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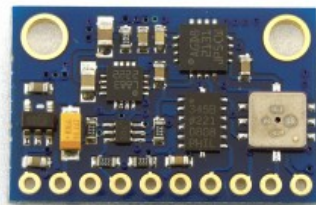
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## GY-80 - Multi Sensor Board - 3 Axis Gyro - 3 Axis Accelerometer - 3 Axis Magnetometer - Barometer - Thermometer



Product Code: G-GY-80-IMU

Availability: In Stock

Price: HK \$150.00

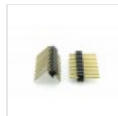
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## Description

## Reviews (0)

This board combines 5 sensors into a single tiny package. Convenient to experiment with different sensors or used together as an inertial management unit. They are all accessible via I2C bus.

Comes with straight and right angle headers.

	Part Number	I2C Address	
3 Axis Gyro	ST Microelectronics L3G4200D	0x69	<a href="#">Datasheet</a>
3 Axis Accelerometer	Analog Devices ADXL345	0x53	<a href="#">Datasheet</a>
3 Axis Magnetometer	Honeywell MC5883L	0x1E	<a href="#">Datasheet</a>
Barometer + Thermometer	Bosch BMP085	0x77	<a href="#">Datasheet</a>

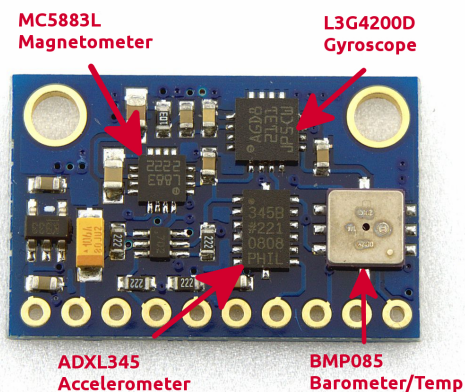
## Documentation

All sensors are accessible via I2C bus for basic operation so you will only need 4 wires to get started:

- GND - Ground
- Supply voltage. GY80 is 5v and 3.3v compatible. Use one of the following depending on your interface voltage:
  - VCC - For +5v power. If using with boards such as an Arduino UNO, Leonardo, Micro, Mega.
  - VCC\_3.3v - For +3.3v power. If using with boards such as an Arduino Due.
- SCL - I2C Clock
- SDA - I2C Data

The quickest way to verify your board is connected properly is running the following I2C scanner program. This simple sketch will print the I2C address of all discovered devices to the serial monitor.

<http://playground.arduino.cc/Main/I2cScanner>



GY-80 has the following sensors on board:

**Barometer and thermometer** - Measures atmospheric pressure and temperature. Used for weather applications and estimating altitude.

**3 Axis Accelerometer** - Measures acceleration. Can be used to sense linear motion, vibration, and infer orientation and force.

**3 Axis Gyroscope** - Measures angular rotation which can be used to infer orientation.

**3 Axis Magnetometer** - Measures strength and direction of magnetic fields. Can be used as a compass to determine bearing.

Bildr.org has written some great articles on using each of these sensors along with sample code:

Barometer + Thermometer	<a href="http://bildr.org/2011/06/bmp085-arduino/">http://bildr.org/2011/06/bmp085-arduino/</a>
Magnetometer	<a href="http://bildr.org/2012/02/hmc5883l_arduino/">http://bildr.org/2012/02/hmc5883l_arduino/</a>
Accelerometer	<a href="http://bildr.org/2011/03/adxl345-arduino/">http://bildr.org/2011/03/adxl345-arduino/</a>
Gyro	<a href="http://bildr.org/2011/06/l3g4200d-arduino/">http://bildr.org/2011/06/l3g4200d-arduino/</a>

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