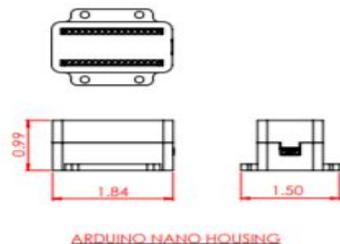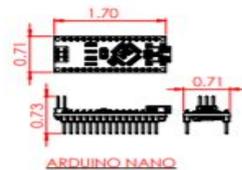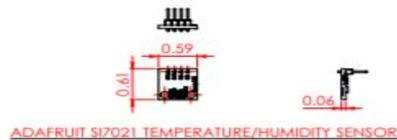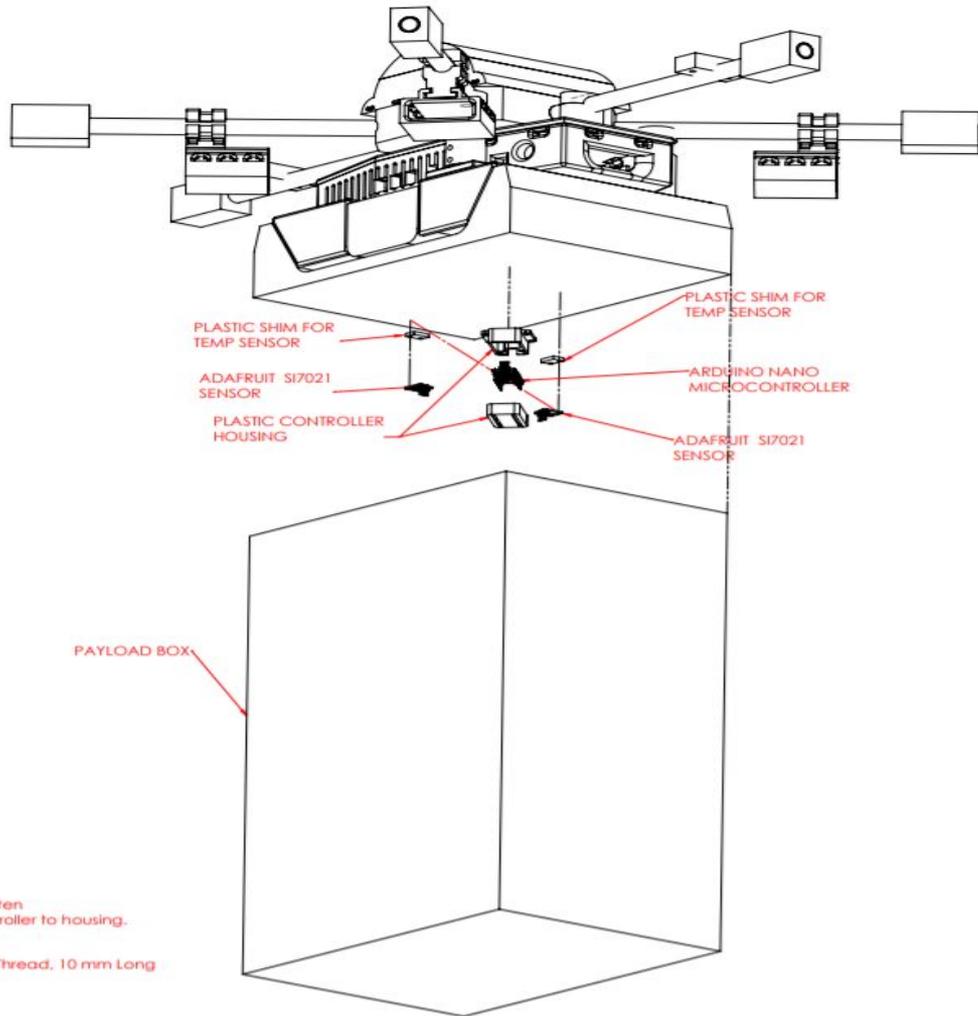# JAMZ Pitch

Group 10 - Supathira, Benjamin, Evan, Gabriel, Alison

Hardware System
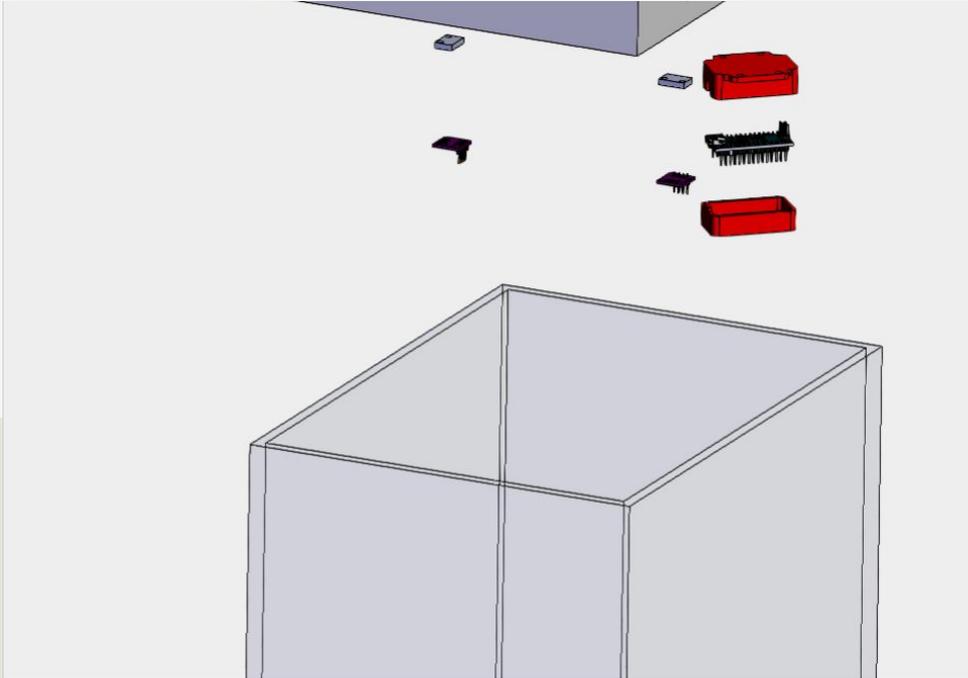
- x2 adafruit si7021 sensors
- x1 arduino nano
- x2 plastic shims
- x1 housing case for the nano
- x1 5.5 x 8.5x 1.0 cm breadboard
- x1 multiplexer

PLASTIC SHIM FOR
TEMP SENSOR

PLASTIC SHIM FOR
TEMP SENSOR

ADAFRUIT SI7021
SENSOR

ARDUINO NANO
MICROCONTROLLER

PLASTIC CONTROLLER
HOUSING

ADAFRUIT SI7021
SENSOR

PAYLOAD BOX

0.59

0.61

0.06

ADAFRUIT SI7021 TEMPERATURE/HUMIDITY SENSOR

1.70

0.71

0.73

0.71

ARDUINO NANO

0.99

1.84

1.50

ARDUINO NANO HOUSING

NOTES:

1) USE Steel Pan Head Phillips Screws,
M1.7 x 0.35 mm Thread, 8mm long to fasten
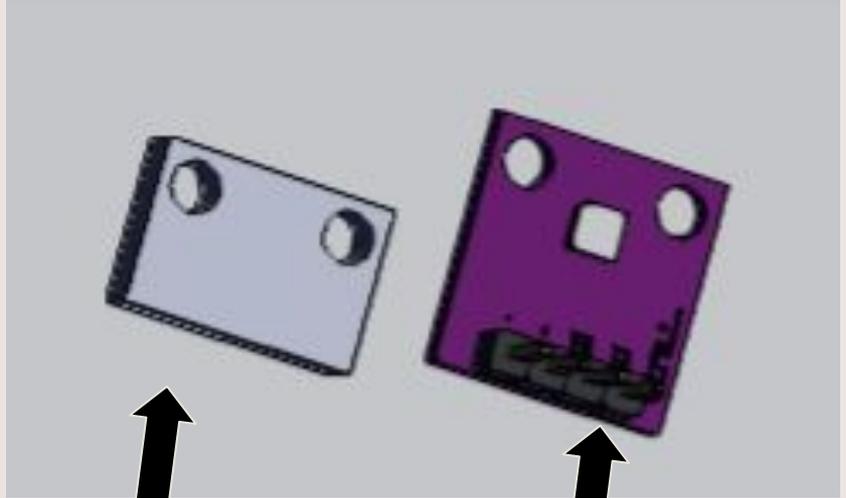Adafruit sensor to drone and Nano Controller to housing.

2) Use Socket Head Screw, M3 x 0.5 mm Thread, 10 mm Long
to fasten Controller Housing to Drone

3D Printed Parts

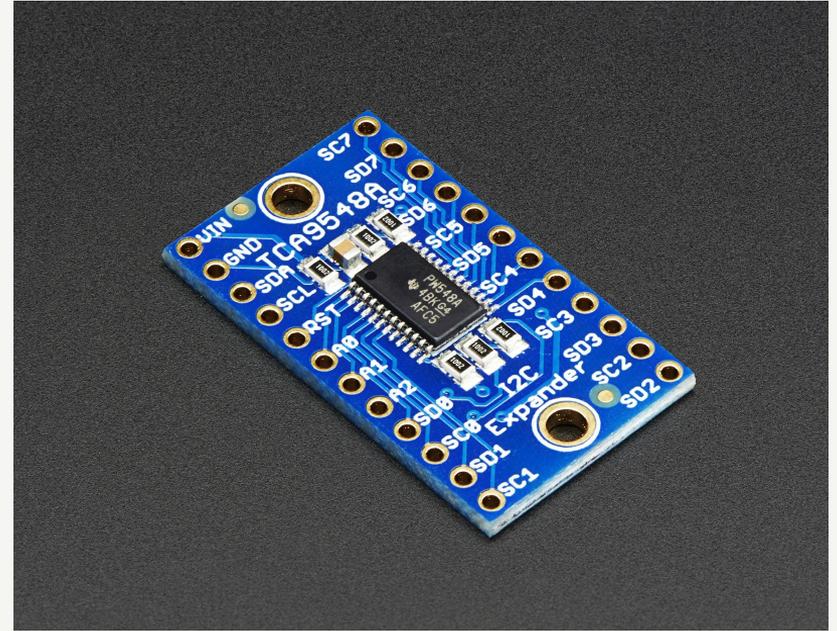Housing for the arduino nano

Plastic shim

Temperature/Humidity sensor

Two sensors, one controller

——

→ TCA9548A 1-to-8 I2C Multiplexer Breakout

Software System

- Code is rather simple: Adafruit library
    - Import Unified Adafruit library
    - Import Adafruit Si7021 library

- Two sensors share the same adresse → implement a mux (8x1)
    - One sensor at a time

- Verify values
- Return the average

Thanks

Do you have any question?