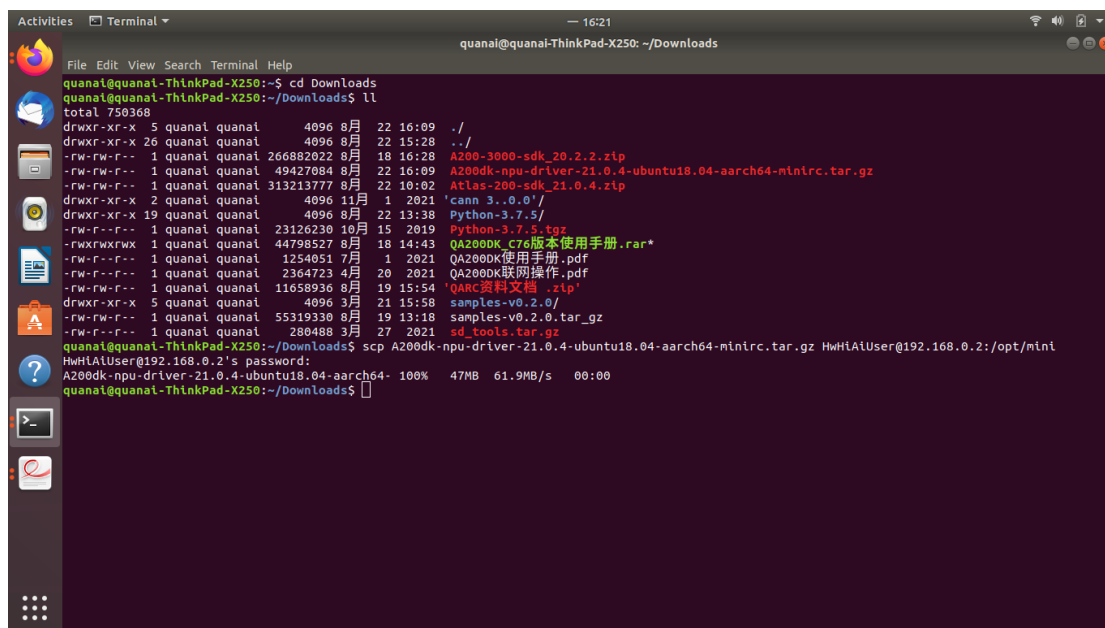


若用户想使用最新版本驱动与固件时，开发板显示无法正常启动系统，用户可以先根据 5.1.RC1 版本完成制卡后，进行如下操作，使得模块中的系统适配最新版本驱动与固件，以 21.0.4 版本驱动为例。

1 用 5.1.RC1 版本制卡完成后，上电板卡，登录成功后，在 PC 端上传 21.0.4 版本驱动到板卡的/opt/mini 文件夹下



The image shows a terminal window on a device named 'quanai@quanai-ThinkPad-X250'. The user is in the ~/Downloads directory. A file listing command 'll' is executed, showing a table of files with permissions, owner, size, date, and filename. The files include various SDKs, drivers, and manuals. The user then executes an SCP command to upload the 'A200dk-npu-driver-21.0.4-ubuntu18.04-aarch64-minirc.tar.gz' file to the '/opt/mini' directory on the host 'HwHiAiUser@192.168.0.2'. The command is successful, showing a progress bar and completion message.

```
quanai@quanai-ThinkPad-X250:~$ cd Downloads
quanai@quanai-ThinkPad-X250:~/Downloads$ ll
total 750368
drwxr-xr-x 5 quanai quanai 4096 8月 22 16:09 ./
drwxr-xr-x 26 quanai quanai 4096 8月 22 15:28 ../
-rw-rw-r-- 1 quanai quanai 266882022 8月 18 16:28 A200-3000-sdk_20.2.2.zip
-rw-rw-r-- 1 quanai quanai 49427084 8月 22 16:09 A200dk-npu-driver-21.0.4-ubuntu18.04-aarch64-minirc.tar.gz
-rw-rw-r-- 1 quanai quanai 313213777 8月 22 10:02 Atlas-200-sdk_21.0.4.zip
drwxr-xr-x 2 quanai quanai 4096 11月 1 2021 'cann 3..0.0/'
drwxr-xr-x 19 quanai quanai 4096 8月 22 13:38 Python-3.7.5/
-rw-r--r-- 1 quanai quanai 23126230 10月 15 2019 Python-3.7.5.tgz
-rwxrwxrwx 1 quanai quanai 44798527 8月 18 14:43 QA200DK_c76版本使用手册.rar*
-rw-r--r-- 1 quanai quanai 1254051 7月 1 2021 QA200DK使用手册.pdf
-rw-r--r-- 1 quanai quanai 2364723 4月 20 2021 QA200DK联网操作.pdf
-rw-rw-r-- 1 quanai quanai 11658936 8月 19 15:54 'QARC资料文档.zip'
drwxr-xr-x 5 quanai quanai 4096 3月 21 15:58 samples-v0.2.0/
-rw-rw-r-- 1 quanai quanai 55319330 8月 19 13:18 samples-v0.2.0.tar.gz
-rw-r--r-- 1 quanai quanai 280488 3月 27 2021 sd_tools.tar.gz
quanai@quanai-ThinkPad-X250:~/Downloads$ scp A200dk-npu-driver-21.0.4-ubuntu18.04-aarch64-minirc.tar.gz HwHiAiUser@192.168.0.2:/opt/mini
HwHiAiUser@192.168.0.2's password:
A200dk-npu-driver-21.0.4-ubuntu18.04-aarch64- 100% 47MB 61.9MB/s 00:00
quanai@quanai-ThinkPad-X250:~/Downloads$
```

2 如果显示/opt/mini 权限限制, 则在板卡内对文件夹/opt 进行释放权限

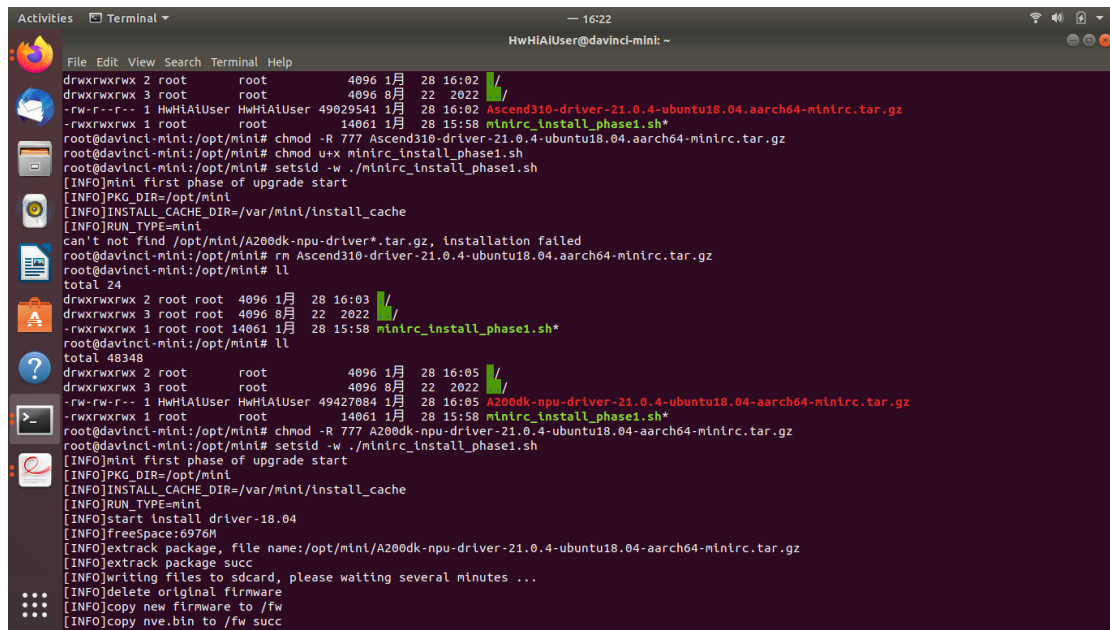
```
Activities Terminal 16:21 HwHiAiUser@davinci-mini: ~
File Edit View Search Terminal Help

HwHiAiUser@davinci-mini:~$ npu-smi info
-----+-----+
| npu-smi 21.0.3.1 | Version: 21.0.3.1 |
+-----+-----+
| NPU   Name   | Health | Power(W) | Temp(C) |
| Chip  Device | Bus-Id | AICore(%) | Memory-Usage(MB) |
+-----+-----+
| 0     310    | OK     | 12.8     | 42       |
| 0     0      | NA     | 0        | 2375 / 8192 |
+-----+-----+

HwHiAiUser@davinci-mini:~$ su
Password:
su: Authentication failure
HwHiAiUser@davinci-mini:~$ sudo su
[sudo] password for HwHiAiUser:
Sorry, user HwHiAiUser is not allowed to execute '/bin/su' as root on davinci-mini.
HwHiAiUser@davinci-mini:~$ su
Password:
root@davinci-mini:/home/HwHiAiUser# cd /opt
root@davinci-mini:/opt# ll
total 12
drwxr-xr-x 3 root root 4096 8月 22 2022 ./
drwxr-xr-x 22 root root 4096 8月 22 2022 ../
drwxr-xr-x 2 root root 4096 8月 22 2022 mini/
root@davinci-mini:/opt# cd mini
root@davinci-mini:/opt/mini# ll
total 24
drwxr-xr-x 2 root root 4096 8月 22 2022 ./
drwxr-xr-x 3 root root 4096 8月 22 2022 ../
-r-xr-x--- 1 root root 14061 1月 28 15:58 minirc_install_phase1.sh*
root@davinci-mini:/opt/mini# cd ../../
root@davinci-mini:/# chmod -R 777 /opt
root@davinci-mini:/# cd /opt/mini
root@davinci-mini:/opt/mini# ll
total 47960
drwxrwxrwx 2 root root 4096 1月 28 16:02 ./
drwxrwxrwx 3 root root 4096 8月 22 2022 ../
```

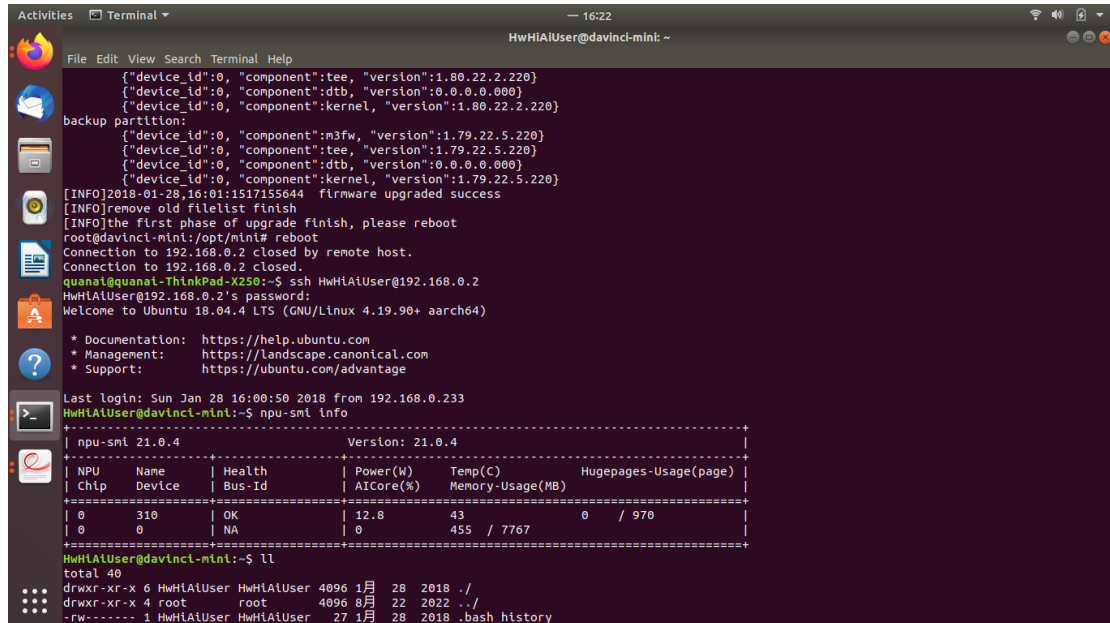
3 进入 /opt/mini 文件下，输入命令 `chmod u+x minirc_install_phase1.sh`，修改 `minirc_install_phase1.sh` 文件的权限，使其可以正常执行。执行如下命令，升级脚本。

`setsid -w ./minirc_install_phase1.sh`



```
Activities  Terminal  16:22  HwHIAUser@davinci-mini: -
File Edit View Search Terminal Help
drwxrwxrwx 2 root root 4096 1月 28 16:02 /
drwxrwxrwx 3 root root 4096 8月 22 2022 /
-rw-r--r-- 1 HwHIAUser HwHIAUser 49029541 1月 28 16:02 Ascend310-driver-21.0.4-ubuntu18.04-aarch64-minirc.tar.gz
-rwxrwxrwx 1 root root 14061 1月 28 15:58 minirc_install_phase1.sh*
root@davinci-mini:/opt/mini# chmod -R 777 Ascend310-driver-21.0.4-ubuntu18.04-aarch64-minirc.tar.gz
root@davinci-mini:/opt/mini# chmod u+x minirc_install_phase1.sh
root@davinci-mini:/opt/mini# setsid -w ./minirc_install_phase1.sh
[INFO]mini first phase of upgrade start
[INFO]PKG_DIR=/opt/mini
[INFO]INSTALL_CACHE_DIR=/var/mini/install_cache
[INFO]RUN_TYPE=mini
can't not find /opt/mini/A200dk-npu-driver*.tar.gz, installation failed
root@davinci-mini:/opt/mini# rm Ascend310-driver-21.0.4-ubuntu18.04-aarch64-minirc.tar.gz
root@davinci-mini:/opt/mini# ll
total 24
drwxrwxrwx 2 root root 4096 1月 28 16:03 /
drwxrwxrwx 3 root root 4096 8月 22 2022 /
-rwxrwxrwx 1 root root 14061 1月 28 15:58 minirc_install_phase1.sh*
root@davinci-mini:/opt/mini# ll
total 48348
drwxrwxrwx 2 root root 4096 1月 28 16:05 /
drwxrwxrwx 3 root root 4096 8月 22 2022 /
-rw-r--r-- 1 HwHIAUser HwHIAUser 49427084 1月 28 16:05 A200dk-npu-driver-21.0.4-ubuntu18.04-aarch64-minirc.tar.gz
-rwxrwxrwx 1 root root 14061 1月 28 15:58 minirc_install_phase1.sh*
root@davinci-mini:/opt/mini# chmod -R 777 A200dk-npu-driver-21.0.4-ubuntu18.04-aarch64-minirc.tar.gz
root@davinci-mini:/opt/mini# setsid -w ./minirc_install_phase1.sh
[INFO]mini first phase of upgrade start
[INFO]PKG_DIR=/opt/mini
[INFO]INSTALL_CACHE_DIR=/var/mini/install_cache
[INFO]RUN_TYPE=mini
[INFO]start install driver-18.04
[INFO]freeSpace:6976M
[INFO]extract package, file name:/opt/mini/A200dk-npu-driver-21.0.4-ubuntu18.04-aarch64-minirc.tar.gz
[INFO]extract package succ
[INFO]writing files to sdcard, please waiting several minutes ...
[INFO]delete original firmware
[INFO]copy new firmware to /fw
[INFO]copy nve.bin to /fw succ
```

4 执行完毕后，重启开发板，登录系统，可以查看到版本升级为 21.0.4



The terminal window shows the following sequence of events:

- Initial state: HwHiAIUser@davinci-mini
- JSON configuration for components: tee, dtb, kernel, m3fw.
- Backup partition command.
- INFO messages: "2018-01-28,16:01:1517155644 firmware upgraded success", "remove old filelist finish", "the first phase of upgrade finish, please reboot".
- Reboot command: root@davinci-mini:/opt/mini# reboot
- Connection to 192.168.0.2 closed by remote host.
- Connection to 192.168.0.2 closed.
- SSH session from guanai-ThinkPad-X250 to HwHiAIUser@192.168.0.2.
- Welcome to Ubuntu 18.04.4 LTS (GNU/Linux 4.19.90+ aarch64).
- System information links: Documentation, Management, Support.
- Last login: Sun Jan 28 16:00:50 2018 from 192.168.0.233.
- Command: HwHiAIUser@davinci-mini:~\$ npu-sml info
- Output: npu-sml 21.0.4 Version: 21.0.4
- Table showing hardware status:

NPU	Name	Health	Power(W)	Temp(C)	Hugepages-Usage(page)
0	310	OK	12.8	43	0 / 970
0	0	NA	0	455 / 7767	

Additional commands and output:

- Command: HwHiAIUser@davinci-mini:~\$ ll
- Output: total 40
- File listing: drwxr-xr-x 0 HwHiAIUser HwHiAIUser 4096 1月 28 2018 ./, drwxr-xr-x 4 root root 4096 8月 22 2022 ../, -rw-r--r-- 1 HwHiAIUser HwHiAIUser 27 1月 28 2018 .bash\_history