Libraries installation

Libraries Installation for RPi

Open the terminal of Raspberry Pi and install libraries as guides below

Install WiringPi Library

```
cd
sudo apt-get install wiringpi
wget https://project-downloads.drogon.net/wiringpi-latest.deb
sudo dpkg -i wiringpi-latest.deb
gpio -v
```

Install C Library bcm2835

```
cd
wget http://www.airspayce.com/mikem/bcm2835/bcm2835-1.60.tar.gz
tar zxvf bcm2835-1.60.tar.gz
cd bcm2835-1.60/
sudo ./configure
sudo make && sudo make check && sudo make install
```

For more information and the newest libraries please refer to website：
http://www.airspayce.com/mikem/bcm2835/

Install Python Library

```
sudo pip3 install pillow
sudo pip3 install numpy
sudo apt-get install libopenjp2-7
sudo apt install libtiff
sudo apt install libtiff5
sudo apt-get install libatlas-base-dev
```

For python2

```
cd
sudo apt-get update
sudo apt-get install python-pip
sudo pip install RPi.GPIO
```

For python3

```
cd
sudo apt-get update
sudo apt-get install python3-pip
sudo pip3 install RPi.GPIO
```

Download example

Open a terminal and download with commands below.

```
cd
sudo apt-get install p7zip-full
wget https://www.waveshare.com/w/upload/b/b7/PoE_HAT_B_code.7z
7z x PoE_HAT_B_code.7z -r -o./PoE_HAT_B_code
```

Run the example

Open a terminal and run the example

C

```
cd ~/PoE_HAT_B_code/c/
make clean
make
sudo ./main
```

python

```
cd ~/PoE_HAT_B_code/python/
sudo python main.py
```

Set the temperature threshold

C

```
sudo nano ~/PoE_HAT_B_code/c/examples/main.c
```

Modify the last parameter of POE_HAT_Display() and save

python

```
sudo nano ~/PoE_HAT_B_code/python/examples/main.py
```

Modify the last parameter of POE.POE_HAT_Display() and save

Auto-run

Modify rc.local file

```
sudo nano /etc/rc.local
```

- Add the following line in front of the line exit 0

```
fi
sudo /home/pi/PoE_HAT_B_code/c/main &
#exit 0
```

Resources

Documents

- SSD1306 datasheet
- SI3404 datasheet
- Schematic

Example

- Codes