

ENGR 16200

IR Sensor and Beacon

Dual IR Intensity Sensor

To measure the energy of the high temperature heat source, you will be using a Dual IR Intensity Sensor (DIIS). This sensor will measure a unitless intensity. A picture of the sensor can be seen in Fig. 1.



Fig. 1: DIIS unit

The DIIS can be utilized using functions included in `IR_Functions.py` on Blackboard Learn. This library includes three functions. `IR_setup` primes the DIIS for use in port A0 of the GrovePi. By changing the pin numbers in the first two lines, you can change the port used for the DIIS. This function also allows the pins to prepare for data input. `IR_PrintValues` reads and prints the unitless intensity of radiation using `grovepi.analogread(sensor)`. This function does not store or return the values of intensity, it simply prints them. `IR_Read` reads and returns the values of intensity using `grovepi.analogread(sensor)`. If you wish to change the DIIS port, note that you must modify **all functions** in `IR_Functions.py`. For more information regarding the pin numbers on the GrovePi, see Figure 2.

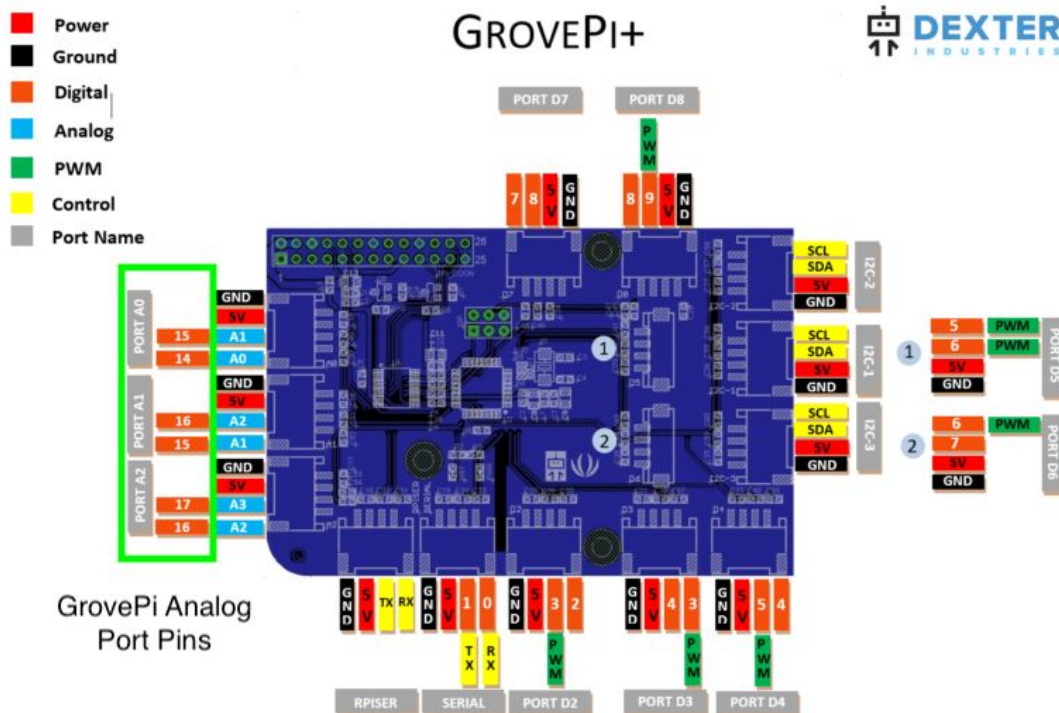


Fig. 2: GrovePi Pin Layout (<https://www.dexterindustries.com/GrovePi/engineering/port-description/>)