GoPiGo3 Sensors

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Dexter Industry Temperature, Humidity, and Pressure Sensor

DI sensor documentation: https://di-sensors.readthedocs.io/en/master/

Barometric pressure compensation for altitude:
https://www.engineeringtoolbox.com/barometers-elevation-compensation-d_1812.html

1. Shutdown the GoPiGo3. Do not connect sensors when the GoPiGo3 has power
2. Plug the sensor into an I2C port. Mount the sensor on a sensor mount.

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thp_sensor.py

This program will read the thp sensor every 5 seconds and display to the console.

```
#!/usr/bin/env python3
# Name: thp_sensor.py
# Purpose: Read temperature, humidity and barometric pressure
# ----------------------------------------------
# History
# ----------------------------------------------
# Author    Date        Comments
# Loring    10/24/21    Changed to fahrenheit, convert pressure to inHg,
#                       compensate for altitude
# Barometric pressure compensation for altitude:
# https://www.engineeringtoolbox.com/barometers-elevation-compensation-d_1812.html
#
# DI sensor documentation: https://di-sensors.readthedocs.io/en/master/
#
# Python example program for the Dexter Industries
# Temperature Humidity Pressure Sensor

```

```
from time import sleep
from di_sensors.easy_temp_hum_press import EasyTHPSensor

print("Example program for reading Dexter Industries")
print("Temperature Humidity Pressure Sensor on an I2C port.")

my_thp = EasyTHPSensor()

while True:
    # Read the temperature
    # temp = my_thp.safe_celsius()
    temp = my_thp.safe_fahrenheit()

    # Read the relative humidity
    hum = my_thp.safe_humidity()

    # Read the pressure in pascals
    press = my_thp.safe_pressure()

    # Convert pascals to inHg, compensate for 4000' altitude
    press = (press / 3386.38867) + 4.08

    # Print the values to the console
    print("Temperature: {:5.1f}F  Humidity: {:5.1f}%  Pressure: {:5.2f}".format(
        temp, hum, press))

    # Pause between readings
    sleep(5)
```