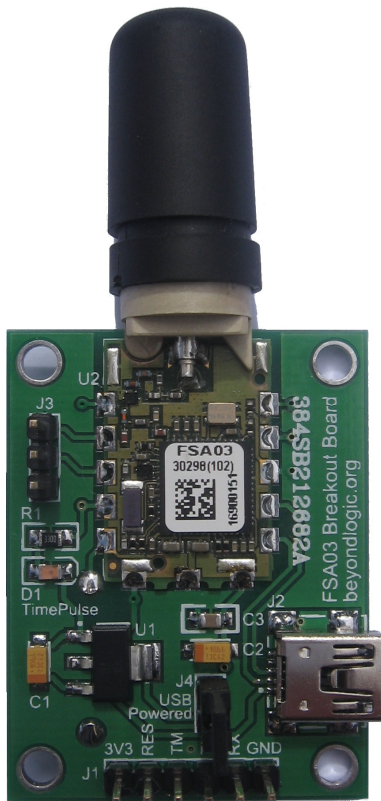


uBlox 5 GPS with Sarantel Quadrifilar Helix Antenna



Add GPS (Global Positioning System) to your next project with this high performance uBlox 5 GPS receiver with integrated Sarantel Quadrifilar Helix Antenna.

This demo board incorporates a USB 2.0 and 3.3V Asynchronous Serial interface to offer maximum flexibility and ease of development. Use the USB interface for PC development, performance evaluation and/or testing, while the Asynchronous Serial interface makes connecting the GPS module to your embedded microcontroller a breeze. The GPS module can be powered from the USB port using the on-board LDO voltage regulator.

The uBlox 5 GPS receiver supports both NMEA & UBX binary protocols. NMEA (National Marine Electronics Association) is a common standard text based protocol used among GPS receivers and other marine equipment. UBX is a binary protocol developed by uBlox.

Example Microsoft C# source code can be downloaded to obtain the position of the GPS, Time/Date, Speed and Altitude with examples of integration into Google Maps and Google Earth.

An optional backup battery (CR1220 - not included) mounted on the back of the PCB allows faster time to first fixes from a hot start or warm start dependant upon the duration of the VCC outage.

Specifications :

- u-blox 5 single chip GPS receiver (UBX-G5010)
 - High performance 50-channel engine
 - GPS L1 C/A code
 - GALILEO L1 open service (with upgrade)
 - SBAS: WAAS, EGNOS, MSAS, GAGA
 - Maximum update rate 4Hz
 - Under 1 second Time-To-First-Fix (TTFF) for hot and aided starts
 - 29 second cold and warm starts
- Sarantel Quadrifilar Helix Antenna
 - 1575.42MHz Frequency
 - -3.5 dBic Gain
 - 120 degree Beamwidth
- 1x 3.3V UART 4.8 to 230.4 kbits/s and 1x USB (V2.0 full speed 12Mbits/s) interface.
- Supports NMEA & UBX binary protocols.
- TimePulse LED.
- 2.5 to 3.6V Power Supply, nominal 3.3V
- Backup battery (CR1220) for hot starts. Battery not included.
- Size (mm) : 32w x 70h (PCB 32w x 42h)

Interfaces :

J1 : (6 pin 0.1" header)

Pin	Name	Description
1	3.3V PWR	3.3VDC Power Supply.
2	nReset	External Reset Input. Internally pulled high with 3.3K resistor.
3	TM	Timepulse Output. 1 PPS (Configurable)
4	TX (Out)	Asynchronous Serial Transmit Out.
5	RX (In)	Asynchronous Serial Transmit In. Pulled high with 330K resistor.
6	GND	Power and Signal Ground.

J2 : USB 2.0 Full Speed Port (Mini B Connector)

J3 : (Optional 3 pin 0.1" header)

Pin	Name	Description
1	CFG_GPS0 / PIO21	GPIO
2	EXTINT0	External Interrupt Input. Can be used with the time mark function.
3	GND	Signal Ground.

Links :

u-Blox u-center GPS evaluation software :
<http://www.u-blox.com/en/evaluation-tools-a-software/u-center/u-center.html>

Schematics & Example C# PC Source Code :
<http://www.beyondlogic.org/fsa03>

This device is sold as a demo board for electronic enthusiasts and is not considered a finished device. It is not intended for use by the general public. If this device is incorporated into a finished product, the integrator is responsible for electromagnetic compatibility, compliance and labelling in the applicable market the finished product will be sold in.