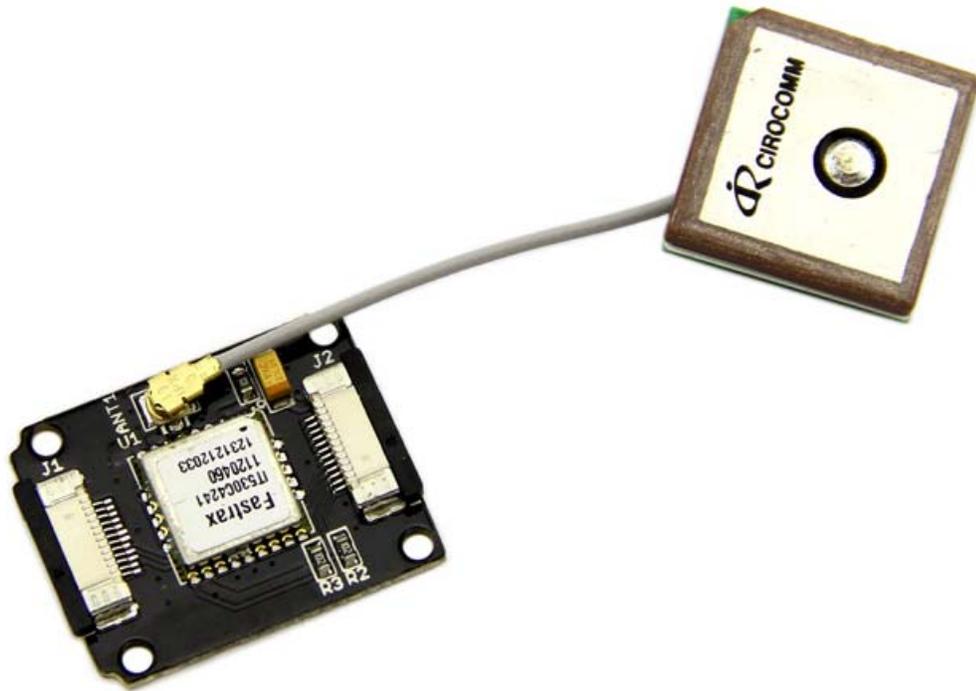


Xadow - GPS



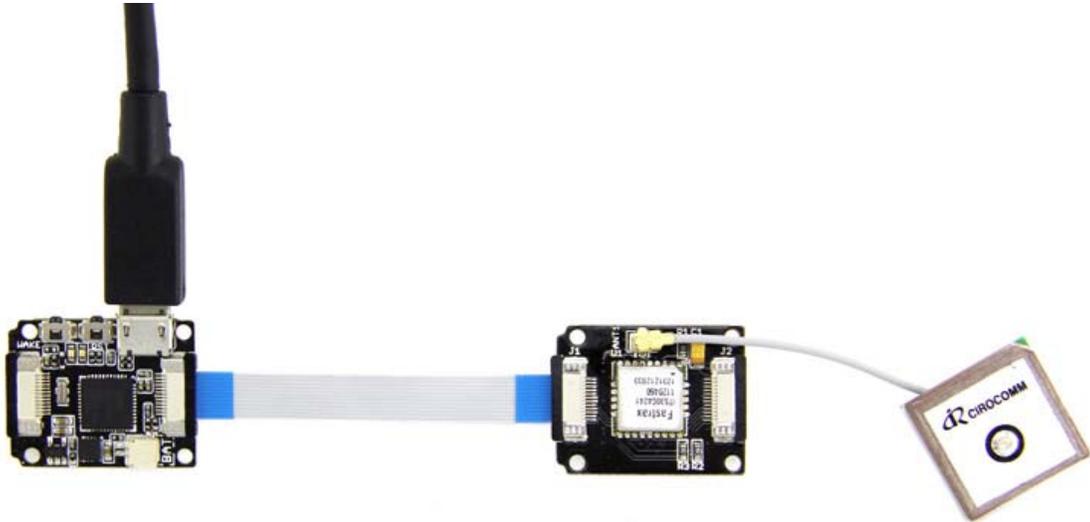
Xadow GPS is an OEM GNSS receiver module, including the Fastrax IT530M and a tiny 12mm squared ceramic patch antenna. The low power module outputs a series of standard NMEA format data which provides position, satellite information and time, etc. This module can be easily connected directly to Xadow Main board to display and record the above-mentioned information. It features acquisition and tracking capability of weak signals, making it a great choice for navigation projects.

Specifications

- Working voltage: 5.0 VDC
- Channels: 99/33 (search/track)
- Navigation sensitivity: -165dBm
- Tracking sensitivity: -148 dBm
- Time to First Fix(cold acq): 23s
- Time to First Fix(warm acq): 23s
- Time to First Fix (hot acq): 1s
- Update rate: 1 Hz (configurable up to 10 Hz)
- Data protocol: NMEA-0183 rev. 3.01
- Communication Mode: UART
- Default baud rate: 115200 b/s
- Operating temperature: -40°C ~+85°C
- Dimensions: 25.43mm x 20.35mm

Demonstration

There is an example showing how to read data from the GPS using software serial and sends it back out on the serial port.



Note

When connect Xadow GPS to Xadow Main Board, you should concern about the connection direction. The connection method is that the unfilled corner of one Xadow module need to connect to the right angle of another module(see four corners of each Xadow module).

```
1#define SerialBaud 9600
2#define Serial1Baud 9600
3void setup()
4{
5    Serial.begin(SerialBaud);
6    Serial1.begin(Serial1Baud);
7}
8
9void loop()
10{
11    for(;;)
12    {
13        // copy from virtual serial line to uart and vice versa
14        /*
15        */
16        if (Serial.available())
17        {
18            Serial1.write(Serial.read());
19        }
20        if (Serial1.available())
21        {
22            Serial.write(Serial1.read());
23        }
24    }
25}
```

- Open the serial monitor, you can see:



There is all the information about NMEA 0183 communication protocol. In fact, we only need to pick out the locate data, others can be ignored. The \$GPRMC data is useful for us, Now let's analysis its detail meaning:

\$GPRMC,091308.000,A,2235.1683,N,11356.3607,E,0.37,259.79,050813,,,A*6E

