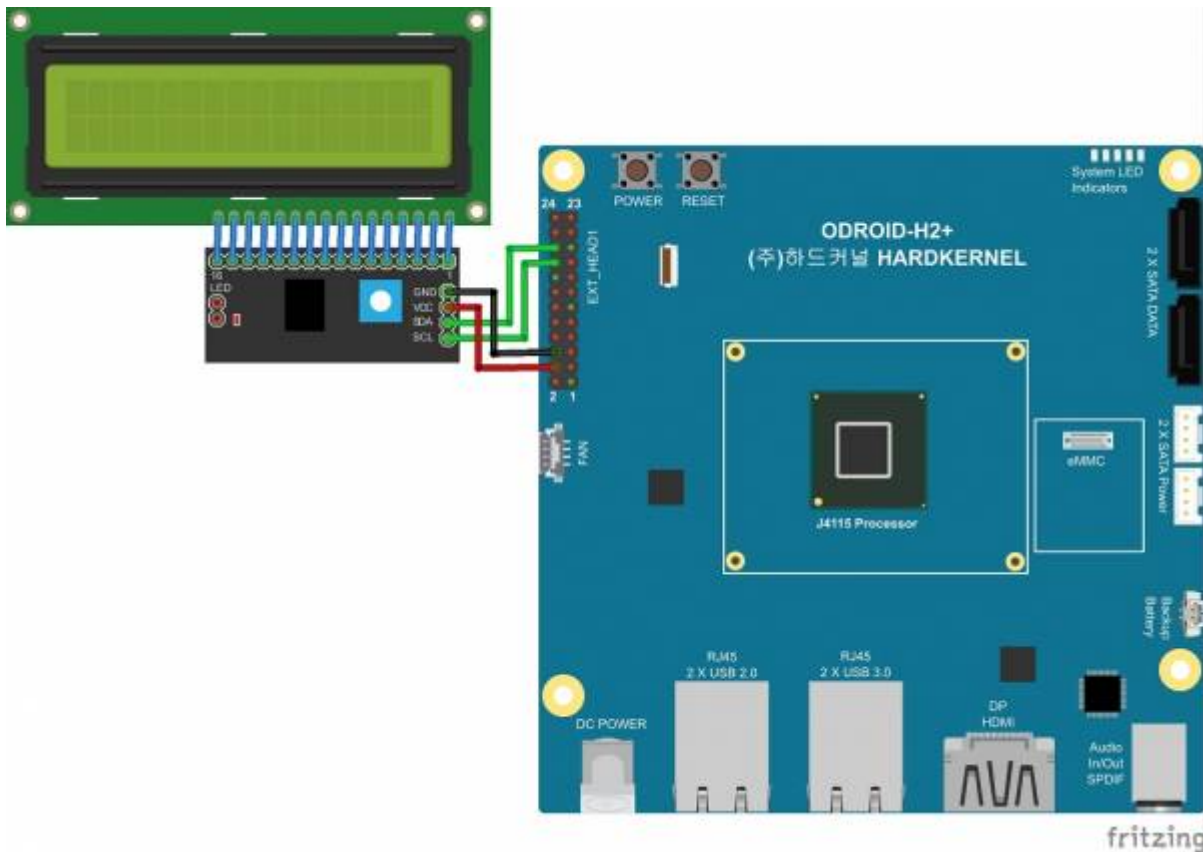


I2C 20x4 LCD

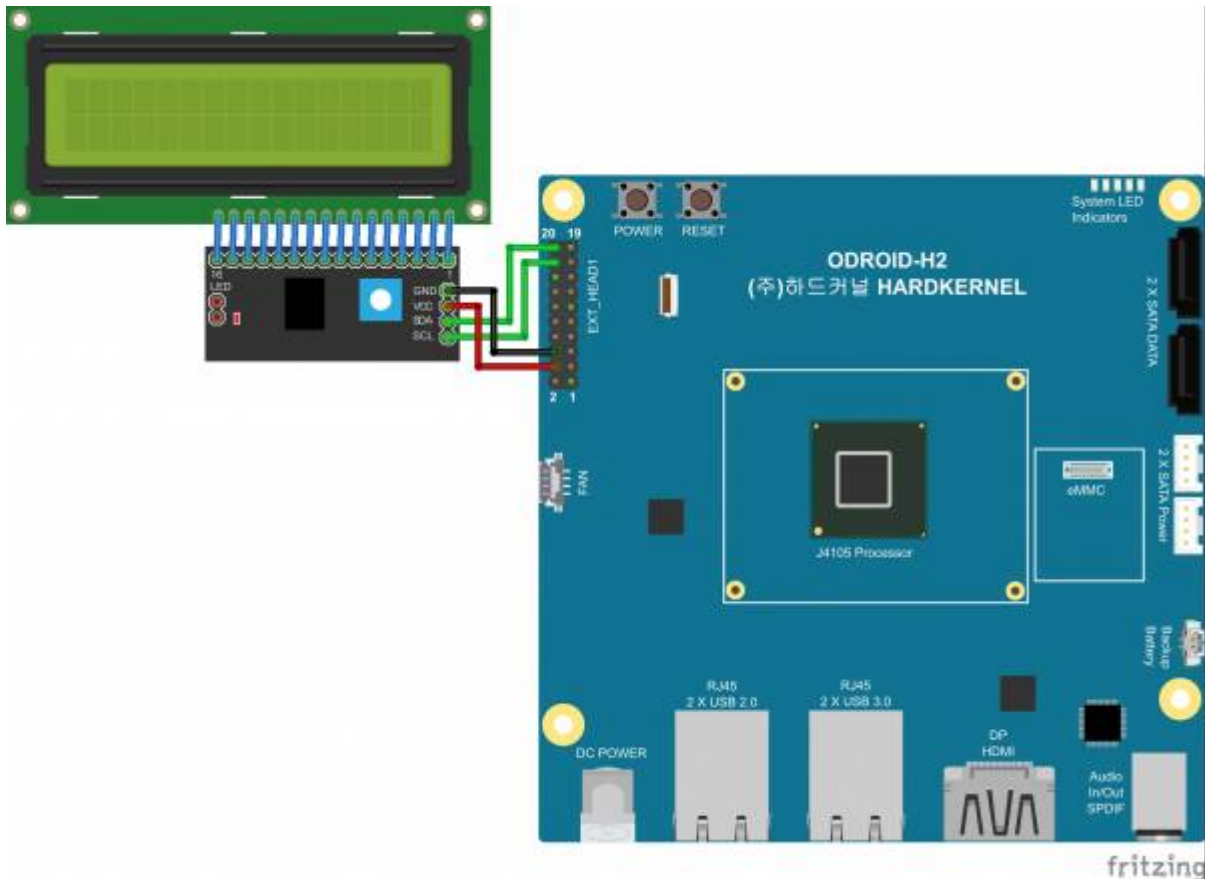
Hello world example

Wiring

H2+



H2



[Download fritzing](#)

- LCM1602 part

lcm1602_iic.fzpz

- ODROID-H2 part

odroid-h2.fzpz

- ODROID-H2+ part

odroid-h2plus.fzpz

- fritzing parts(H2)

20x4lcd_i2c.fzz

- fritzing parts(H2+)

h2plus_20x4lcd_i2c.fzz

Connection Check

If you have done the wiring well, you can see the device as the following commands.

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

- If you're using an older kernel than 4.18, tap the "Old kernel version".

kernel 4.18 or higher

When you have wired the I/O expander to Pin #18(SCL) and #20(SDA).

```
sudo i2cdetect -y -r 2
```

When you have wired the I/O expander to Pin #13(SCL) and #15(SDA).

```
sudo i2cdetect -y -r 3
```

```
odroid@h2:~$ sudo i2cdetect -y -r 2
      1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
10:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
20:  -- -- -- -- -- -- -- 27 -- -- -- -- -- -- --
30:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
40:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
50:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
```

Old kernel version

When you have wired the I/O expander to Pin #18(SCL) and #20(SDA).

```
sudo i2cdetect -y -r 5
```

When you have wired the I/O expander to Pin #13(SCL) and #15(SDA).

```
sudo i2cdetect -y -r 6
```

```
odroid@h2:~$ sudo i2cdetect -y -r 5
      1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
10:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
20:  -- -- -- -- -- -- -- 27 -- -- -- -- -- -- --
30:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
40:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
50:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70:  -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
```

Install & build python packages

```
sudo apt install git python3-dev libi2c-dev python3-smbus
```

If you got this error on your Ubuntu.

```
E: Unable to locate package python3-smbus
```

Build the python3-smbus package.

```
git clone https://github.com/tkurbad/python3-smbus.git
cd python3-smbus
python3 setup.py build
python3 setup.py install
```

Get source code

```
git clone https://github.com/hardkernel/i2c_20x4_lcd.git
```

Edit lccdriver.py if you need to change the host bus address and/or device address.

Run the example

```
sudo python3 hello_world.py I2CBUS
```

- If you're using an older kernel than 4.18, tap the "Old kernel version".

kernel 4.18 or higher

```
sudo python3 hello_world.py 2
```

Or

```
sudo python3 hello_world.py 3
```

Old kernel version

```
sudo python3 hello_world.py 5
```

Or

```
sudo python3 hello_world.py 6
```

H2+



H2



System Monitor

Thanks to [djjproject](#)

source : https://github.com/djjproject/odroidh2_i2c_lcd



Video

Install requirement packages

```
sudo apt install git python3-dev libi2c-dev python3-smbus
sudo apt install python3-psutil lm-sensors hdparm
```

Get the source code

```
git clone https://github.com/djjproject/odroidh2_i2c_lcd.git
```

Change I2C bus and Ethernet port

You may need to change to the I2C bus and Ethernet port name you are using.

Ethernet : https://github.com/djjproject/odroidh2_i2c_lcd/blob/master/hello_world.py#L8

I2C bus : https://github.com/djjproject/odroidh2_i2c_lcd/blob/master/lcddriver.py#L9

Run

```
sudo python3 hello_world.py
```

From:

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

Permanent link:

http://wiki.odroid.com/odroid-h2/application_note/i2c_20x4_lcd

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