1. Install and test I2C

1.1 Install I2C tool

sudo apt install i2c-tools

```
jetson@jetson-desktop:~$ sudo apt install i2c-tools
```

1.2 Test I2C function, scan the address of the currently connected I2C device.

i2cdetect -y -r 1

```
jetson@jetson-desktop:~$ i2cdetect -y -r 1
     0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:          -- -- -- -- -- -- -- -- -- -- -- --
10: -- -- -- -- -- 15 -- -- -- -- -- -- -- -- -- --
20: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
30: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
40: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
50: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70: -- -- -- -- -- -- -- --
jetson@jetson-desktop:~$
```

As shown in the figure above, it means that an I2C device is connected to Jetson NANO, 0x15 is the I2C device address of the DOFBOT expansion board.

2. Install I2C-Python

2.1 Install pip3

sudo apt install python3-pip

```
jetson@jetson-desktop:~$ sudo apt install python3-pip
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  apt-clone archdetect-deb dctrl-tools dpkg-repack girl.2-json-1.0
  girl.2-nma-1.0 girl.2-timezonemap-1.0 girl.2-xkl-1.0 grub-common
  libdebian-installer4 libtimezonemap-data libtimezonemap1 os-prober
  python3-icu python3-pam rdate
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libexpat1-dev libpython3-dev libpython3.8-dev python-pip-whl python3-dev
  python3-wheel python3.8-dev zlib1g zlib1g-dev
The following NEW packages will be installed:
  libexpat1-dev libpython3-dev libpython3.8-dev python-pip-whl python3-dev
  python3-pip python3-wheel python3.8-dev zlib1g-dev
The following packages will be upgraded:
  zlib1g
1 upgraded, 9 newly installed, 0 to remove and 167 not upgraded.
Need to get 6,641 kB of archives.
After this operation, 23.5 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

2.2 Install smbus

sudo apt install python3-smbus

```
dofbot@Dofbot:~$ sudo apt install python3-smbus
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  apt-clone archdetect-deb dctrl-tools dpkg-repack girl.2-json-1.0
  girl.2-nma-1.0 girl.2-timezonemap-1.0 girl.2-xkl-1.0 grub-common
  libdebian-installer4 libtimezonemap-data libtimezonemap1 os-prober
  python3-icu python3-pam rdate
Use 'sudo apt autoremove' to remove them.
The following NEW packages will be installed:
  python3-smbus
0 upgraded, 1 newly installed, 0 to remove and 167 not upgraded.
```

2.3 Install others tool

sudo apt install build-essential python3-dev

```
jetson@jetson-desktop:~$ sudo apt install build-essential python3-dev
Reading package lists... Done
Building dependency tree
Reading state information... Done
python3-dev is already the newest version (3.8.2-0ubuntu2).
python3-dev set to manually installed.
The following packages were automatically installed and are no longer required:
  apt-clone archdetect-deb dctrl-tools dpkg-repack girl.2-json-1.0
  girl.2-nma-1.0 girl.2-timezonemap-1.0 girl.2-xkl-1.0 grub-common
  libdebian-installer4 libtimezonemap-data libtimezonemap1 os-prober
  python3-icu python3-pam rdate
Use 'sudo apt autoremove' to remove them.
The following packages will be upgraded:
  build-essential
1 upgraded, 0 newly installed, 0 to remove and 166 not upgraded.
Need to get 4,664 B of archives.
After this operation, 1,024 B of additional disk space will be used.
Do you want to continue? [Y/n]
```