

# Write SUPER boot

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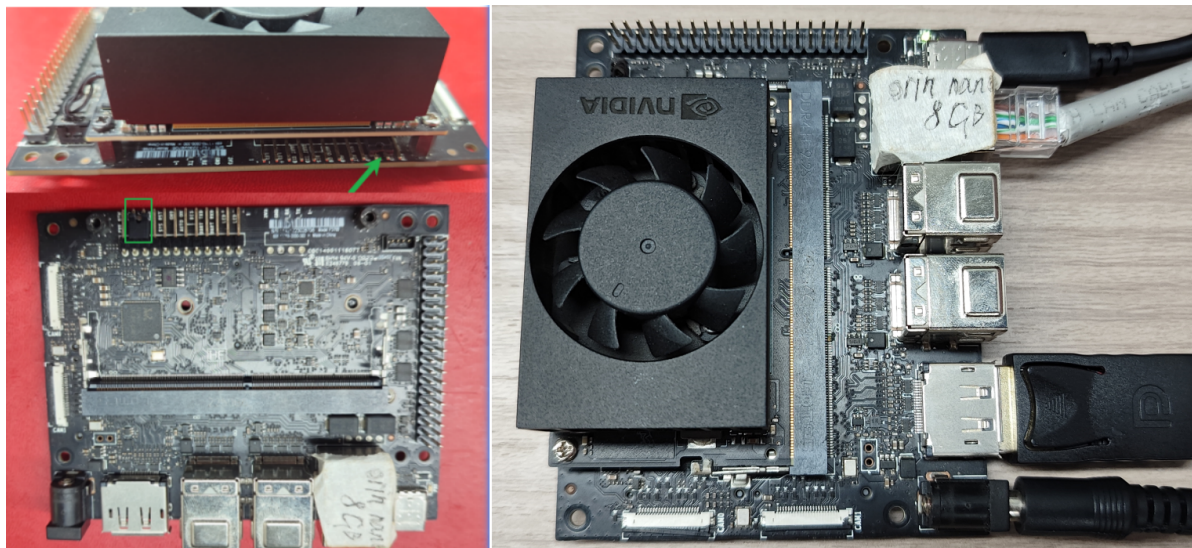
The purpose of this tutorial is to burn SUPER boot to the Jetson Orin series motherboard (used with Jetpack 6.2 system). There is no need to install a solid-state drive during the burning process. After the burning is completed, install the solid-state drive to the motherboard and start the system to use the factory system that we have set up in advance.

## 1. Flashing mode

### 1.1. Hardware connection

1. Use a jumper cap to short the FC REC and GND pins under the core board: the core board can be left unassembled, the picture is just for clearer observation
2. The Jetson Orin motherboard needs to be connected to a DC power adapter, DP data cable, network cable and Type C data cable: Type C data cable is connected to the computer

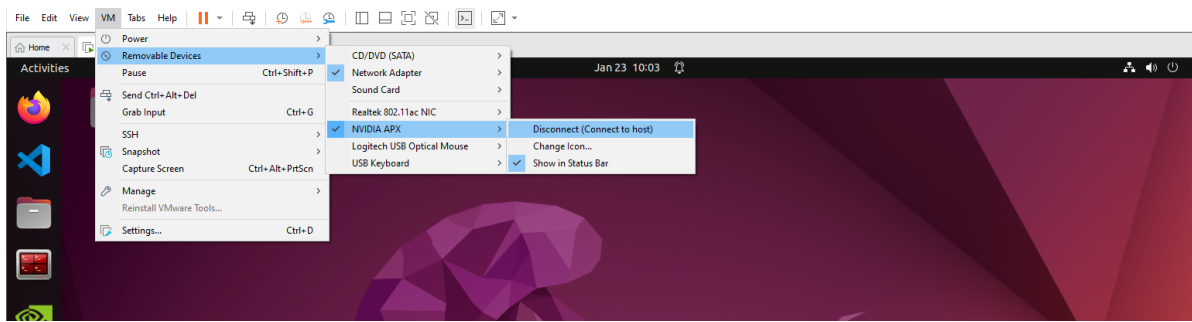
Note: The DP data cable and network cable can be used without burning the boot, but they will be needed when using the motherboard later



### 1.2. Software connection

Users need to use the virtual machine we provide to burn SUPER boot. We need to connect the motherboard to the virtual machine so that it can be recognized by the Ubuntu system:

```
virtual machine username: yahboom
virtual machine password: yahboom
```



```

yahboom@VM: ~
yahboom@VM: ~ 118x30
yahboom@VM:~$ lsusb
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 003 Device 004: ID 0e0f:0002 VMware, Inc. Virtual USB Hub
Bus 003 Device 003: ID 0e0f:0002 VMware, Inc. Virtual USB Hub
Bus 003 Device 006: ID 0955:7523 NVIDIA Corp. APX
Bus 003 Device 002: ID 0e0f:0003 VMware, Inc. Virtual Mouse
Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 002: ID 0e0f:0002 VMware, Inc. Virtual USB Hub
Bus 002 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
yahboom@VM:~$

```

## 2. Write boot

Open the terminal, enter the specified folder and run the script: If the burning fails, you can disconnect the motherboard power and reconnect the virtual machine to run the command

```
cd ~/jetpack_6.2/Linux_for_Tegra && sudo ./yahboom_flash.sh.x
```

```

yahboom@VM: ~
yahboom@VM: ~ 118x30
yahboom@VM:~$ lsusb
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 003 Device 004: ID 0e0f:0002 VMware, Inc. Virtual USB Hub
Bus 003 Device 003: ID 0e0f:0002 VMware, Inc. Virtual USB Hub
Bus 003 Device 006: ID 0955:7523 NVIDIA Corp. APX
Bus 003 Device 002: ID 0e0f:0003 VMware, Inc. Virtual Mouse
Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 002: ID 0e0f:0002 VMware, Inc. Virtual USB Hub
Bus 002 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
yahboom@VM:~$ cd ~/jetpack_6.2/Linux_for_Tegra && sudo ./yahboom_flash.sh.x
[sudo] password for yahboom:
#####
# L4T BSP Information:
# R36 , REVISION: 4.3
# User release: 0.0
#####
ECID is 0x80012344705DF1D76C0000001FD8140
# Target Board Information:
# Name: jetson-orin-nano-devkit-super, Board Family: generic, SoC: Tegra 234,
# OpMode: production, Boot Authentication: NS,
# Disk encryption: disabled ,
#####
copying device_config(/home/yahboom/jetpack_6.2/Linux_for_Tegra/bootloader/generic/BCT/tegra234-mb1-bct-device-p3767-0
000.dts)... done.
copying misc_config(/home/yahboom/jetpack_6.2/Linux_for_Tegra/bootloader/generic/BCT/tegra234-mb1-bct-misc-p3767-0000.
dts)... done.
copying emc_fuse_dev_params(/home/yahboom/jetpack_6.2/Linux_for_Tegra/bootloader/generic/BCT/tegra234-br-bct-diag-boot
.dts)... done.
copying minratchet_config(/home/yahboom/jetpack_6.2/Linux_for_Tegra/bootloader/generic/BCT/tegra234-mb1-bct-ratchet-p3

```

```
yahboom@VM: ~/jetpack_6.2/Linux_for_Tegra
yahboom@VM: ~/jetpack_6.2/Linux_for_Tegra 135x35
[ 76.0156 ] Writing partition BCT with br_bct_BR.bct [ 8192 bytes ]
[ 76.0160 ] [.....] 100%
[ 82.6710 ] tegradevflash_v2 --write BCT-boot-chain_backup bct_backup.img
[ 82.6717 ] Bootloader version 01.00.0000
[ 83.0245 ] Writing partition BCT-boot-chain_backup with bct_backup.img [ 32768 bytes ]
[ 83.0248 ] [.....] 100%
[ 83.4461 ] tegradevflash_v2 --write A_MB1_BCT mb1_cold_boot_bct_MB1_sigheader.bct.encrypt
[ 83.4467 ] Bootloader version 01.00.0000
[ 83.7399 ] Writing partition A_MB1_BCT with mb1_cold_boot_bct_MB1_sigheader.bct.encrypt [ 17600 bytes ]
[ 83.7402 ] [.....] 100%
[ 83.9829 ] tegradevflash_v2 --write B_MB1_BCT mb1_cold_boot_bct_MB1_sigheader.bct.encrypt
[ 83.9833 ] Bootloader version 01.00.0000
[ 84.2747 ] Writing partition B_MB1_BCT with mb1_cold_boot_bct_MB1_sigheader.bct.encrypt [ 17600 bytes ]
[ 84.2754 ] [.....] 100%
[ 84.5188 ] tegradevflash_v2 --write A_MEM_BCT mem_coldboot_sigheader.bct.encrypt
[ 84.5192 ] Bootloader version 01.00.0000
[ 84.8233 ] Writing partition A_MEM_BCT with mem_coldboot_sigheader.bct.encrypt [ 243712 bytes ]
[ 84.8236 ] [.....] 100%
[ 87.8696 ] tegradevflash_v2 --write B_MEM_BCT mem_coldboot_sigheader.bct.encrypt
[ 87.8703 ] Bootloader version 01.00.0000
[ 88.1617 ] Writing partition B_MEM_BCT with mem_coldboot_sigheader.bct.encrypt [ 243712 bytes ]
[ 88.1632 ] [.....] 100%
[ 91.2087 ] Flashing completed

[ 91.2088 ] Coldbooting the device
[ 91.2096 ] tegrarcv2 --chip 0x23 0 --isnb2
[ 91.2101 ] MB2 version 01.00.0000
[ 91.5296 ] Coldbooting the device
[ 91.5301 ] tegrarcv2 --chip 0x23 0 --reboot coldboot
[ 91.5306 ] MB2 version 01.00.0000
*** The target generic has been flashed successfully. ***
Reset the board to boot from internal eMMC.

Total:132 seconds
yahboom@VM:~/jetpack_6.2/Linux_for_Tegra$
```

### 3. Start the system

After the burning boot is successful, install the solid state drive boot system provided by our factory.

