

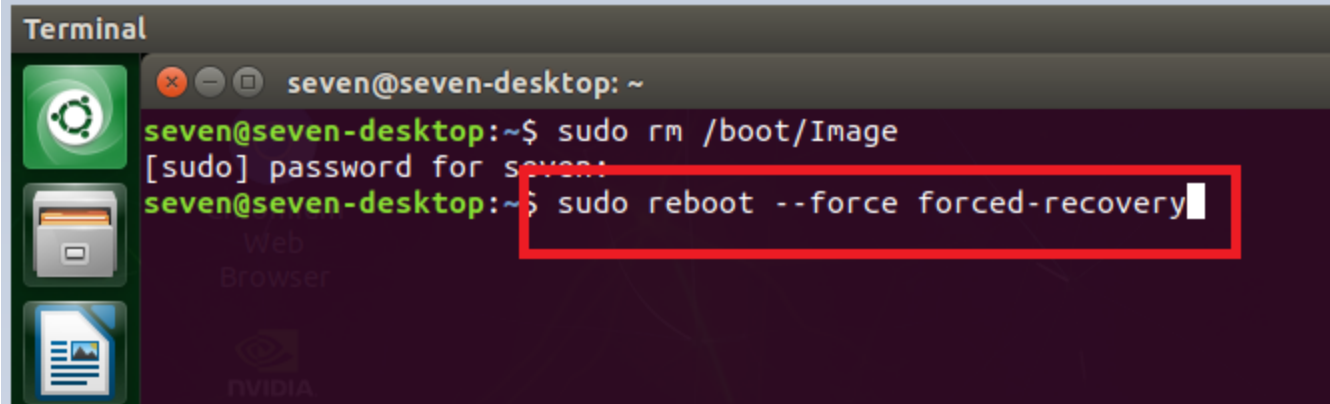
How to reflash AIR-020

- First we need to prepare the following things:
 - Host PC with Ubuntu 18.04 or later
 - Micro USB cable with data capable cables
 - AIR-020X Image



How to reflash AIR-020

- First, put the AIR-020 device to recovery mode, Method 1 : startup AIR-020 and use the “sudo reboot –force forced-recovery” then the AIR-020 reboot into recovery mode

A screenshot of a Linux terminal window titled "Terminal". The window shows a user named "seven" at a desktop named "seven-desktop". The terminal prompt is "seven@seven-desktop: ~". The user has entered the command "sudo rm /boot/Image" and has been prompted for a password. The user has then entered the command "sudo reboot --force forced-recovery", which is highlighted with a red rectangular box. The terminal background is dark purple with green text. On the left side of the terminal window, there are icons for a green gear, a printer, and a document. At the bottom of the terminal window, there are icons for "Web Browser" and "NVIDIA".

```
Terminal
seven@seven-desktop: ~
seven@seven-desktop:~$ sudo rm /boot/Image
[sudo] password for seven:
seven@seven-desktop:~$ sudo reboot --force forced-recovery
```

How to reflash AIR-020

- Method 2 : we need to open the bottom cover.



How to reflash AIR-020

- Hold the recovery mode button and press the power button, release the recovery mode button after 5 seconds, the AIR-020X is recovery mode.



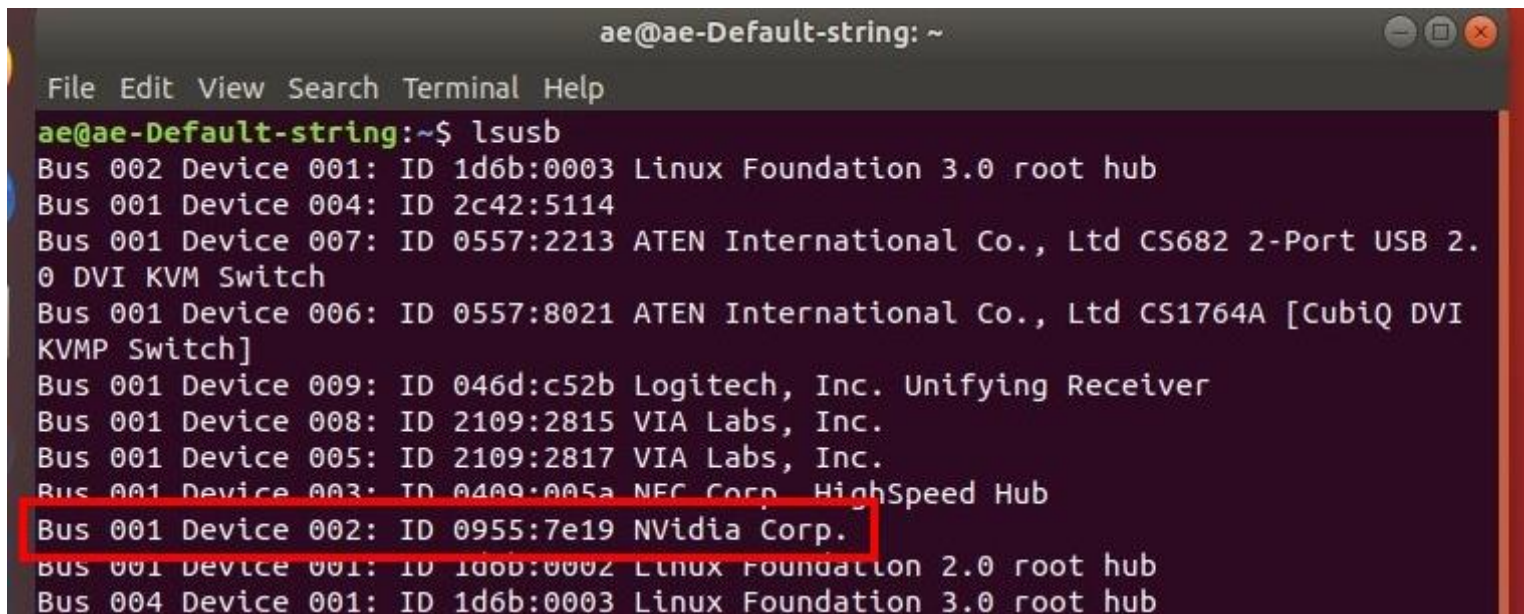
How to reflash AIR-020

- Use Micro USB cable connect from host PC to AIR-020.



How to reflash AIR-020

- On the host PC, open the terminal and use the `$ lsusb` command to check the connection success.



```
ae@ae-Default-string: ~  
File Edit View Search Terminal Help  
ae@ae-Default-string:~$ lsusb  
Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub  
Bus 001 Device 004: ID 2c42:5114  
Bus 001 Device 007: ID 0557:2213 ATEN International Co., Ltd CS682 2-Port USB 2.0 DVI KVM Switch  
Bus 001 Device 006: ID 0557:8021 ATEN International Co., Ltd CS1764A [CubiQ DVI KVMP Switch]  
Bus 001 Device 009: ID 046d:c52b Logitech, Inc. Unifying Receiver  
Bus 001 Device 008: ID 2109:2815 VIA Labs, Inc.  
Bus 001 Device 005: ID 2109:2817 VIA Labs, Inc.  
Bus 001 Device 003: ID 0409:005a NEC Corp. HighSpeed Hub  
Bus 001 Device 002: ID 0955:7e19 NVidia Corp.  
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub  
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
```

How to reflash AIR-020

- Install required package on Host for build AIR-020 image.

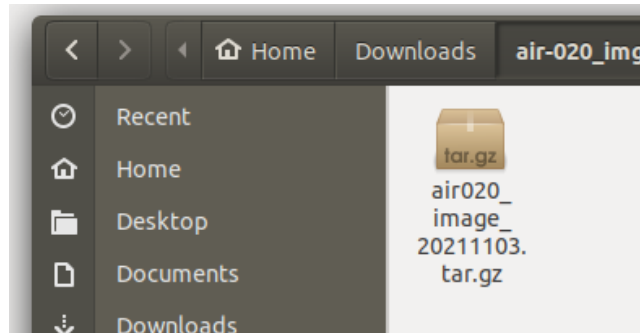
```
$ sudo apt install build-essential python libxml2-  
utils abootimg sshpass binutils -y
```


How to reflash AIR-020

- Download the Image and unzip to .tar.gz

<https://www.dropbox.com/sh/27wh8f4n5r9aa8b/AACP4GcfgwXfiS-Tdh1Nz6ODa?dl=0>

- Use command: “**sudo tar zxvf AIR-020*.tar.gz**”
to extract the image in terminal



How to reflash AIR-020

- Start to flash with the following steps in terminal:
 - `$ cd Linux_for_Tegra/194/`(If AIR-020 NVMe is 128G, use next command to install on NVMe)
 - `$ sudo ./tools/kernel_flash/l4t_initrd_flash.sh --external-device nvme0n1 -c ./tools/kernel_flash/flash_l4t_nvme.xml -S 96GiB --showlogs --erase-all jetson-xavier-nx-devkit-emmc nvme0n1p1`

```
ae@ae-Default-string: ~
File Edit View Search Terminal Help
ae@ae-Default-string:~$ lsusb
Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 001 Device 004: ID 2c42:5114
Bus 001 Device 007: ID 0557:2213 ATEN International Co., Ltd. DVI KVM Switch
Bus 001 Device 006: ID 0557:8021 ATEN International Co., Ltd. [KVM Switch]
Bus 001 Device 009: ID 046d:c52b Logitech, Inc. Unifying Receiver
Bus 001 Device 008: ID 2109:2815 VIA Labs, Inc. USB 3.0 Hub
Bus 001 Device 005: ID 2109:2817 VIA Labs, Inc. USB 3.0 Hub
Bus 001 Device 003: ID 0409:005a NEC Corp. HighSpeed Hub
Bus 001 Device 002: ID 0955:7419 Nvidia Corp.
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 3.0 root hub
```

How to reflash AIR-020

- When the terminal shows like the photo below, it means the flash success and can start to use AIR-020.
 - \$ df

```
*** The target t186ref has been flashed successfully. ***  
Make the target filesystem available to the device and reset the board to boot from external nvme0n1p1.
```

```
ubuntu@localhost:~$ df  
Filesystem      1K-blocks    Used Available Use% Mounted on  
/dev/nvme0n1p1 122546800 11969544 104309200 11% /  
devtmpfs        1574032      0    1574032   0% /dev  
tmpfs           1958684      40    1958644   1% /dev/shm  
tmpfs           1958684    20816    1937868   2% /run  
tmpfs           5120         4        5116     1% /run/lock  
tmpfs           1958684      0    1958684   0% /sys/fs/cgroup  
tmpfs           391736      132     391604   1% /run/user/1000  
/dev/mmcblk0p1 14318640    76824   13491432   1% /media/ubuntu/ae24324b  
ubuntu@localhost:~$
```

Contact Window and File Link

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*Go Together,
We Go Far and Grow Big*

