

PiR2C Components

Using the BC Robotics Weather HAT

2020H Aug 11 by [D@CC](#)

1.0 Raspberry Pi WeatherHAT PRO

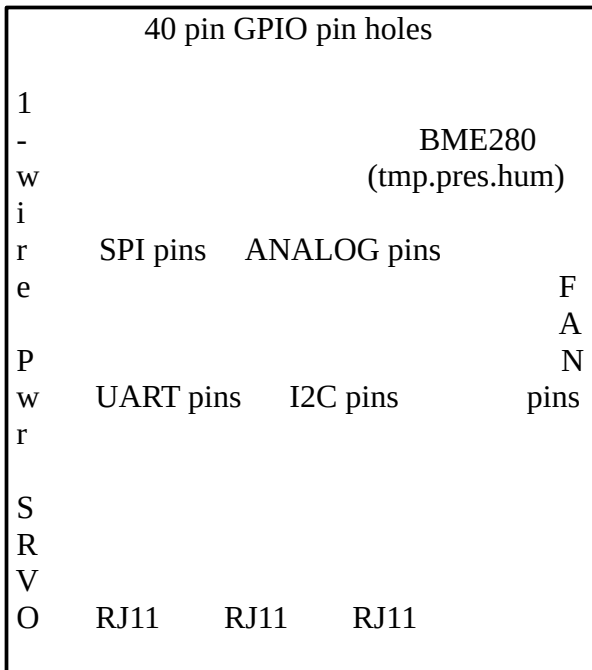


Diagram: Raspberry Pi WeatherHAT PRO

from BC Robotics
2020HAug11

SKU: RAS-184 \$34.95

Features

- 4 channel AS1015 A-D Converter
- DS18B20 Temperature Sensor pins (1-wire connector)
multiple sensors on a single 1-wire connector
- pins for a servo motor plug-in
- 3 RJ11 connection points for the Weather Meters.
- 3 extra analogue inputs
e.g. thermistor, soil moisture sensor or CDS photo cell
(1-wire 2 prong tiny)
- pins for an external 5v fan
- pins for an external 5V power supply
- 40 pin GPIO for Rasp-Pi
- on-board BME280 Temp/Press/Humidity sensor (incl.)
- I2C broken out
- compatible with all R-Pi models

Pin-Outs

WeatherBoard SPI Lettering:

5V / 3V3 / MOSI / MISO / SCLK / SPI0 / SPI1 / GND

ANALOG Lettering:

GND / A1 / A2 / A3 / AVCC (3V3)

I2C Lettering:

5V / 3v3 / SDA / SCL / GND

QUESTIONS

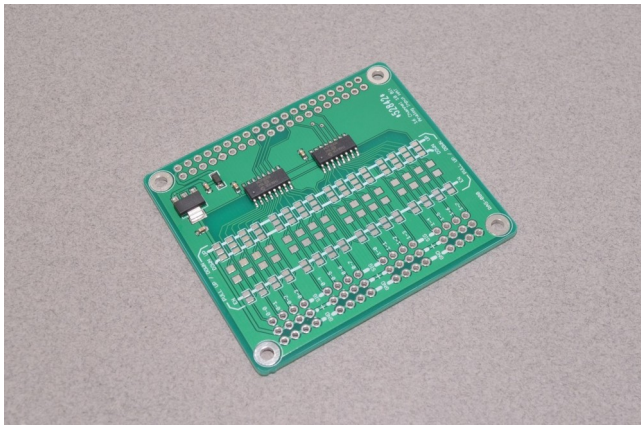
1. How to use the UART pins?
2. How to use the Servo pins?
3. How to use the 3 RJ11 connectors (normally used for - the wind speed & direction
- rain gauge)?
4. How far must it be from the R-Pi board to shield it from the CPU heat?
5. How to connect multiple remote DS18B20 to a single 1-wire connector?
- 6A. Can it use the I2C GROVE Connectors? NO Grove:SCL,SDA,3V3,GND
7. Which Rasp-Pi HAT GenPurp board will I also need to use?
8. Can I connect GND beside the 3v3 on the I2C pins (instead of the 5V)
9. Thermistor on a wire provides a 2nd remote temp sensor
10. How to add:
 - pushbutton (GPIO DI)
 - red led (maybe I can use the servo pins?? for a blinking red led)
 - white led (GPIO DO)
 - heat resistor (GPIO DO sharing the white LED maybe)

D@CC likes it.

Comments by D@CC

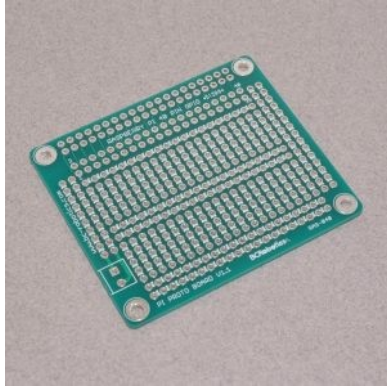
- This board is almost a PiR2 itself
 - on-board: A-D x 4, Temp/Hum/Press
 - accepts: 1-wire for DS18B20 remote temperature sensor
 - A-D for : thermistor, soil moisture, CDS photocell
- It can co-exist with the 16 Channel Analog Input HAT

2. 16 Channel Analog Input HAT



Picture: 16 Channel Analog Input HAT

Raspberry Pi Proto Strip Board



Raspberry Pi Proto Strip Board \$ 3.95

Raspberry Pi HATs from Mouser

SKU: 589-3.14-2

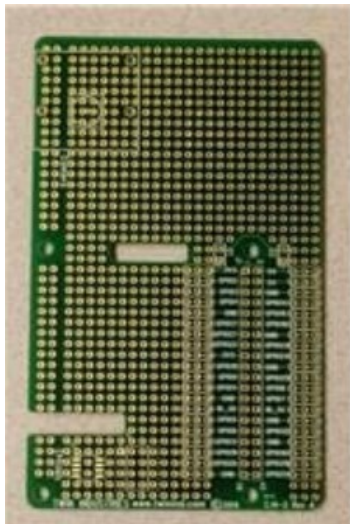
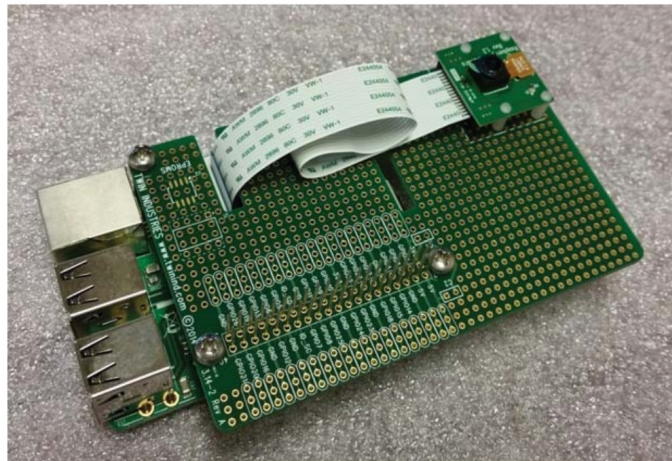


Photo: SKU: 589-3.14-2



Part#3.141-2 (with accessories)

589-3.14-2 CAD\$ 11.99 Big 113mm x 69mm

589-3.14-1 Small Pi Breadboard

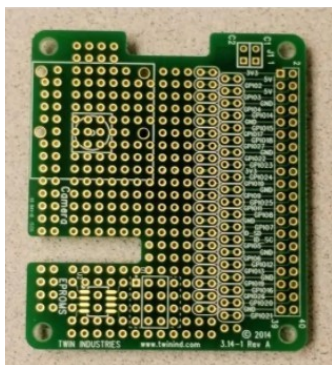


Photo: 589-3.14-1

589-3.14-1 CAD\$ 9.74 Small 65mm x 56mm
/PiR2C_componentsA.odt

