10.Driver library and communication

1、Install serial port driver library

Since the robot and the underlying expansion board use serial port communication, the serial port driver library needs to be installed before it can be used. The Yahboom Muto system has already installed the serial port driver, so you can ignore the following steps.

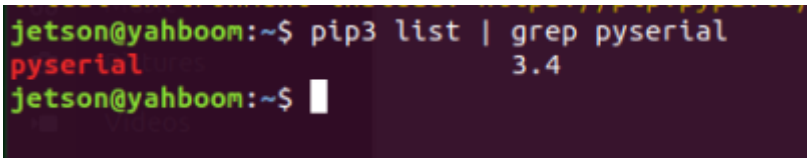
The Ubuntu system has multiple serial libraries. Installation errors may cause the serial port to fail to communicate properly. Please follow the steps below to install the serial port driver library.

Open the terminal and enter the following command to install the serial port driver

```
sudo pip3 install pyserial
```

Check the version number of the serial port driver library

```
pip3 list | grep pyserial
```



2.Install robot driver library

The Yahboom Muto mirror system has already installed the latest robot driver library, so there is no need to reinstall it.
You only need to install the robot driver library if you are not using a Yahboom image or if the driver library has updated content.

The following installation process takes Jetson Nano's installation of the MutoLib driver library as an example:

Transfer the driver library file to the system, taking transferring to the desktop as an example, and decompress it to obtain the corresponding MutoLib folder.

```
cd ~/Desktop && ls
unzip MutoLib.zip
```

```
jetson@yahboom:~$ cd ~/Desktop && ls
chromium-browser.desktop  nv_devzone.desktop
gnome-terminal.desktop    nv_forums.desktop
lxterminal.desktop        nvidia-vpi_demos-1.2.desktop
MutoLib.zip               nv_jetson_projects.desktop
jetson@yahboom:~/Desktop$ unzip MutoLib.zip
Archive:  MutoLib.zip
   creating: MutoLib/
   creating: MutoLib/MutoLib/
  inflating: MutoLib/MutoLib/__init__.py
  inflating: MutoLib/MutoLib/MutoLib.py
  inflating: MutoLib/README.md
  inflating: MutoLib/setup.py
jetson@yahboom:~/Desktop$
```

Start install drive library.

```
cd MutoLib
sudo python3 setup.py install
```

```
jetson@yahboom:~/Desktop$ cd MutoLib/
jetson@yahboom:~/Desktop/MutoLib$ sudo python3 setup.py install
running install
/usr/local/lib/python3.6/dist-packages/setuptools/command/install.py:37:
olsDeprecationWarning: setup.py install is deprecated. Use build and pip
er standards-based tools.
  setuptools.SetuptoolsDeprecationWarning,
```

Check the version number after installation.

```
pip3 list | grep MutoLib
```

```
Installed /usr/local/lib/python3.6/dist-packages/MutoLib-1.1.2-py3.6.egg
Processing dependencies for MutoLib==1.1.2
Finished processing dependencies for MutoLib==1.1.2
jetson@yahboom:~/Desktop/MutoLib$ pip3 list | grep MutoLib
MutoLib                       1.1.2
jetson@yahboom:~/Desktop/MutoLib$
```

Test the underlying firmware version number of the read version.

```
python3
from MutoLib import Muto
g_bot = Muto()
g_bot.read_version()
```

```
jetson@yahboom:~/Desktop/MutoLib$ python3
Python 3.6.9 (default, Mar 10 2023, 16:46:00)
[GCC 8.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> from MutoLib import Muto
>>> g_bot = Muto()
>>> g_bot.read_version()
'0x11'
>>>
```

Muto has two optional parameters Muto (port="/dev/myserial", debug=False).

The port parameter indicates the specified serial port device number.

By default, /dev/myserial has been specified. If the factory image is not used, it can be modified to / Device numbers such as dev/ttyUSB0; the parameter debug=True means printing debugging information, False means not printing debugging information.