

XC3712 Arduino Compatible GPS Receiver Module

The XC3712 Arduino Compatible GPS Receiver Module incorporates a NEO6M2 GPS receiver IC with a ceramic antenna, providing NMEA 0183 compatible data at 9600 Baud. The module includes a 3.3V regulator for 5V operation, and the 3.3V data out can be safely read by a 5V microcontroller, as long as 5V is not fed back into the device via the RX or TX pins.

There are numerous GPS libraries available- as long as they can process NMEA data, they should work fine. Information on the NMEA protocol can be found on the Wikipedia page at https://en.wikipedia.org/wiki/NMEA_0183.

On some boards like the Uno which only have a single serial port, you may need to install a software serial library. The AltSoftSerial library has a non-blocking read, and is needed for the below example sketch. It can be downloaded from the Library Manager by searching for 'altsoftserial' or downloading from the github page at <https://github.com/PaulStoffregen/AltSoftSerial>. Note that this library will only work with certain pins, which are detailed in the examples. Alternatively, the Leonardo or Mega's other hardware serial ports can be used. Note from the image that RX is not connected.

The following code will read the data from the GPS module and display it on the Serial Monitor:

```
#include <AltSoftSerial.h>
AltSoftSerial altSerial;

// AltSoftSerial always uses these pins:
//
// Board          Transmit  Receive  PWM Unusable
// ----          -
// Arduino Uno    9         8        10
// Arduino Leonardo 5         13       (none)
// Arduino Mega   46        48       44, 45

void setup() {
  Serial.begin(115200);
  altSerial.begin(9600);
}

void loop() {
  if(altSerial.available()){
    Serial.write(altSerial.read());
  }
}
```

