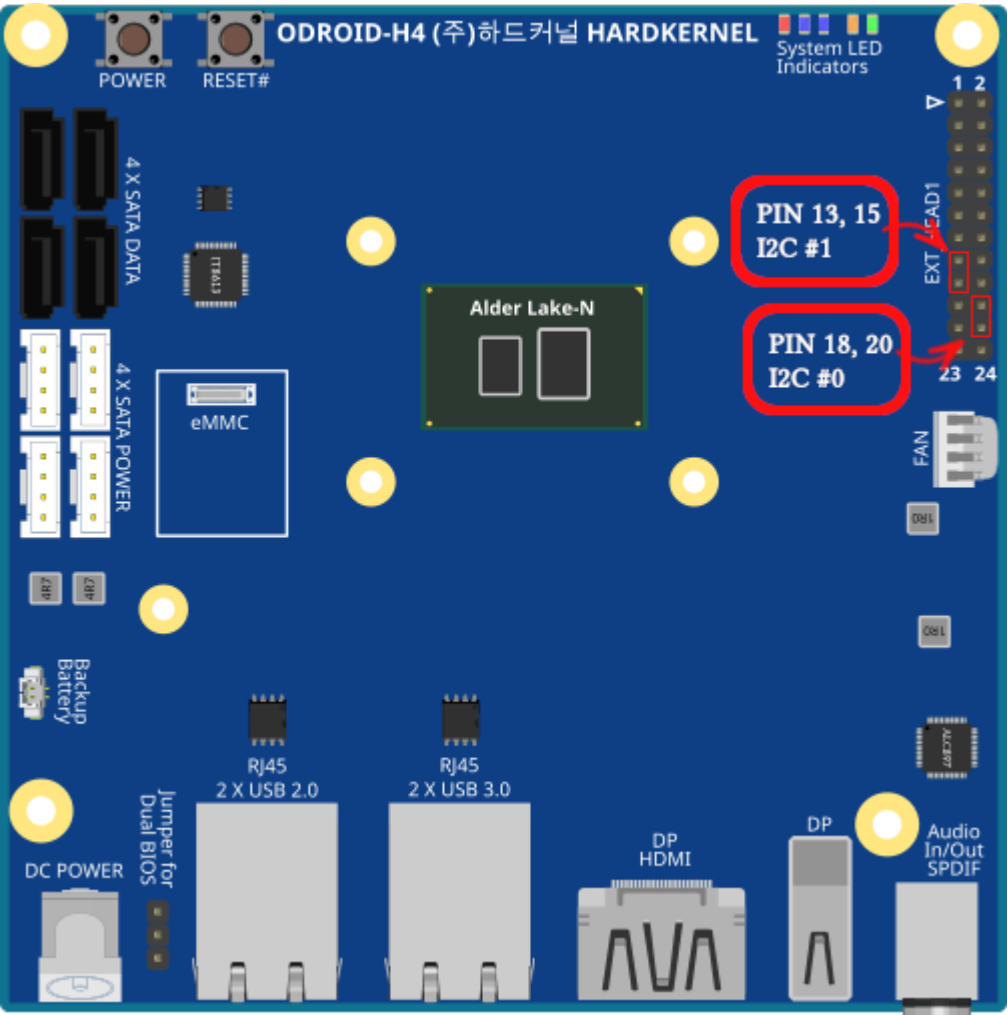



# I2C



Pin#	Pin Label	dev node
18	I2C_0_SCL	/dev/i2c-0
20	I2C_0_SDA	
13	I2C_1_SCL	/dev/i2c-2
15	I2C_1_SDA	

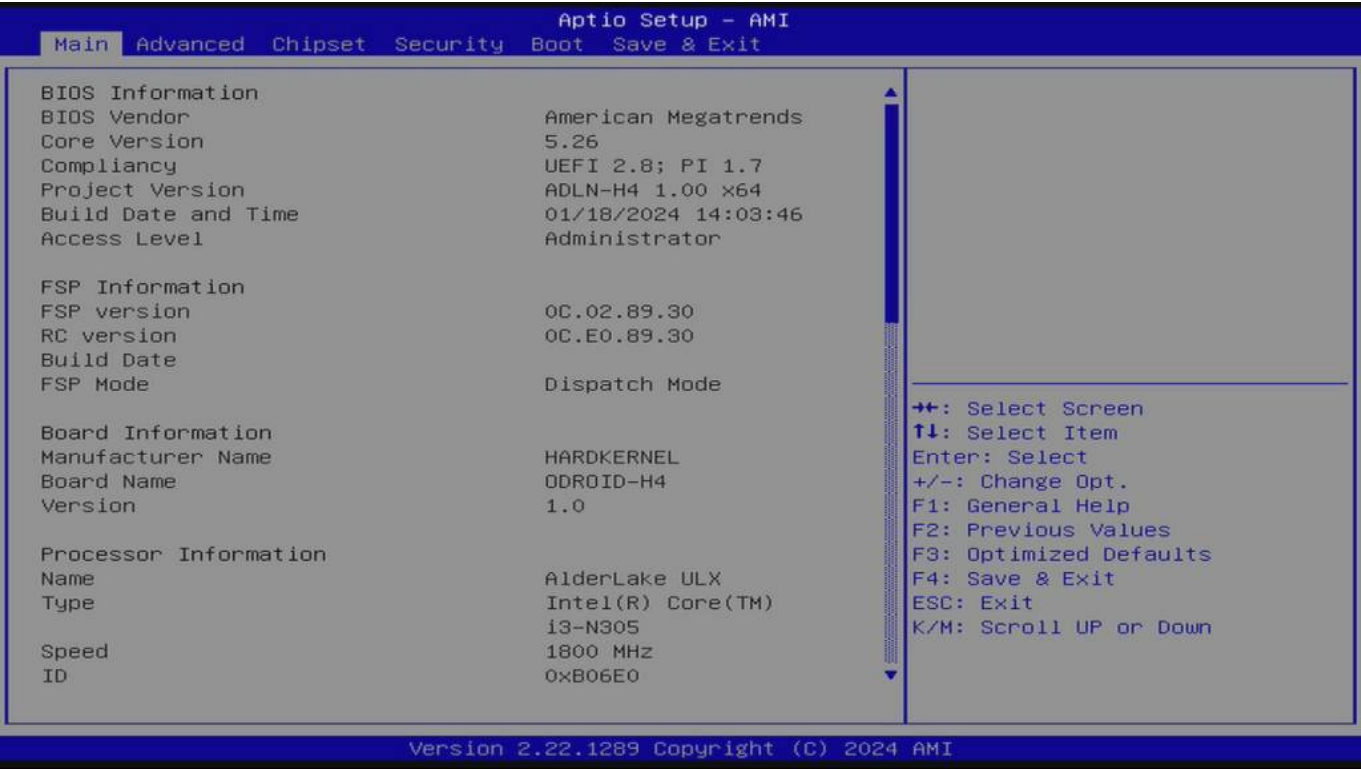
 This examples have written based on under the Ubuntu 22.04 and Linux kernel 6.5.0-14-generic

## How to change I2C speed on BIOS

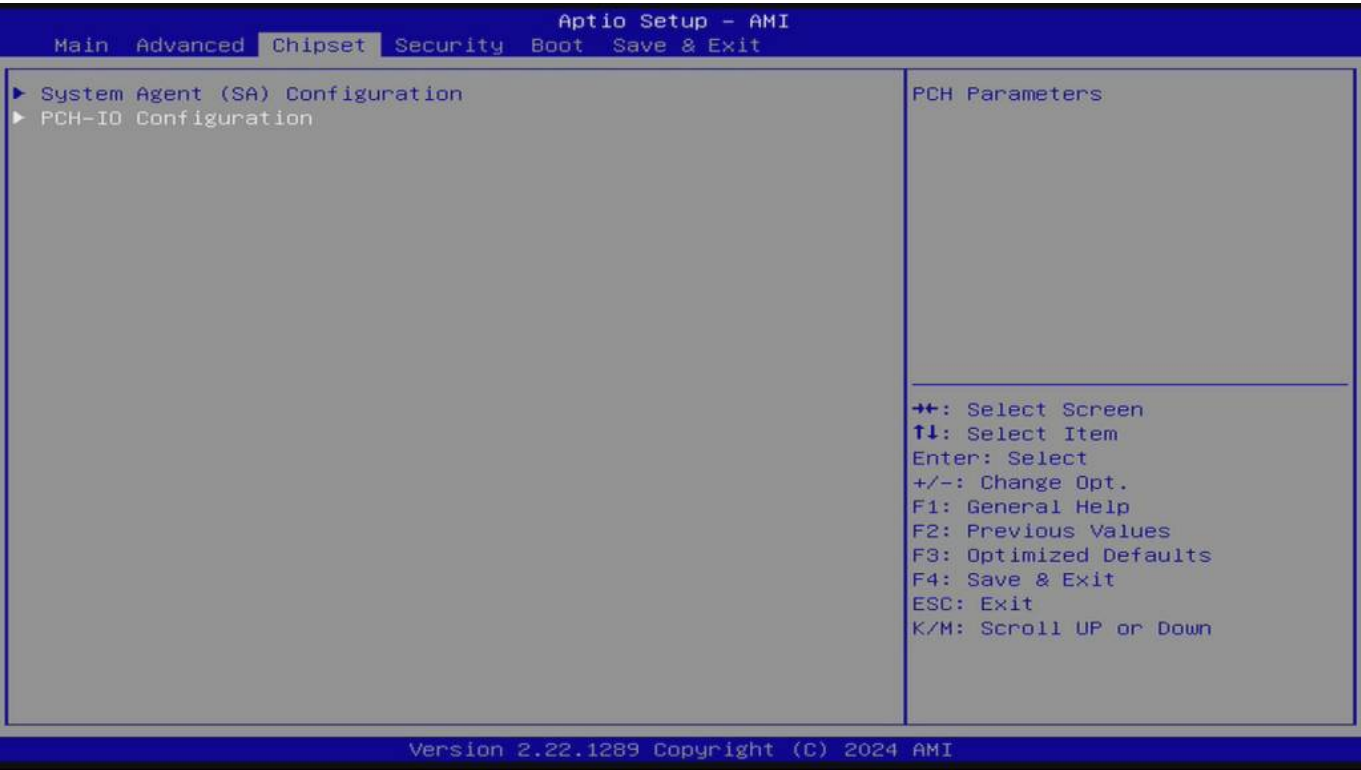
The default I2C speed is 400kHz. If you want to change the speed to 100kHz, 400kHz, 1MHz and 3.4MHz. first you should enter the BIOS.

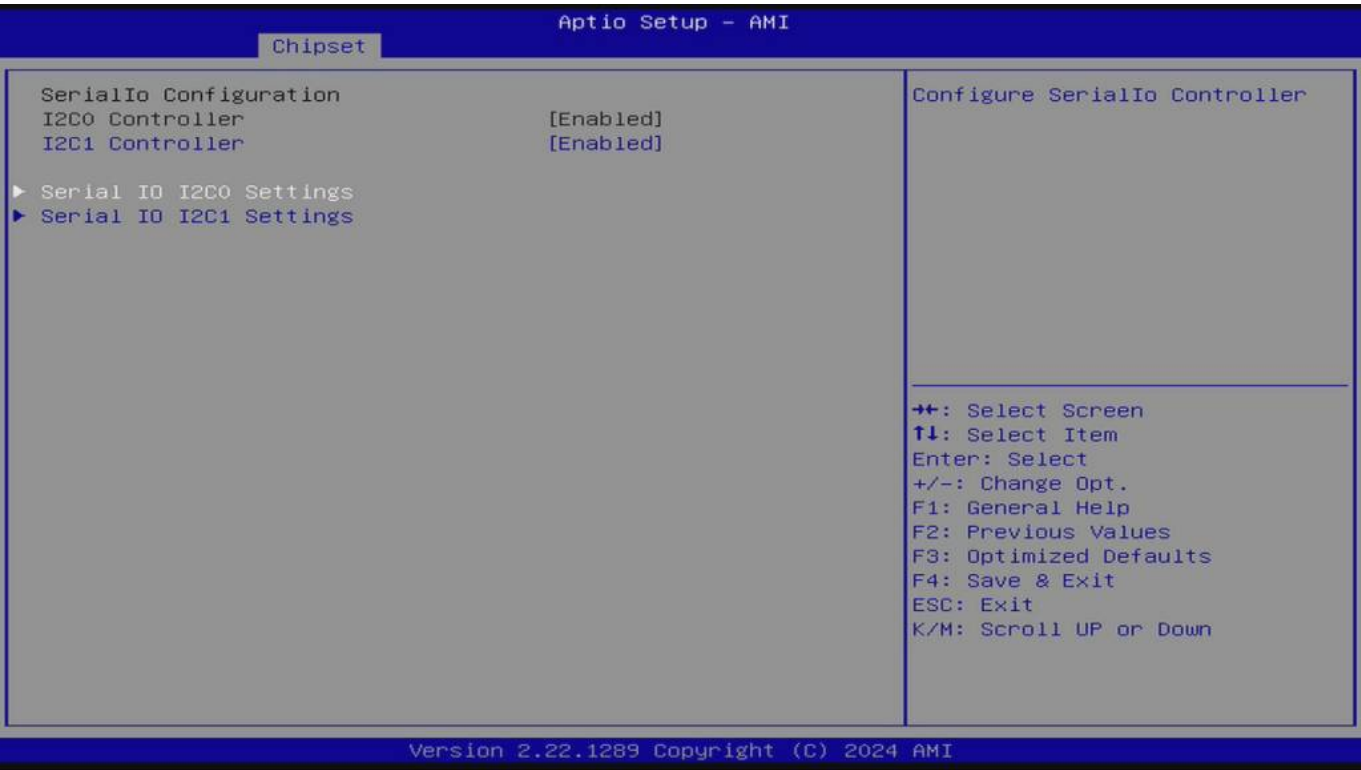
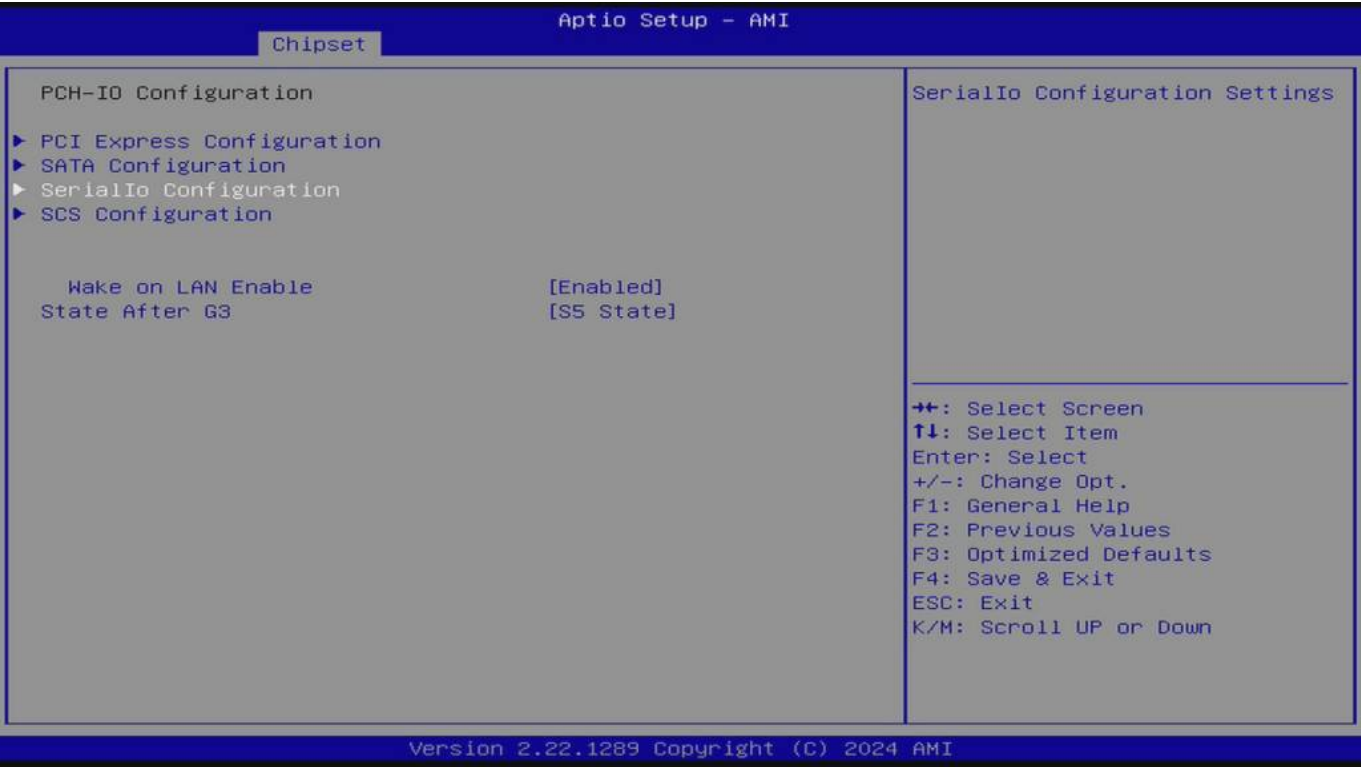
## Enter the BIOS

1. Power off your **ODROID-H4**.
2. Press the Power button on your **ODROID-H4**, then Press “DEL” key while booting.
3. You can see the pic as follow.

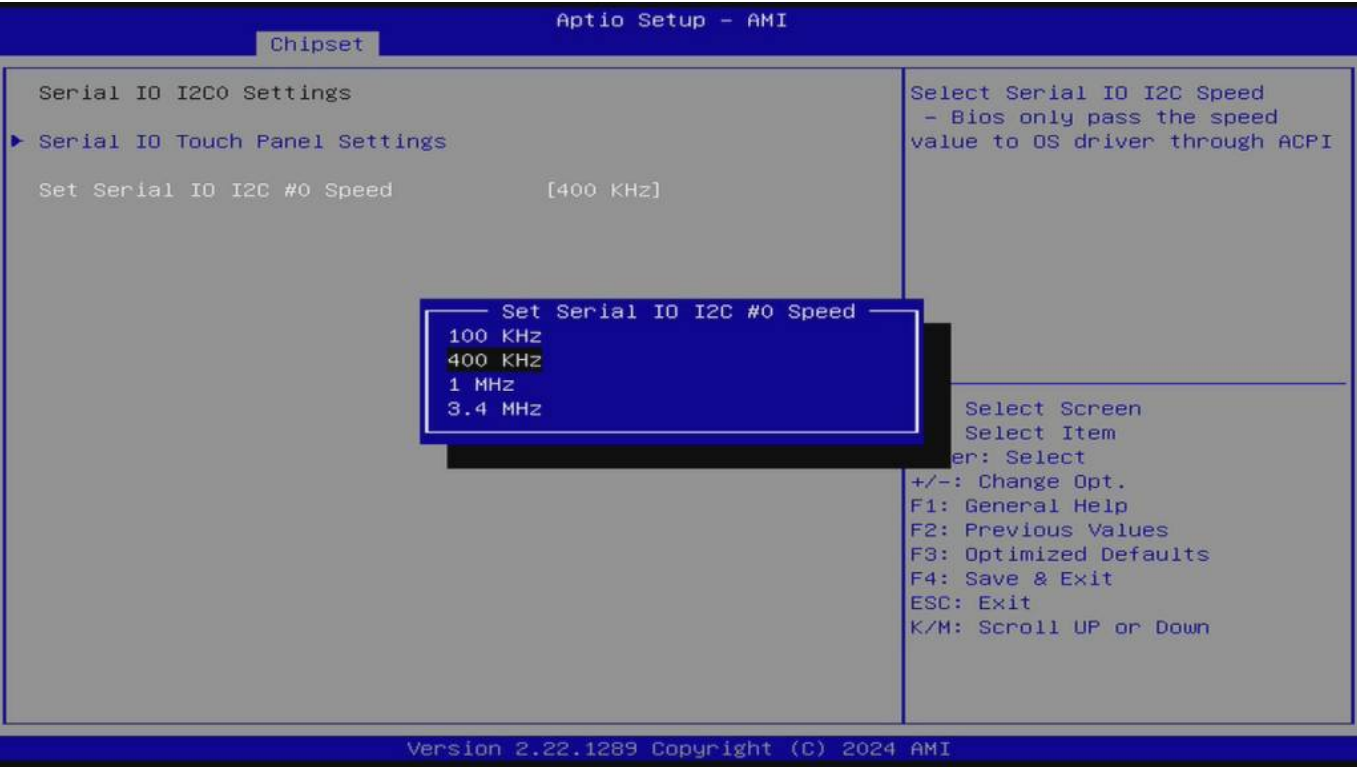


## Move to "Chipset->PCH-IO Configuration->SerialIO Configuration"



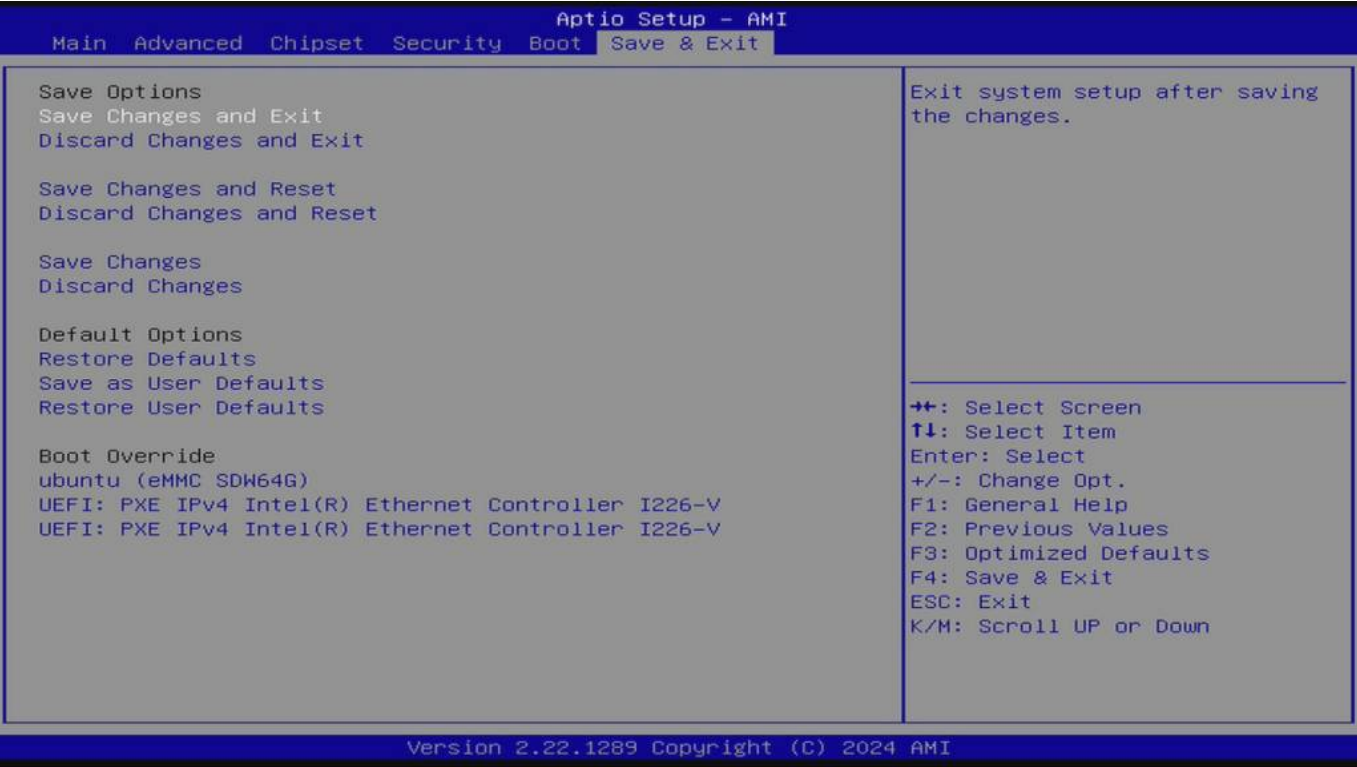


Change the I2C speed what you want



Save & exit the BIOS

Move to the Save & Exit tab. And then, select the “Save Changes and Exit” menu.





## How to find I2C slave address of devices on Ubuntu

This instruction was tested on Ubuntu 22.04 on Kernel 6.5.0-14-generic

Install package

```
sudo apt install i2c-tools
```

Find your device's address with "i2cdetect".

```
sudo i2cdetect -y -r [0 or 1 or 2]
```

If you wired your device to pin #18 and #20, then you can find the device's address with the following command.

```
odroid@odroid:~$ sudo i2cdetect -y -r 1
   0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
10:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
20: 20  --  --  --  --  --  --  --  --  --  --  --  --  --  --
30:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
40:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
50:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
60:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
70:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
odroid@odroid:~$
```

Otherwise, if you connect to pin #13 and #15, you can find the address with this command.

```
odroid@odroid:~$ sudo i2cdetect -y -r 2
      0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
10:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
20: 20 -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
30:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
40:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
50:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
odroid@odroid:~$
```

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