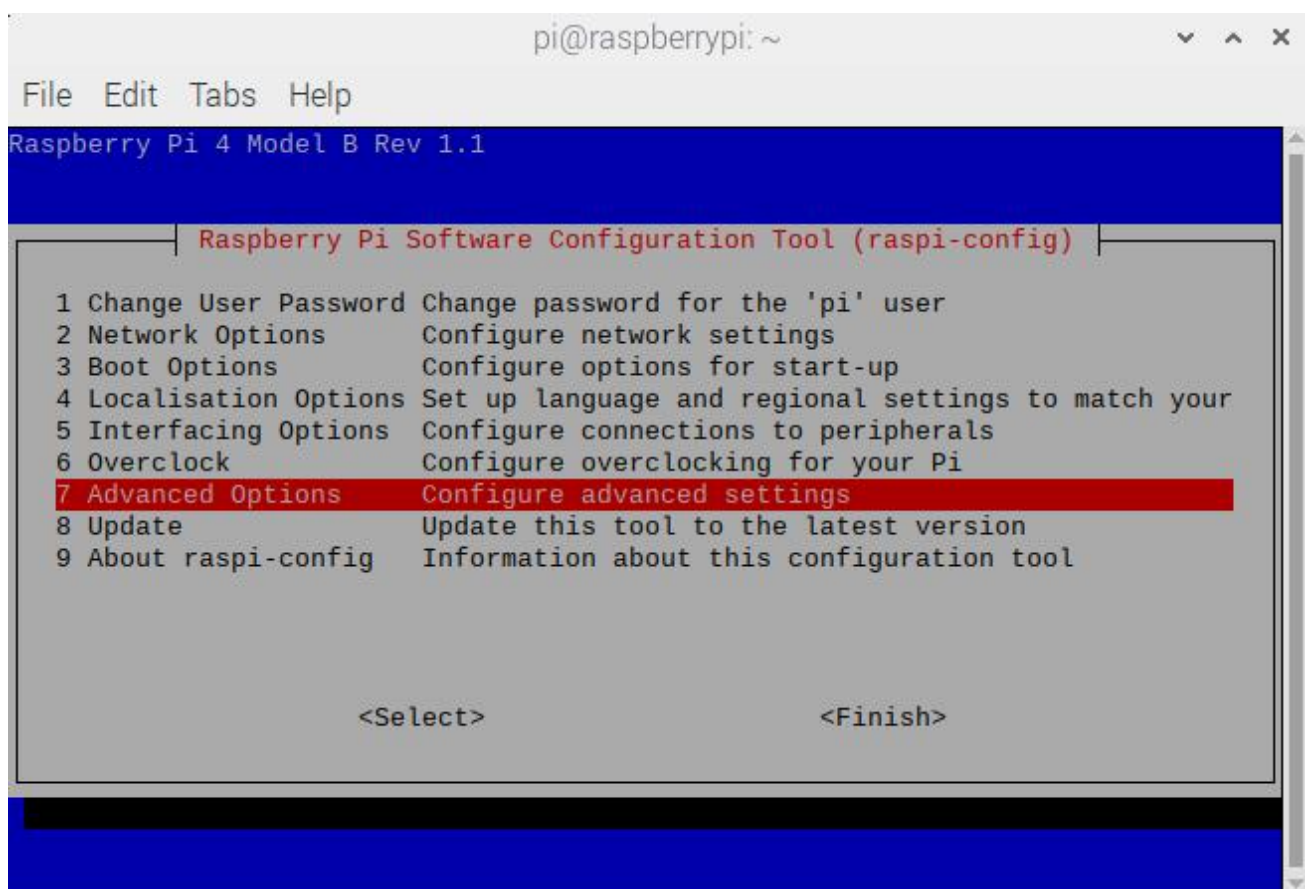# X728-Software

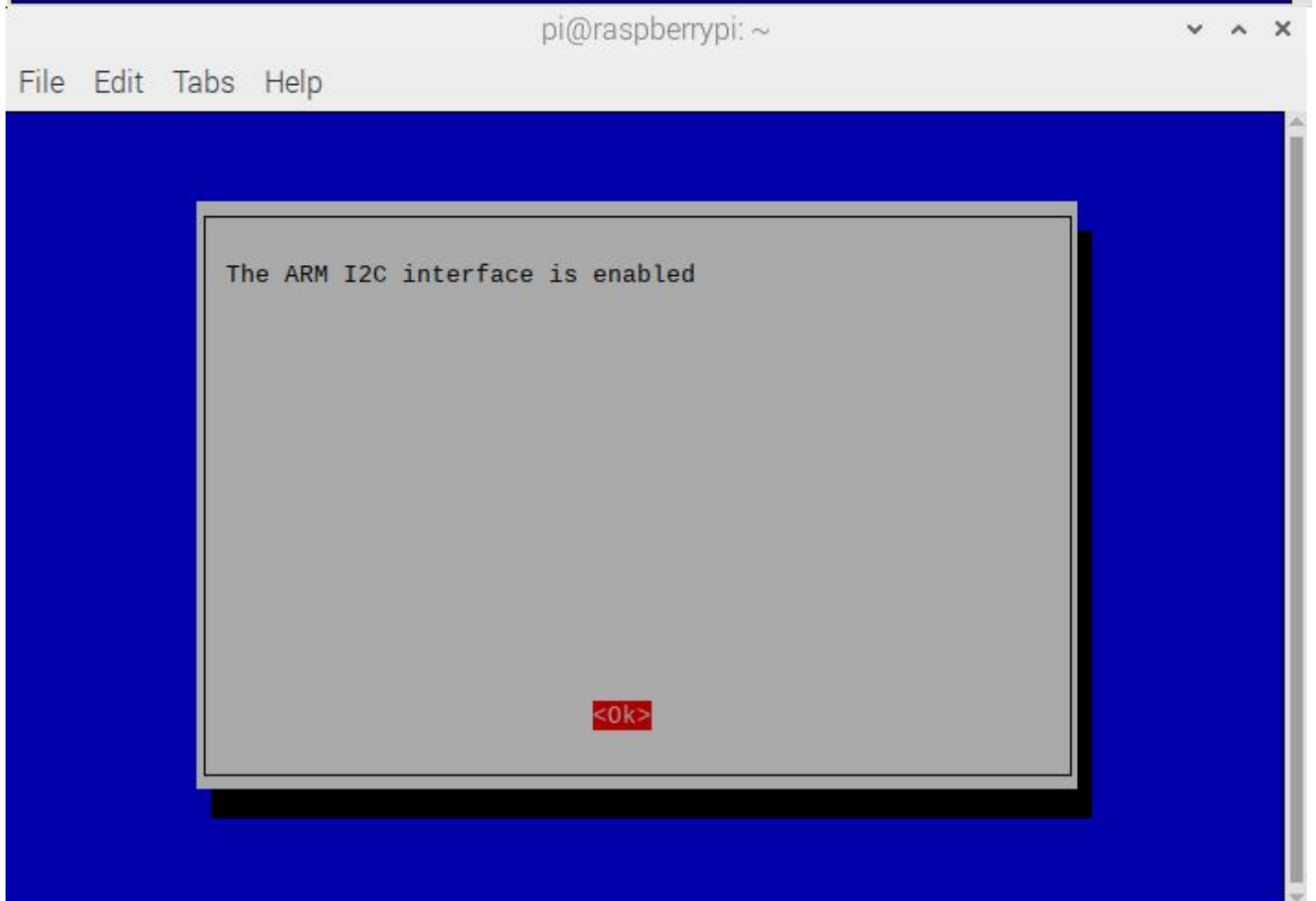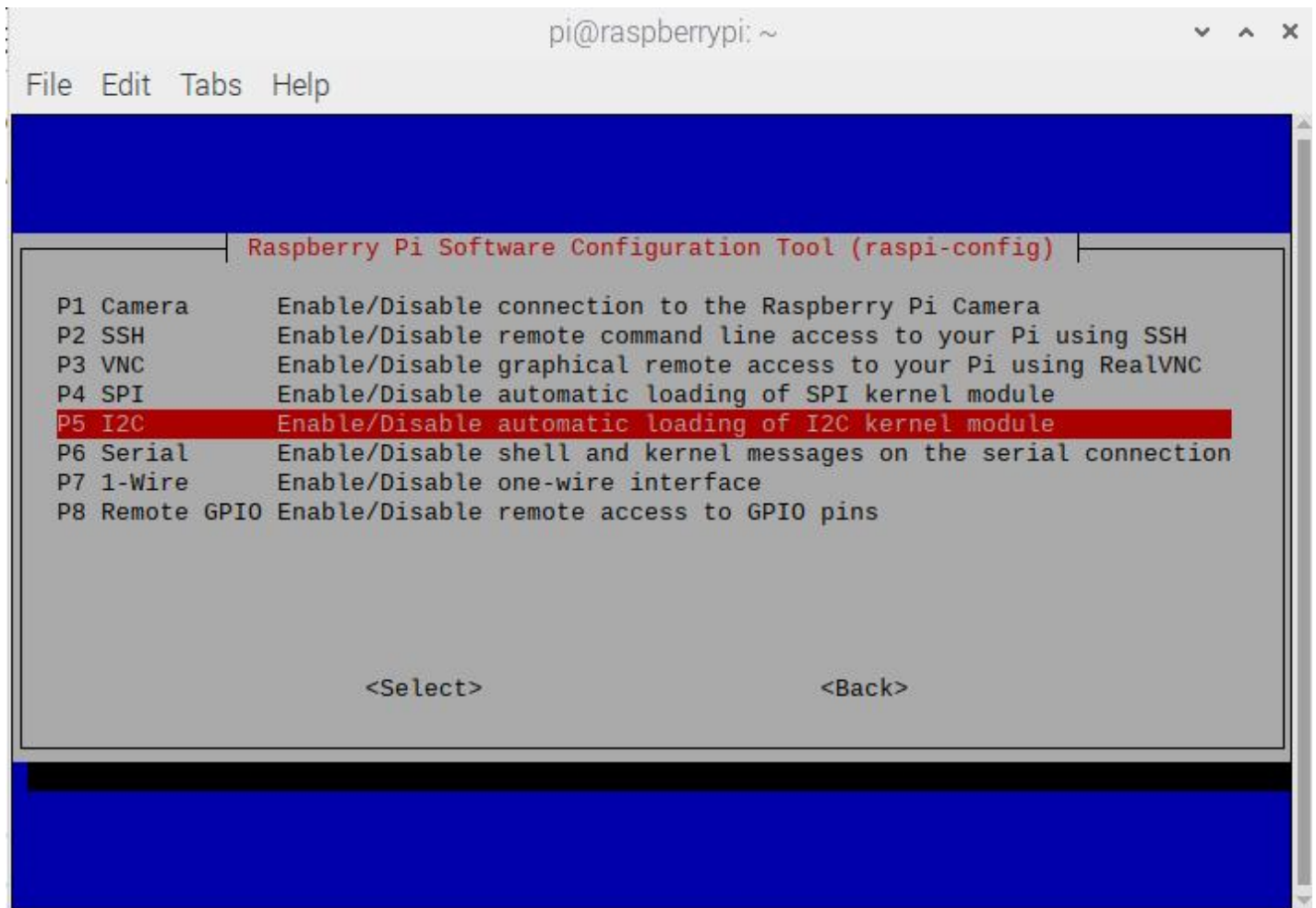The following test is base on '2020-02-13-raspbian-buster.img'

Python version: V2.7

1. Enable I2C funcion on Raspbian:

```
sudo raspi-config
```

Select 5 Interfacing Options and then P5 I2C - Enable/Disable automatic loading. A prompt will appear asking Would you like the ARM I2C interface to be enabled?, select "Yes"

pi@raspberrypi: ~

File   Edit   Tabs   Help

```
┌──────┤ Raspberry Pi Software Configuration Tool (raspi-config) ├──────┐

    P1 Camera       Enable/Disable connection to the Raspberry Pi Camera
    P2 SSH          Enable/Disable remote command line access to your Pi using SSH
    P3 VNC          Enable/Disable graphical remote access to your Pi using RealVNC
    P4 SPI          Enable/Disable automatic loading of SPI kernel module
    P5 I2C          Enable/Disable automatic loading of I2C kernel module
    P6 Serial       Enable/Disable shell and kernel messages on the serial connection
    P7 1-Wire       Enable/Disable one-wire interface
    P8 Remote GPIO  Enable/Disable remote access to GPIO pins




                    <Select>                              <Back>
```

pi@raspberrypi: ~

File   Edit   Tabs   Help

```
    The ARM I2C interface is enabled







                              <Ok>
```

Select "OK"

Select "Finish" to return to the command line and reboot your raspberry pi.

```
sudo reboot
```

2. Install necessary software (python and i2c tool library)

```
sudo apt-get install python-smbus
sudo apt-get install i2c-tools
```

3. Download x728 setup scripts:

```
git clone https://github.com/geekworm-com/x728.git
cd x728
```

4. Install script&reboot:

```
sudo bash x728.sh
printf "%s\n" "alias x728off='sudo x728softsd.sh'" >> ~/.bashrc
sudo reboot
```

5. Set and Read the RTC time

```
#If you need to set the system time for any reason you can use the following command :
date -s "5 MAR 2019 13:00:00"
```

```
#Write the system date and time to the RTC module after your correct the system date and time :
sudo hwclock -w
```

```
#Read the date and time back from the RTC module:
sudo hwclock -r
```

6. How to reading battery voltage and percentage, this is the sample code, you can modify it by your request.

```
sudo python x728bat.py
```

7. Power off command on Raspbian from software

```
x728off
```

8. Testing AC power off/loss or power adapter failure detection (need to shor the 'PLD' pin)

```
sudo python x728pld.py
```

Return to X728

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