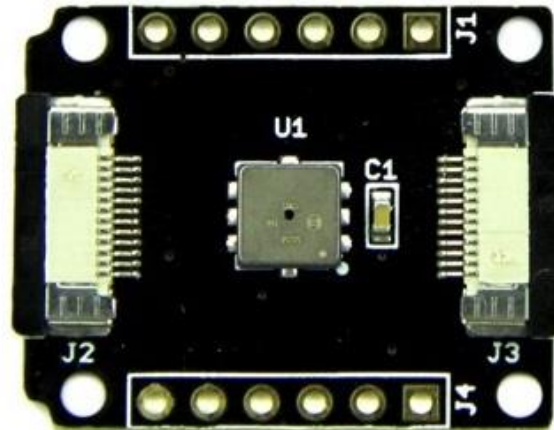


SEED-103040001

Xadow – Barometer



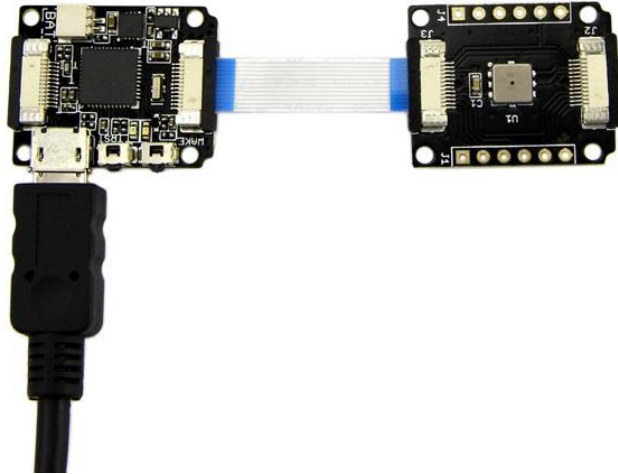
PRODUCT DETAILS

The module can measure the air pressure and temperature of the current environment, and then you can convert this signal to information of altitude. If you are planning to use Xadow to do a wearable device and measure the altitude when you climb the mountain, then the module will be your perfect choice.

Specification

- Working Voltage: 1.8 ~ 3.3v
- Pressure Range: 300 ~ 1100hPa(+9000m ~ 4500m above sea level)
- Low Power
- Control Mode: I2C (address 0x77)
- Operating Temperature : -40 ~ +85 °C
- Dimensions: 25.43mm x 20.35mm

Hardware Installation



Download Library

Xadow Barometer is sharing the library with Grove - Barometer Sensor. You can download directly the library from Github.

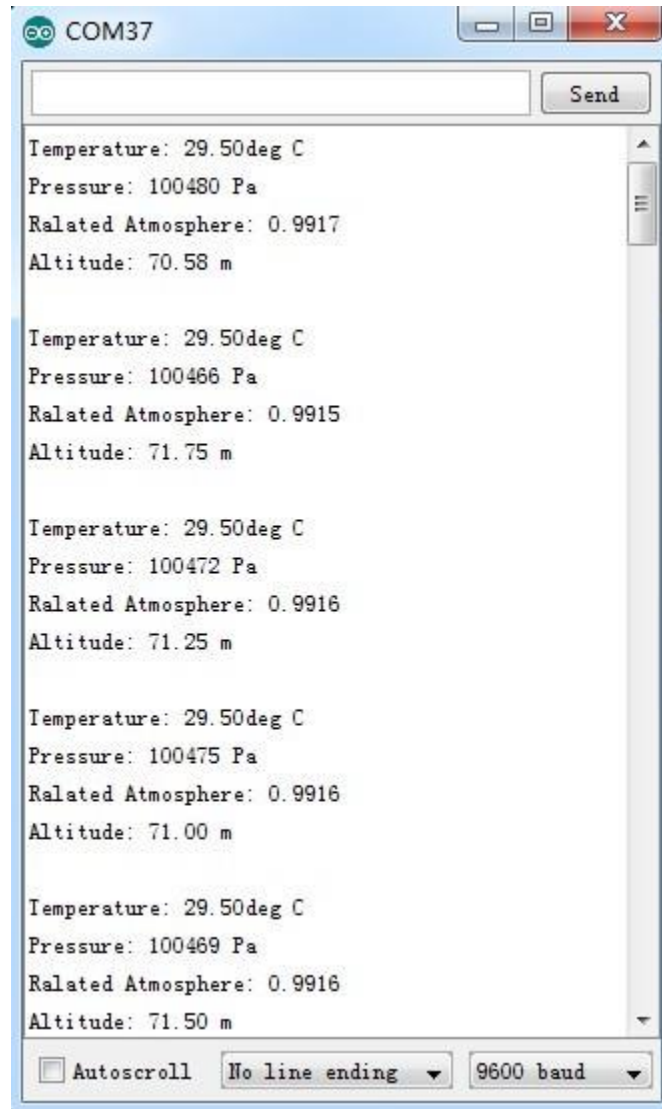
Now you can open the code and upload it to Xadow Main Board. If you have not installed the Xadow Driver, You can learn the operation steps by referring to the getting started in wiki main page

```

1  /*
2  * Get pressure, altitude, and temperature from the BMP085.
3  * Serial.print it out at 9600 baud to serial monitor.
4  */
5  #include "Barometer.h"
6  #include <Wire.h>
7  float temperature;
8  float pressure;
9  float atm;
10 float altitude;
11 Barometer myBarometer;
12 void setup(){
13   Serial.begin(9600);
14   myBarometer.init();
15 }
16
17 void loop()
18 {
19   temperature = myBarometer.bmp085GetTemperature(myBarometer.bmp085ReadUT()); //Get
20   pressure = myBarometer.bmp085GetPressure(myBarometer.bmp085ReadUP()); //Get the te
21   altitude = myBarometer.calcAltitude(pressure); //Uncompensated calculation - in M
22   atm = pressure / 101325;
23
24   Serial.print("Temperature: ");
25   Serial.print(temperature, 2); //display 2 decimal places
26   Serial.println("deg C");
27
28   Serial.print("Pressure: ");
29   Serial.print(pressure, 0); //whole number only.
30   Serial.println(" Pa");
31
32   Serial.print("Ralated Atmosphere: ");
33   Serial.println(atm, 4); //display 4 decimal places
34
35   Serial.print("Altitude: ");
36   Serial.print(altitude, 2); //display 2 decimal places
37   Serial.println(" m");
38
39   Serial.println();
40
41   delay(1000); //wait a second and get values again.
42 }

```

Open the serial monitor to receive the sensor's data including temperature, barometric pressure value, relative atmosphere pressure and altitude.



Here is a reference graph plotting out the relationship between altitude above sea level and barometric pressure.

