

WEATHER-BOARD2 on ODROID-N2/C4



Requirements

Make sure that you have these products:

- [ODROID-N2](#) or [ODROID-C4](#)
- [Weather board 2](#)
- [Jumper Wires](#)

Wiring

For the wiring, you should wire a total of four lines, GND, 3V3, SCL and SDA. The GND and 3V3 pin can be used like the following pin you want.

GND : 6, 9, 14, 20, 25, 34, 39

3V3 : 1, 17

ODROID-N2

J2 - 2x20 PINS

Default Pin State	GPIO & Export No	Net Name	Pin Number	Pin Number	Net Name	GPIO & Export No	Default Pin State
-	-	3.3V	1	2	5.0V	-	-
I(P/D)	GPIOX.17 (#493)	I2C0_SDA	3	4	5.0V	-	-
I(P/U)	GPIOX.18 (#494)	I2C0_SCL	5	6	GND	-	-
I(P/D)	GPIOA.13 (#473)		7	8	TXD1	GPIOX.12 (#488)	I(P/U)
-	-	GND	9	10	RXD1	GPIOX.13 (#489)	I(P/U)
I(P/U)	GPIOX.3 (#479)		11	12	PWM_E	GPIOX.16 (#492)	I(P/U)
I(P/U)	GPIOX.4 (#480)		13	14	GND	-	-
I(P/U)	GPIOX.7 (#483)	PWM_F	15	16		GPIOX.0 (#476)	I(P/U)
-	-	3.3V	17	18		GPIOX.1 (#477)	I(P/U)
I(P/U)	GPIOX.8 (#484)	SPI0_MOSI	19	20	GND	-	-
I(P/U)	GPIOX.9 (#485)	SPI0_MISO	21	22		GPIOX.2 (#478)	I(P/U)
I(P/U)	GPIOX.11 (#487)	SPI0_CLK	23	24	SPI0_SS0	GPIOX.10 (#486)	I(P/U)
-	-	GND	25	26	SPI0_SS1	GPIOA.4 (#464)	I(P/D)
I(P/U)	GPIOA.14 (#474)	I2C1_SDA	27	28	I2C1_SCL	GPIOA.15 (#475)	I(P/U)
I(P/U)	GPIOX.14 (#490)		29	30	GND	-	-
I(P/U)	GPIOX.15 (#491)		31	32		GPIOA.12 (#472)	I(P/D)
I(P/U)	GPIOX.5 (#481)	PWM_C	33	34	GND	-	-
I(P/D)	GPIOX.6 (#482)	PWM_D	35	36		GPIOX.19 (#495)	-
		ADC.AIN3	37	38	REF 1.8V		
-	-	GND	39	40	ADC.AIN2		



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ODROID-C4

J2 - 2x20 PINS

Default Pin State	GPIO & Export No	Net Name	Pin Number	Pin Number	Net Name	GPIO & Export No	Default Pin State
-	-	3.3V	1	2	5.0V	-	-

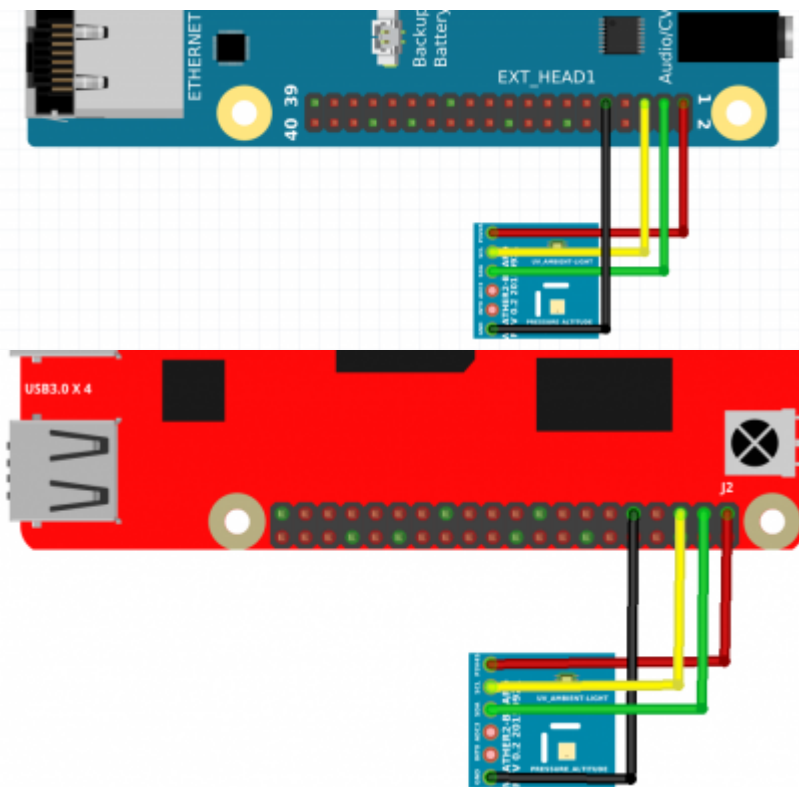
Default Pin State	GPIO & Export No	Net Name	Pin Number	Pin Number	Net Name	GPIO & Export No	Default Pin State
I(P/D)	GPIOX.17 (#493)	I2C0_SDA	3	4	5.0V	-	-
I(P/U)	GPIOX.18 (#494)	I2C0_SCL	5	6	GND	-	-
I(P/D)	GPIOX.5 (#481)		7	8	TXD1	GPIOX.12 (#488)	I(P/U)
-	-	GND	9	10	RXD1	GPIOX.13 (#489)	I(P/U)
I(P/U)	GPIOX.3 (#479)		11	12	PWM_E	GPIOX.16 (#492)	I(P/U)
I(P/U)	GPIOX.4 (#480)		13	14	GND	-	-
I(P/U)	GPIOX.7 (#483)	PWM_F	15	16		GPIOX.0 (#476)	I(P/U)
-	-	3.3V	17	18		GPIOX.1 (#477)	I(P/U)
I(P/U)	GPIOX.8 (#484)	SPI0_MOSI	19	20	GND	-	-
I(P/U)	GPIOX.9 (#485)	SPI0_MISO	21	22		GPIOX.2 (#478)	I(P/U)
I(P/U)	GPIOX.11 (#487)	SPI0_SCLK	23	24	SPI0_CS0	GPIOX.10 (#486)	I(P/U)
-	-	GND	25	26	SPI0_CS1	GPIOH.6 (#433)	I(P/D)
I(P/U)	GPIOA.14 (#474)	I2C1_SDA	27	28	I2C1_SCL	GPIOA.15 (#475)	I(P/U)
I(P/U)	GPIOX.14 (#490)		29	30	GND	-	-
I(P/U)	GPIOX.15 (#491)		31	32		GPIOH.7 (#434)	I(P/D)
I(P/U)	GPIOX.6 (#482)	PWM_A	33	34	GND	-	-
I(P/D)	GPIOX.19 (#495)	PWM_B	35	36		GPIOH.5 (#432)	-
		ADC.AIN2	37	38	REF 1.8V		
-	-	GND	39	40	ADC.AIN0		



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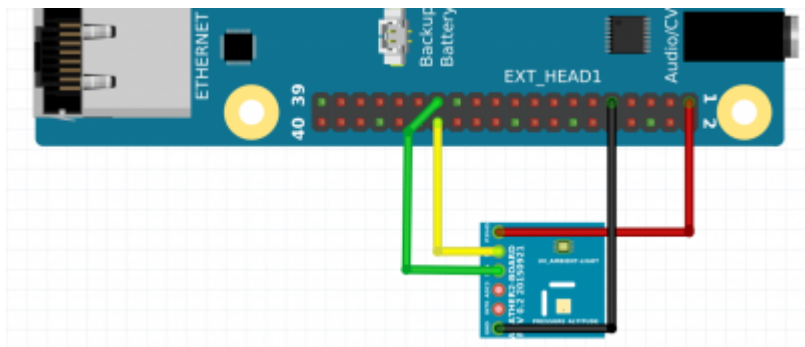
I2C-2

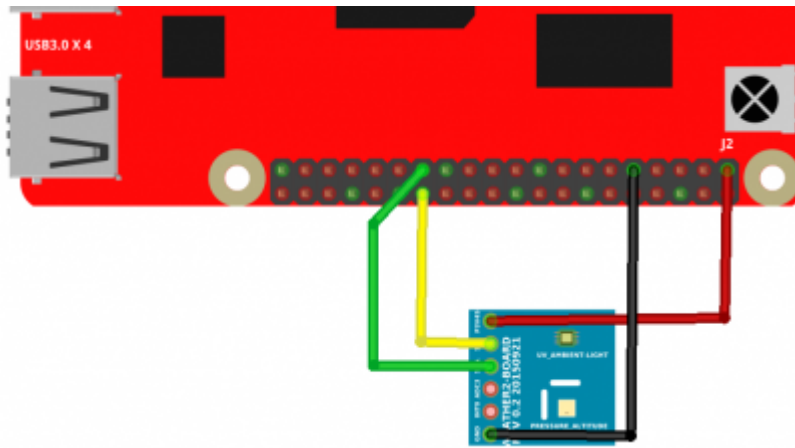
Pin Number	Net Name	Export Number
3	I2C-2 SDA	493
5	I2C-2 SCL	494



I2C-3

Pin Number	Net Name	Export Number
27	I2C-3 SDA	474
28	I2C-3 SCL	475





[Download fritzing about the wiring](#)

- ODROID-N2 part

ODROID-N2 Fritzing part

- ODROID-C4 part

ODROID-C4 Fritzing part

- WEATHER-BOARD2 part

Weather-board2 Fritzing part

- Wiring parts

wb2_n2.fzz

Check your slave devices of WEATHER-BOARD

target

```
odroid@odroid:~$ sudo apt install i2c-tools
odroid@odroid:~$ sudo i2cdetect -y -r 2
00:          -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
10: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
20: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
30: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
40: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
50: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60: 60 -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70: -- -- -- -- -- -- -- -- 76 -- -- -- -- -- --
```

or


target

```
odroid@odroid:~$ sudo i2cdetect -y -r 3
```

```
00:      - - - - -  
10: - - - - -  
20: - - - - -  
30: - - - - -  
40: - - - - -  
50: - - - - -  
60: 60 - - - - -  
70: - - - - - 76 - -
```

If you don't find any i2c node on “/dev/”, please check this I2C setting.
[Setting the I2C on ODROID-N2](#)

Downalod & run a example



```
odroid@odroid: ~/WEATHER-BOARD/c_weather  
===== si1132 =====  
UV_index : 0.04  
Visible : 514 Lux  
IR : 172 Lux  
===== bme280 ===== WEATHER-BOARD v1.6  
temperature : 35.42 'C  
humidity : 33.05 %  
pressure : 1002.51 hPa  
altitude : 180.615021 m
```

Python

target

```
$ sudo apt install python3-smbus  
$ git clone https://github.com/hardkernel/WEATHER-BOARD.git  
$ cd WEATHER-BOARD/python_weather
```

target

```
$ sudo python3 weather_board.py /dev/i2c-2
```

or

target

```
$ sudo python3 weather_board.py /dev/i2c-3
```

Pure C code

target

```
$ sudo apt install git  
$ git clone https://github.com/hardkernel/WEATHER-BOARD.git  
$ cd WEATHER-BOARD/c_weather  
$ make
```

target

```
$ sudo ./weather_board /dev/i2c-2
```

or

target

```
$ sudo ./weather_board /dev/i2c-3
```

WiringPi

target

```
$ git clone https://github.com/hardkernel/wiringPi  
$ cd wiringPi  
$ ./build  
  
$ git clone https://github.com/hardkernel/WEATHER-BOARD.git  
$ cd WEATHER-BOARD/c_weather/wiringPi  
$ make
```

target

```
$ sudo ./weather_board /dev/i2c-2
```

or

target

```
$ sudo ./weather_board /dev/i2c-3
```

Android Things

Android Things with weather2-board

From:

<https://wiki.odroid.com/> - **ODROID Wiki**

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