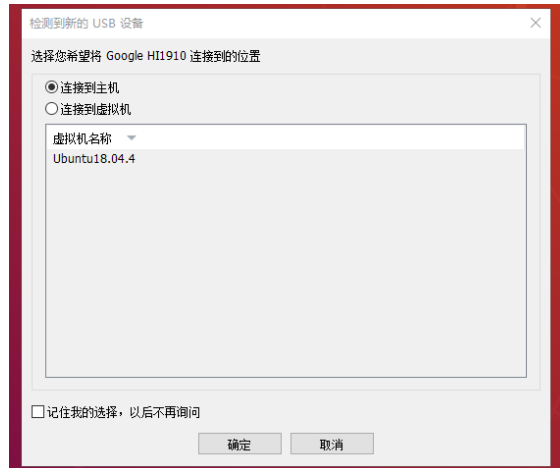


二、操作系统: Ubuntu

(1) USB 测试

首先通过 USB 连接电脑与开发板，当连接电脑系统为虚拟环境时，设备连接后，会自动弹出如下界面：



选择连接到虚拟机，点击 ubuntu18.04.4 后 点击确定，在 ubuntu 操作系统桌面，右键点击 Opne Terminal 开启任务窗口，先进行 PING 192.168.1.2 的测试。ping 通则第一步进行登录操作，ping 不通，则先进行重设 IP 操作，如下所示：

1) 命令行输入 ifconfig 回车

重设 IP: 复制并黏贴进命令行

```
sudo ifconfig ens33 192.168.0.223 netmask 255.255.255.0 up
```

输入用户密码

输入命令行: ssh p

再次输入用户密码并 回车

2) 登录操作

```
ssh HwHiAiUser@192.168.1.2
```

输入用户密码后，成功登录

输入 npu-smi info，查看设备信息。

(2) 网口测试

首先进行 ping 192.168.0.2 操作。如 ping 的通则进行登录操作，如 ping 不通，则先进行重设 ip 操作。

1) 命令行输入 ifconfig 回车

例如 ens33，界面如下：

```
HwHiAiUser@ubuntu:~$ ping 192.168.1.2
PING: command not found
HwHiAiUser@ubuntu:~$ ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.223 netmask 255.255.255.0 broadcast 192.168.0.255
    ether 00:c:29:16:4f:1f txqueuelen 1000 (Ethernet)
    RX packets 1254 bytes 104985 (104.9 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 194 bytes 27179 (27.1 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

ens38: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.253.128 netmask 255.255.255.0 broadcast 192.168.253.255
    inet6 fe80::a564:c1c1:1890:b0b9 prefixlen 64 scopeid 0x20<link>
    ether 00:c:29:16:4f:29 txqueuelen 1000 (Ethernet)
    RX packets 3117 bytes 919173 (919.1 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1300 bytes 147882 (147.8 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

ens160u2: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.1.223 netmask 255.255.255.0 broadcast 192.168.1.255
    inet6 fe80::b0f8:1bff:fedd:33ed prefixlen 64 scopeid 0x20<link>
    ether b2:f8:1b:dd:33:ed txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 65 bytes 9477 (9.4 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 616 bytes 48508 (48.5 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 616 bytes 48508 (48.5 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

重设 IP： 复制并黏贴进命令行

`sudo ifconfig ens33 192.168.0.223 netmask 255.255.255.0 up`

密码：输入用户密码

2) 登录

`ssh HwHiAiUser@192.168.0.2`

密码：输入密码（默认 Mind@123）

问题一：出现以下界面时，复制粘贴命令

`ssh-keygen -f "/home/HwHiAiUser/.ssh/known_hosts" -R "192.168.0.2"`

```
HwHiAiUser@ubuntu:~$ ssh HwHiAiUser@192.168.1.2
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@ WARNING: REMOTE HOST IDENTIFICATION HAS CHANGED! @
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
IT IS POSSIBLE THAT SOMEONE IS DOING SOMETHING NASTY!
Someone could be eavesdropping on you right now (man-in-the-middle attack)!
It is also possible that a host key has just been changed.
The fingerprint for the ECDSA key sent by the remote host is
SHA256:Z7jlln2g35LSkwj3JKTzC596GN1a19c7/Ax0P4/Bz1s.
Please contact your system administrator.
Add correct host key in /home/HwHiAiUser/.ssh/known_hosts to get rid of this mes
sage.
Offending ECDSA key in /home/HwHiAiUser/.ssh/known_hosts:3
remove with:
ssh-keygen -f "/home/HwHiAiUser/.ssh/known_hosts" -R "192.168.1.2"
ECDSA host key for 192.168.1.2 has changed and you have requested strict checkin
g.
Host key verification failed.
HwHiAiUser@ubuntu:~$ ssh-keygen -f "/home/HwHiAiUser/.ssh/known_hosts" -R "192
.168.1.2"
# Host 192.168.1.2 found: line 3
/home/HwHiAiUser/.ssh/known_hosts updated.
Original contents retained as /home/HwHiAiUser/.ssh/known_hosts.old
```

输入：`bash configure_usb_ethernet.sh -s ens160u1 192.168.1.223`

```

HwHiAiUser@ubuntu:~$ bash configure_usb_ethernet.sh -s ens160u1 192.168.1.2
23
bash: configure_usb_ethernet.sh: No such file or directory
HwHiAiUser@ubuntu:~$ ssh HwHiAiUser@192.168.1.2
The authenticity of host '192.168.1.2 (192.168.1.2)' can't be established.
ECDSA key fingerprint is SHA256:r6U03KJL6qJviGJFfQj4wHQ9Q3t41ngmQAEzr8IsnSM
.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.168.1.2' (ECDSA) to the list of known hosts
.
HwHiAiUser@192.168.1.2's password:
Welcome to Ubuntu 18.04.4 LTS (GNU/Linux 4.19.95+ aarch64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

Last login: Sun Jan 28 16:11:20 2018 from 192.168.1.223
HwHiAiUser@davinci-mini:~$

```

问题二：出现如下界面时，输入 YES 并回车后，再次输入

ssh HwHiAiUser@192.168.0.2

```

HwHiAiUser@ubuntu:~$ ssh HwHiAiUser@192.168.1.2
The authenticity of host '192.168.1.2 (192.168.1.2)' can't be established.
ECDSA key fingerprint is SHA256:Z7jllm2g35LSkwj3JKTzC596GN1a19c7/Ax0P4/Bz1s.
Are you sure you want to continue connecting (yes/no)? yes

```

登录成功后验证

输入：npu-smi info

界面如下，则说明测试成功：

```

Last login: Sun Jan 28 16:12:15 2018 from 192.168.0.223
HwHiAiUser@davinci-mini:~$ npu-smi info
=====+=====+=====+=====+=====+
| npu-smi 20.3.0 | Version: 20.2.0 |
+-----+-----+-----+-----+-----+
| NPU   Name   | Health   | Power(W) | Temp(C)  |
| Chip  Device | Bus-Id   | AICore(%) | Memory-Usage(MB) |
+-----+-----+-----+-----+-----+
| 0     310    | OK       | 12.8     | 44       |
| 0     0      | 0000:00:00.0 | 0        | 655 / 8192 |
+-----+-----+-----+-----+-----+

```