GPS5HAOEM

High Altitude GPS Module
www.byonics.com/gps

Thank you for purchasing a Byonics GPS5HAOEM GPS module. This is a 3.3 volt to 5.5 volt GPS receiver that will send NMEA v3.00 sentences (GGA, GSA, GSV, RMC) at 4800 baud once per second in both RS-232 and TTL compatible formats. It has a blue LED that is on solid when acquiring, and flashing when synchronized.

WARNING: Do not connect this GPS to a voltage higher than 5.5 volts or the unit will be damaged.

Interfacing

Use the included cable to connect to the GPS. The pin out is as follows. Pin 6 is nearest the edge.

Pin	Wire Color	Function
1	Black	Ground
2	Red	Vcc (3.3V – 5V)
3	Yellow	TTL TX (0-5V TTL NMEA data from GPS)
4	White	RS-232 RX (not normally used)
5	Green	RS-232 TX (+/- 8V RS-232 NMEA data from GPS)
6	Blue	TTL RX (not normally used)

Sample output

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$GPGGA,181812.000,3313.8978,N,11147.6274,W,1,09,1.1,383.8,M,-26.7,M,,0000*63
$GPGSA,M,3,30,28,07,17,11,13,01,04,19,,,,1.9,1.1,1.6*36
$GPGSV,3,1,11,30,73,039,31,28,60,316,28,07,50,103,33,17,37,202,31*76
$GPGSV,3,2,11,11,34,085,29,13,33,307,30,01,22,103,27,04,18,075,28*7F
$GPGSV,3,3,11,19,12,039,39,26,44,299,,08,40,321,*48
$GPRMC,181812.000,A,3313.8978,N,11147.6274,W,0.00,335.91,010715,,,A*79
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Specifications

GPS IC	SiRFstarIV
Size	30mm x 30mm x 7.8mm
Receiver	48 channel, L1 frequency, C/A code
Accuracy	Position: 2D RMS approximately 2.5m with WAAS Velocity: 0.01 m/s speed, 0.01° heading
Acquisition Time	Cold Start: 35 sec (Average) Warm Start: 35 sec (Average) Hot Start: 1 sec
Sensitivity	Acquisition: -147dBm Tracking: -163dBm
Dynamics	Altitude: 84000m (Max) Velocity:: 515m/s (Max) Acceleration: +/- 4g (Max)
Serial Port	TTL and RS-232
Power Supply	DC 3.3V – 5.5V
Power Consumption	30mA average
Operating Temp	-20C - +60C
Antenna Type	Built-in Patch antenna

Feel free to email any questions or comments at **http://www.byonics.com/contact**