

SmartGPS-2LP Datasheet

Compact 16 channel GPS receiver with integrated patch antenna



SmartGPS-2LP with cable and DSUB-9F connector

Features

SmartGPS-2LP is a complete GPS receiver with an integrated patch antenna and RS-232 communication ports with selectable protocols. Due to its compact outline it is very versatile.

On two serial ports independent bit rates and protocols can be configured. For example, the first port can output industry standard NMEA protocol, while RTCM data is sent to the second port. In this configuration, the receiver will work in differential GPS Mode.

If fewer position fixes are needed, the receiver can run in a low power mode which further reduces power consumption.

In continuous tracking mode, 3 modes for receiver sensitivity can be selected: Fast acquisition mode for high update rates, high sensitivity mode or the normal mode for average use.

For configuring and testing of the SmartGPS-2LP, a Windows[®] compatible software is available.

Connectors

Connectors of the SmartGPS-2LP can be assembled according to customer requirements, e.g. a DSUB-9 socket with wire pigtailed for the power supply and backup voltage, or no connector at all. Further types include RJ-45, miniDIN and others.

Enclosure

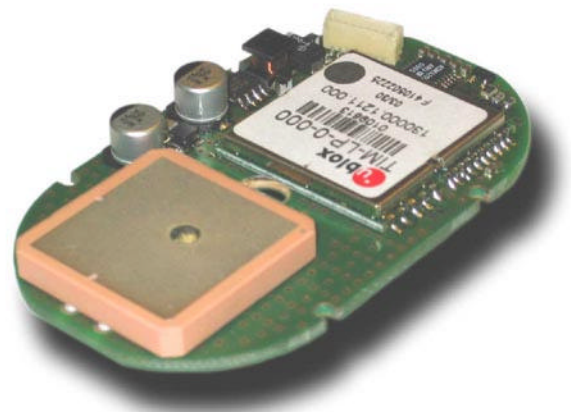
Two case versions are available:

- Adhesive tape or hook & loop fastener mounting version S
- Screw mounting version B



Case version S

Case version B



Assembly view

Specification

Absolute Maximum Ratings

Storage Temperature:	-40..105°C
Input Voltage:	-75..+40 V _{DC}
(+Bat, +On)	-75..+60 V _{DC} (HV-Version) 0 ..+40V _{DC} (LV-Version)
ESD (Human Body Model)	15kV

Operating Conditions

Operating Temperature:	-40..85 °C
Input Voltage:	7..34 V _{DC} (Standard) 7..50 V _{DC} (HV-Version) 5..34 V _{DC} (LV-Version) ⁶
Receiver Type:	16-Channel, L1-Frequency (1575 MHz)
Current Consumption ¹ (Operating, typical):	42 mA @ 12V _{DC} 24 mA @ 24V _{DC}
Current Consumption ¹ (Standby, maximum):	1 mA
Accuracy (SA ² off):	3 m CEP ³
Accuracy (DGPS,SA off):	<2 m CEP ^{3,4}
Maximum Update Rate:	4 Hz
Acquisition Time (typ.)	
Cold Start:	41.5 sec
Warm Start (2..4h):	33.0 sec
Hot Start (< 2h):	< 3.5 sec
Interfaces:	2 x RS-232 No Hardware Handshake
Serial Bit Rates (independent):	4800, 9600, 19200, 38400, 57600, 115200 bit/s
Protocol:	NMEA ⁵ , ubx binary, RTCM (DGPS Input)
Dimensions:	(L x B x H)
Case Version S:	80 x 50 x 18.5mm
Case Version B:	80 x 50 x 35.5mm
Mounting Screw (Case Version B):	M14 x 0.8mm
Weight:	ca 45g (without cable)

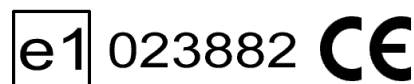
- ¹ Continuous Mode. In the FixNOW Mode a lower supply current can be achieved.
- ² SA = Selective Availability. On May 1, 2000 the US president decided to discontinue SA with immediate effect.
- ³ CEP = Circular Error Probability: The radius of a horizontal circle, centered at the antenna's true position, containing 50% of the fixes.
- ⁴ Depends on accuracy of DGPS system
- ⁵ The strings GGA, GLL, GSA, GSV, MSS, RMC, VTG, ZDA may be configured independently.
- ⁶ Notebook and PalmTop version (no wrong polarity protection)



Interface wires

Signal	Color
Tx B	brown
GND	red
Rx B	orange
Reset	yellow
+ Batt	green
Tx A	blue
Rx A	white
+On	black

Certificate



Contact

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