



## [TS-315 Triple Axis Accelerometer and Gyro Breakout – MPU-6050](#) User Guide

- Raspberry Pi Setup (for Rasbian)
  - Installing I2C Drivers
    - Open the modules file for editing:  

```
sudo vi /etc/modules
```
    - Add the following lines to the bottom of the file:  

```
i2c-bcm2708
```

  

```
i2c-dev
```
    - Save the file
    - Reboot the Raspberry Pi
    - Open the blacklists file for editing:  

```
sudo vi /etc/modprobe.d/raspi-blacklist.conf
```
    - Look for the following 2 lines:  

```
blacklist i2c-bcm2708
```

  

```
blacklist i2c-bcm2708
```
    - If found, delete them.
    - Save the file
    - Reboot the Raspberry Pi
  - Hooking up the Sensor
    - Connect the following pins from the Raspberry Pi GPIO to the corresponding [TS-315 Triple Axis Accelerometer and Gyro Breakout – MPU-6050](#) pins
      - Raspberry Pi GPIO Pin 1 (3.3V) to TS-315's VCC
      - Raspberry Pi GPIO Pin 3 (SDA) to TS-315's SDA
      - Raspberry Pi GPIO Pin 5 (SCL) to TS-315's SCL
      - Raspberry Pi GPIO Pin 6 (GND) to TS-315's GND
  - Install I2C Tools
    - ```
sudo apt-get install i2c-tools
```
  - Run I2C Tools (to view the TS-315's output)
    - ```
sudo i2cdetect -y 1
```

- The output should look as follows showing all I2C devices hooked up to the Raspberry Pi. In this case, TS-315 was detected at address 0x68.

```

      0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:
10: -- -- -- -- -- -- -- -- -- -- -- -- -- --
20: -- -- -- -- -- -- -- -- -- -- -- -- -- --
30: -- -- -- -- -- -- -- -- -- -- -- -- -- --
40: -- -- -- -- -- -- -- -- -- -- -- -- -- --
50: -- -- -- -- -- -- -- -- -- -- -- -- -- --
60: -- -- -- -- -- -- -- 68 -- -- -- -- -- --
70: -- -- -- -- -- -- -- -- -- -- -- -- -- --

```

- Poll address 0x68 for data and retrieve the value in register 0x75

```
sudo i2cget -y 1 0x68 0x75
```

- Congratulations! You're Raspberry Pi is now set up for the [TS-315 Triple Axis Accelerometer and Gyro Breakout – MPU-6050](#)!

- Arduino Setup:

- Hooking up the Sensor

- Connect the following pins from the Arduino UNO to the corresponding [TS-315 Triple Axis Accelerometer and Gyro Breakout – MPU-6050](#) pins

- Arduino UNO Pin 3.3V to TS-315's VCC
- Arduino UNO Pin A4 (SDA) to TS-315's SDA
- Arduino UNO Pin A5 (SCL) to TS-315's SCL
- Arduino UNO Pin GND to TS-315's GND

- Download and Open the following sketch in your Arduino IDE:

- <http://tinkersphere.com/documents/TS315MPU6050sketch.ino>

- Congratulations! You're Arduino UNO is now set up for the [TS-315 Triple Axis Accelerometer and Gyro Breakout – MPU-6050](#)!

- TS-315 Schematic:

