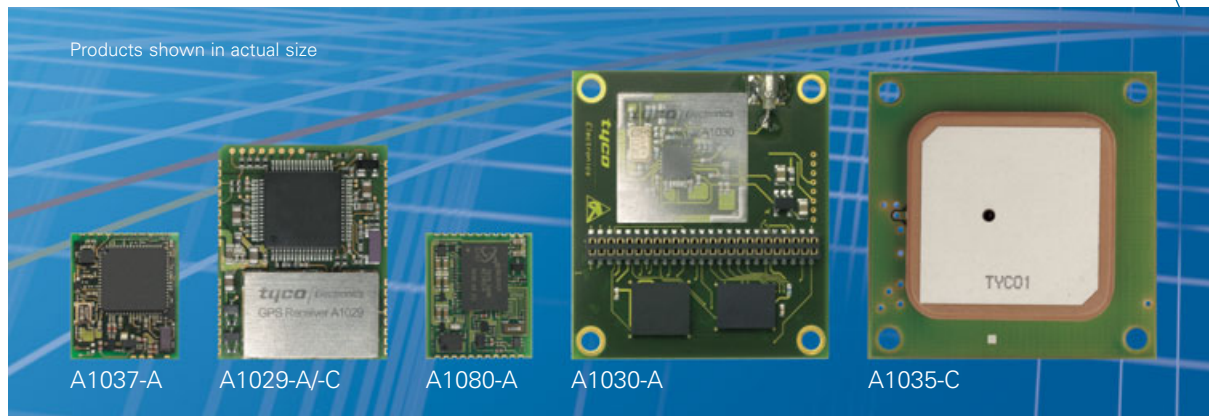
Mechanicals

Dimensions	19 mm x 16.2 mm x 2.0 mm 0.75" x 0.64" x 0.08"
Weight	1 g, < 0.05 oz

1) The receiver's calibrated clock is not stopped, thus it knows precise time (to the μ s level).
 2) The receiver has estimates of time/date/position and valid almanac and ephemeris data.
 3) The receiver has estimates of time/date/position and almanac.
 4) The receiver has no estimate of time/date/position, and no recent almanac.
 5) An external current limiter is suggested to avoid damage in fault conditions.

Positioning Receiver Portfolio

With the mission of supporting our customers to implement GPS functionality into their systems, Tyco Electronics is offering a large product portfolio to cover almost all integration possibilities in an easy way. All GPS products are manufactured in our ISO9001 and TS16949 certified factory inside the EU. Beyond that our modules follow RoHS standard and are 100% electrically and functionally tested prior packaging. This way we constantly guarantee high quality products.



	1 PPS	Antenna active	Antenna passive	Antenna patch onboard	Antenna status detection	Assisted GPS	Connection plug-in	Connection solderable	Data logging	Dead reckoning	Differential GPS RTCM input	Flash, programmable	GPIO	GPS/UTC raw data	I2C interface	Memory free flash (byte) free SRAM (byte)	Processor: Available power	ROM	SBAS support	SPI interface	TCXO	UART NMEA	USB interface	UTM projection
A1037-A	●	●				●		●										●	●			●		
A1029-A	●	●	●		●	●		●		●	●	●	●	●	●	80k/16k	3 MIPS		●	●		●		●
A1029-B	●	●	●		●	●	●			●	●	●	●	●	●	80k/16k	3 MIPS		●	●		●		●
A1029-C	●	●	●		●	●		●		●	●	●	●	●	●	80k/16k	3 MIPS		●	●	●	●		●
A1029-D	●	●	●		●	●	●			●	●	●	●	●	●	80k/16k	3 MIPS		●	●	●	●		●
A1080-A	●	●				●		●						●				●	●		●	●		
A1030-A	●	●	●		●	●	●		●	●	●	●	●	●	●	4M/2M	3 MIPS		●	●		●	●	●
A1035-C		●		●		●	●					●		●		80k/16k	3 MIPS		●	●	●	●		●

● Standard firmware: revision 1xx ● Standard firmware: revision 2xx ● With custom firmware support

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