

GPS DATA MODULE



An application specific GPS receiver module to output dynamic GPS serial data messages in a variety of formats (NMEA, Binary etc). This device has an external antenna feed. The data o/p is supplied in RS232 format for connecting to external instruments e.g. Flir camera for

symbology information, Digital Video transmission links for remote data.

Its compact size allows for simple, discrete installation, with simplicity of interfacing providing for plug and play operation.

Performance Characteristics

Receiver Type	L1 frequency, C/A code, 16 Channels
Position Accuracy	w/o aid 3.3 m CEP
Start-up Time	Hot start < 3 s Warm start 35 s Cold start 41 s Reacquisition Time < 1 s
Acceleration	< 4 g
Update Rate	1 Hz
Timing Accuracy	50 ns RMS
Sensitivity	Acquisition -140 dBm Tracking -149 dBm

Power

Input Voltage	9.0 ~ 30 V DC
Power Consumption	50 mA @ 12 volts dc



Connectivity

Antenna

Type External Active or Passive Antenna
(Using the Navtech Systems Diplexer a single antenna can be shared between GPS receivers).

Power

DC input via Lemo connector +ve (red), -ve (blue)
via USB lead pin 1 (red) +ve, pin 4 (black) -ve

I/O – (USB cable) o/p = pin 2 (white), i/p pin 3 (green) common = pin 4 (black)

Data protocol

RS232 - NMEA, 0183 ASCII (Default), UBX binary, RTCM (i/p) – software configurable

Message sentences selectable

GPGSV,3,3,09,28,16,050,39*42

\$GPGLL,5226.12614,N,00101.89626,W,091809.00,A,A*72

\$GPZDA,091809.00,03,11,2005,00,00*6B

\$GPRMC,091810.00,A,5226.12611,N,00101.89626,W,0.028,20.33,031105,,A*46

\$GPVTG,20.33,T,,M,0.028,N,0.052,K,A*02

\$GPGGA,091810.00,5226.12611,N,00101.89626,W,1,7,1.07,167.2,M,47.3,M,,*79

\$GPGSA,A,3,29,05,07,18,22,26,28,,,,,4.04,1.07,3.90*00

Default messages

\$GPGLL,5226.12614,N,00101.89626,W,091809.00,A,A*72

\$GPRMC,091810.00,A,5226.12611,N,00101.89626,W,0.028,20.33,031105,,A*46

\$GPGGA,091810.00,5226.12611,N,00101.89626,W,1,7,1.07,167.2,M,47.3,M,,*79

\$GPZDA,091809.00,03,11,2005,00,00*6B

Mechanical Information

Dimension 45 x 85 X 25 mm

Weight 100 g

Fixings 32mm (two holes) x 76mm (1 hole) for M3 (4-40 unc)

Environment

Operating Temperature - 40° C ~ 85° C

Storage Temperature - 40° C ~ 125° C



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