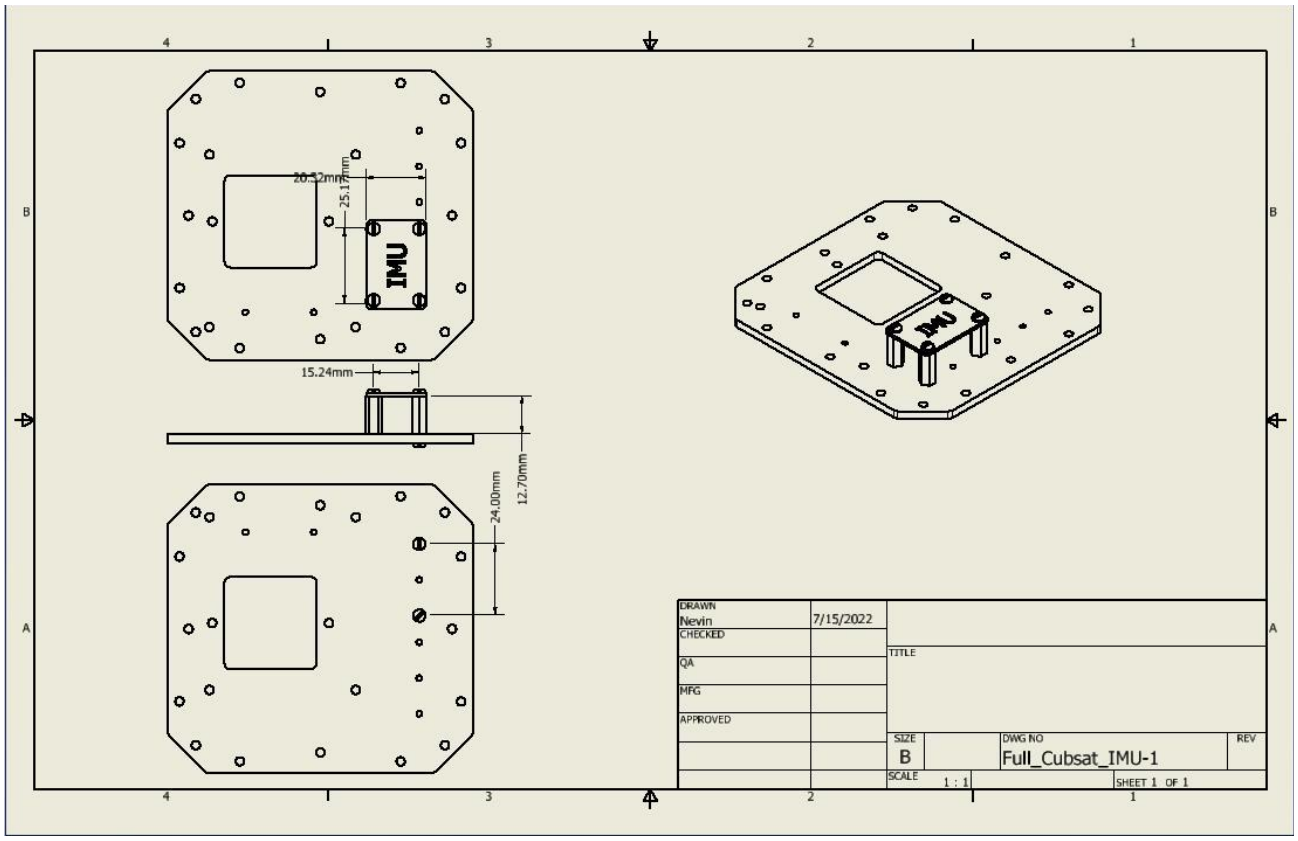
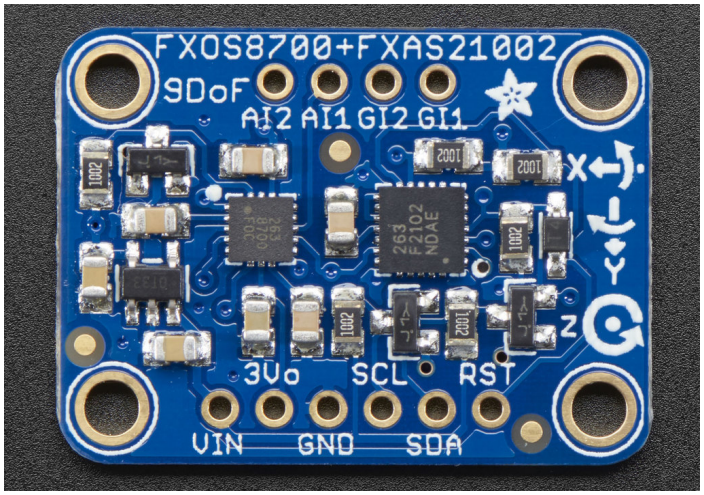
Hardware

Mounting diagram



Electrical



Power Pins

VIN: 3.3-5V input.

Feeds the on board 3.3V voltage regulator.
On a 3.3V system connect 3.3V to VIN for 3.3V logic throughout the system
On a 5.0V system, connect VIN to 5V, and the signals will be shifted downward to 3.3
The NXP sensors are limited to 3.6V or less for the pins.

3Vo: Outputs 3.3V

On a 5V system, it is an additional 3.3V supply.

GND: Ground pin.

Digital Pins

SCL - I2C: Connect to SCL on dev board. 3-5V safe.
SDA - I2C: Connect to SDA on dev board. 3-5V safe.
RST: Manually resets sensors on IMU.

Optionally connect this to RST on dev board board or to a GPIO pin.
3-5V safe.

AI1, AI2: Allow interrupts from the Accelerometer/Magnetometer

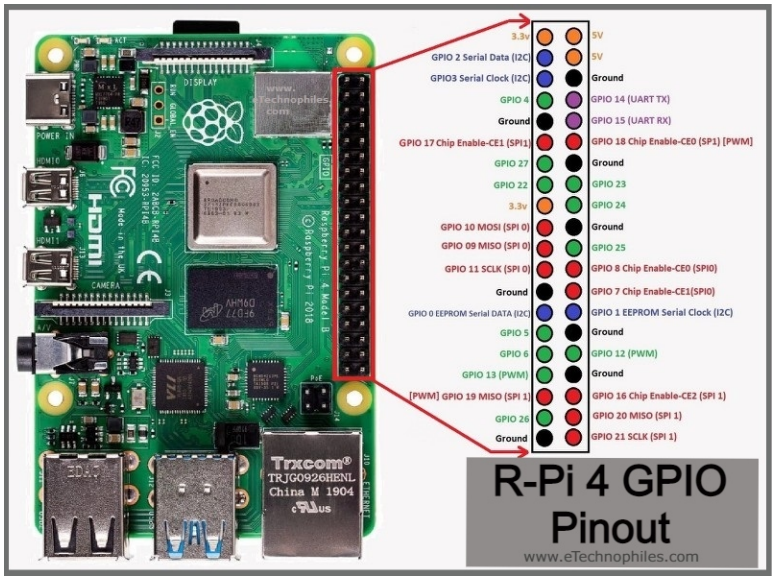
Outputs only, use with 3 or 5V systems.

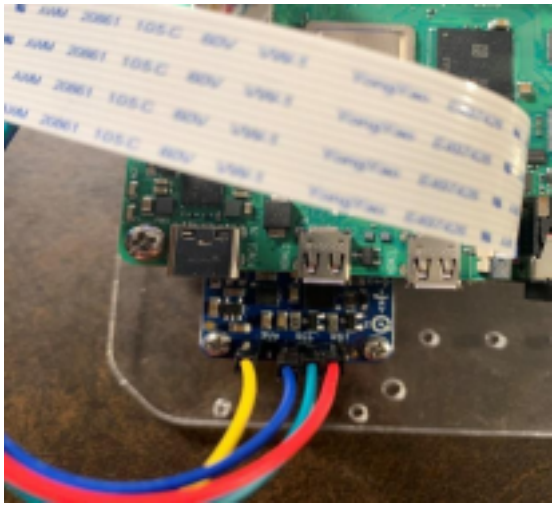
GI1, G12: Allow interrupts from the Gyroscope.

Outputs only, use with 3 or 5V systems.

Wiring

4x F-F Jumper Wires
Connect VIM to #1 3.3V DC Pin
Connect IMU SCL to #5 SCL Pin
Connect IMU SDA to #3 SDA Pin
Connect IMU GND to #9 GND Pin





IMU

Pi

Software

```
import adafruit_fxos8700
import adafruit_fxas21002c

i2c = busio.I2C(board.SCL, board.SDA)
fxos = adafruit_fxos8700.FXOS8700(i2c)
fxas = adafruit_fxas21002c.FXAS21002C(i2c)
```

Adafruit_fxos8700
    Accelerometer
    Magnetometer
Adafruit_fxas21002c
    Gyroscope

Functions:

```
gyroX, gyroY, gyroZ = fxas.gyroscope
```

Fxas.gyroscope
    Returns gyro values in X, Y, Z

```
accelX, accelY, accelZ = fxos.accelerometer
```

Fxos.accelerometer
    Returns acceleration values in X, Y, Z

```
magnetX, magnetY, magnetZ = fxos.magnetometer
```

Fxos.magnetometer
    Returns magnetometer values in X, Y, Z