

Get your Position!

A1037-A Simplified, Miniaturized Full NMEA GPS Module

Value for money is the driving force behind this full NMEA GPS receiver module. The miniaturized, single sided SMD module offers high accuracy position information and a precise one Pulse Per Second (1PPS) signal synchronized to Universal Time (UTC). WAAS and EGNOS are supported in order to improve position accuracy. All modules are electrically tested prior to packaging. Get your highly accurate PVT (Position, Velocity and Time) information in the most cost effective way.



- Highly sensitive ■ -153 dBm tracking
- Accurate positioning ■ 3 m CEP
- Fast TTFF (Time To First Fix) ■ < 60 s under cold start condition (typical)
- Very small footprint ■ 19 x 16 mm
- Temperature fluctuations compensated ■ TCXO technology
- SBAS support ■ WAAS, EGNOS
- A-GPS support ■ Almanac, Ephemeris, Position, Time

Performance

Channels	12 parallel tracking
Frequency	L1 - 1575 MHz
Sensitivity	
Tracking	-153 dBm
Reacquisition	-147 dBm
Position accuracy (horizontal)	3 m CEP
Time to first fix	
Obscuration recovery ¹⁾	1 s
Hot start ²⁾	< 3 s
Warm start ³⁾	< 32 s
Cold ⁴⁾	< 60 s

Communications

Standard GPS software	
NMEA message switchable	GGA, GSA, GSV, VTG, RMC
Baudrate (in baud)	4,800/57,600 default 9,600/19,200 by software
Serial ports	3.3 V CMOS compatible
TxO	NMEA output
RxO	NMEA input

Environment

Temperature	
Operating	-30°C to +70°C
Storage	-40°C to +85°C
Humidity	Non-condensing

Power

Input voltage	3.3 to 3.6 VDC
Current draw	
Operation	< 55 mA (typical)
Standby	12 µA (typical) 36h standby by using 1F Supercap
Antenna supply via VANT	
Voltage range	up to 5.2 V
Max. allowed current ⁵⁾	50 mA

Mechanicals

Dimensions	16.2 mm x 19 mm x 3.0 mm 0.75" x 0.64" x 0.12"
Weight	1 g, < 0.05 oz

1) The receiver's calibrated clock is not stopped, thus it knows precise time (to the µs 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 to support 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. A dedicated R&D team located in Ottobrunn, Germany develops sensitive positioning solutions based on state of the art technologies. 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.

Products shown in actual size



A1037-A



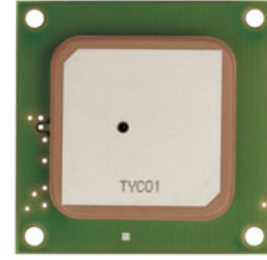
A1029-A/-C



A1080-A



A1030-A



A1035-C/-D

	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)	Memory 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		●	●		●		●	●
A1035-D	●	●	●		●	●								●					●	●		●		●	

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

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