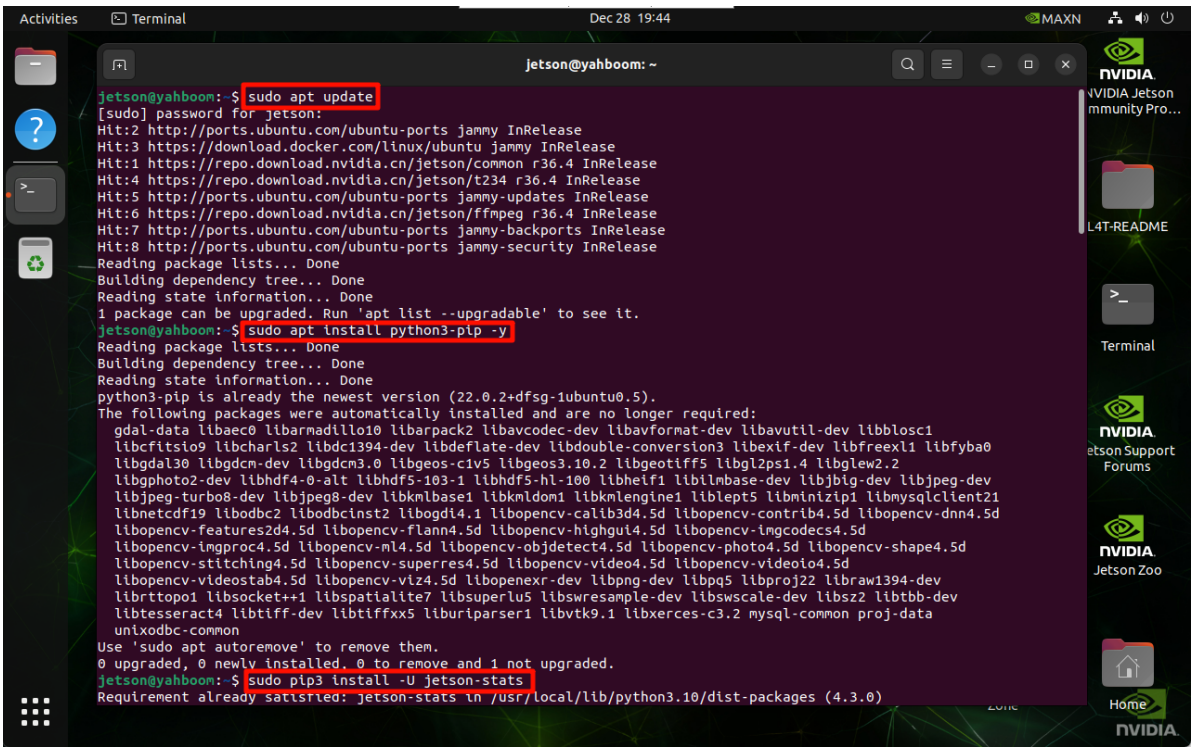
Jtop tool

Jtop is a system monitoring tool developed for NVIDIA Jetson series devices. It can display the resource usage of various aspects of Jetson devices, such as CPU, GPU, memory, disk, network, etc., and can display different hardware temperatures, power consumption, frequency, etc. in real time.

1. Install Jtop

```
sudo apt update
sudo apt install python3-pip -y
sudo pip3 install -U jetson-stats
```



2. Best performance mode

2.2. Enable MAX mode

Enabling MAX Power Mode on Jetson will ensure that all CPU and GPU cores are turned on:

```
sudo nvpmodel -m 0
```

2.2. Enable Jetson Clocks

Enabling Jetson Clocks will ensure that all CPU and GPU cores are running at maximum frequency:

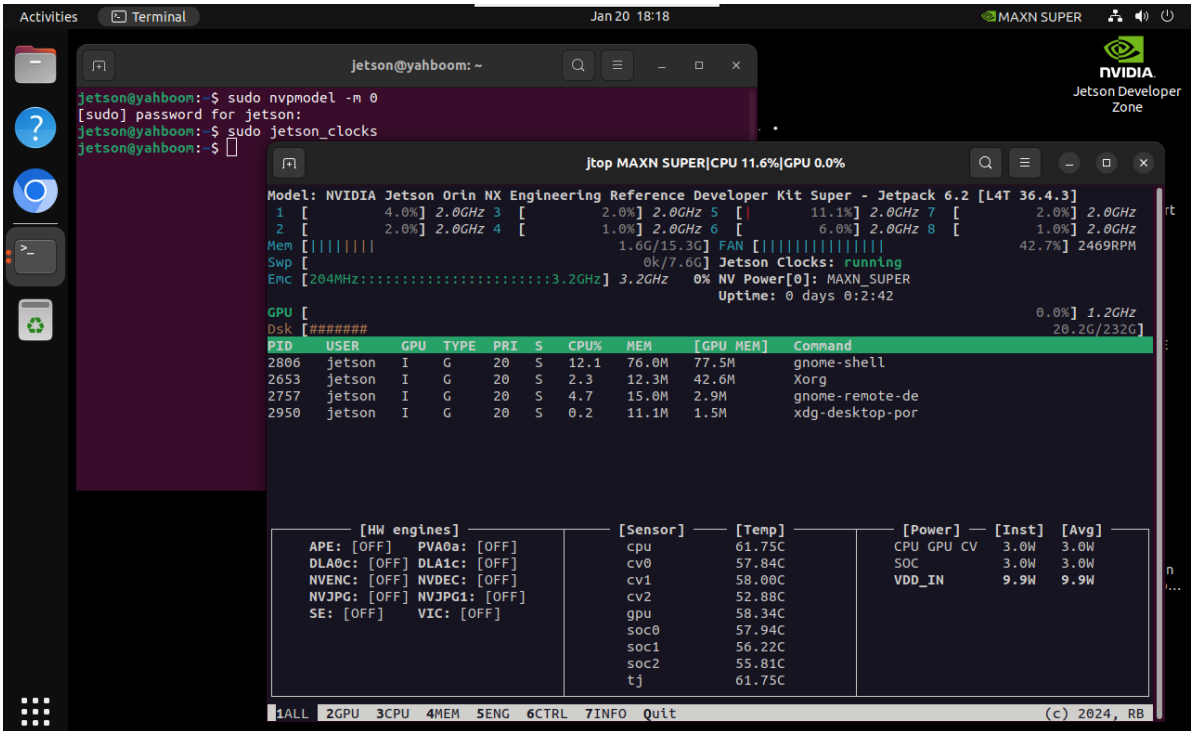
```
sudo jetson_clocks
```

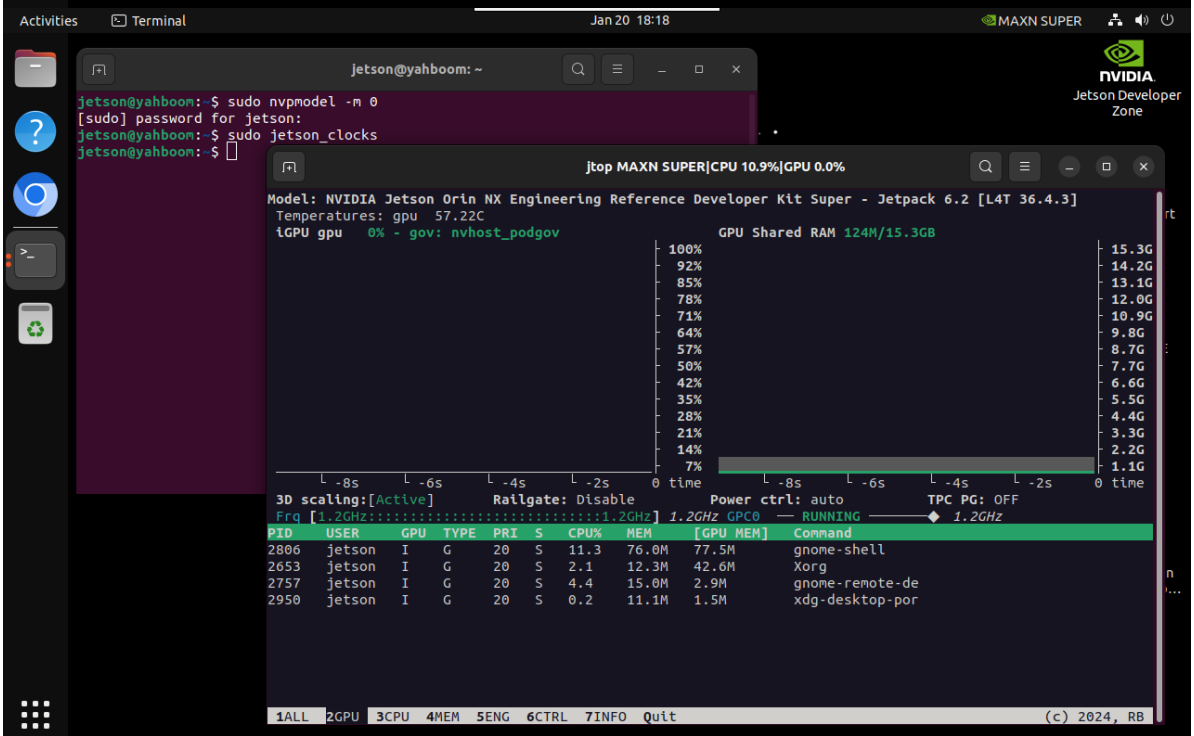
3. Use Jtop

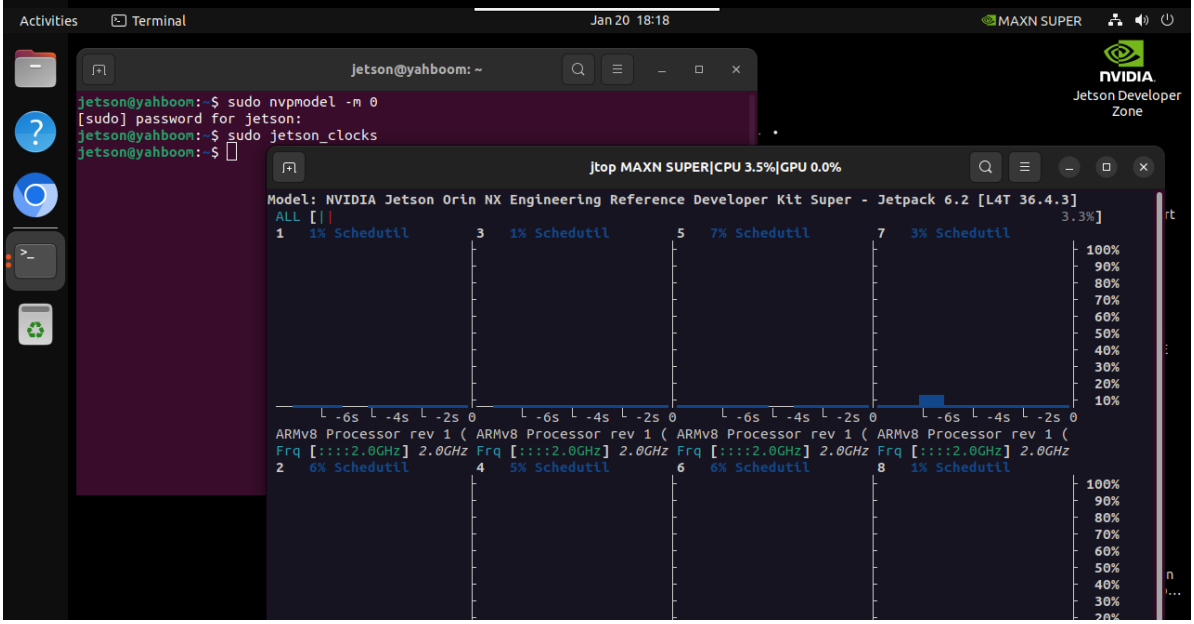
Only after restarting the system can you enter the jtop command in the terminal to start the Jtop tool:

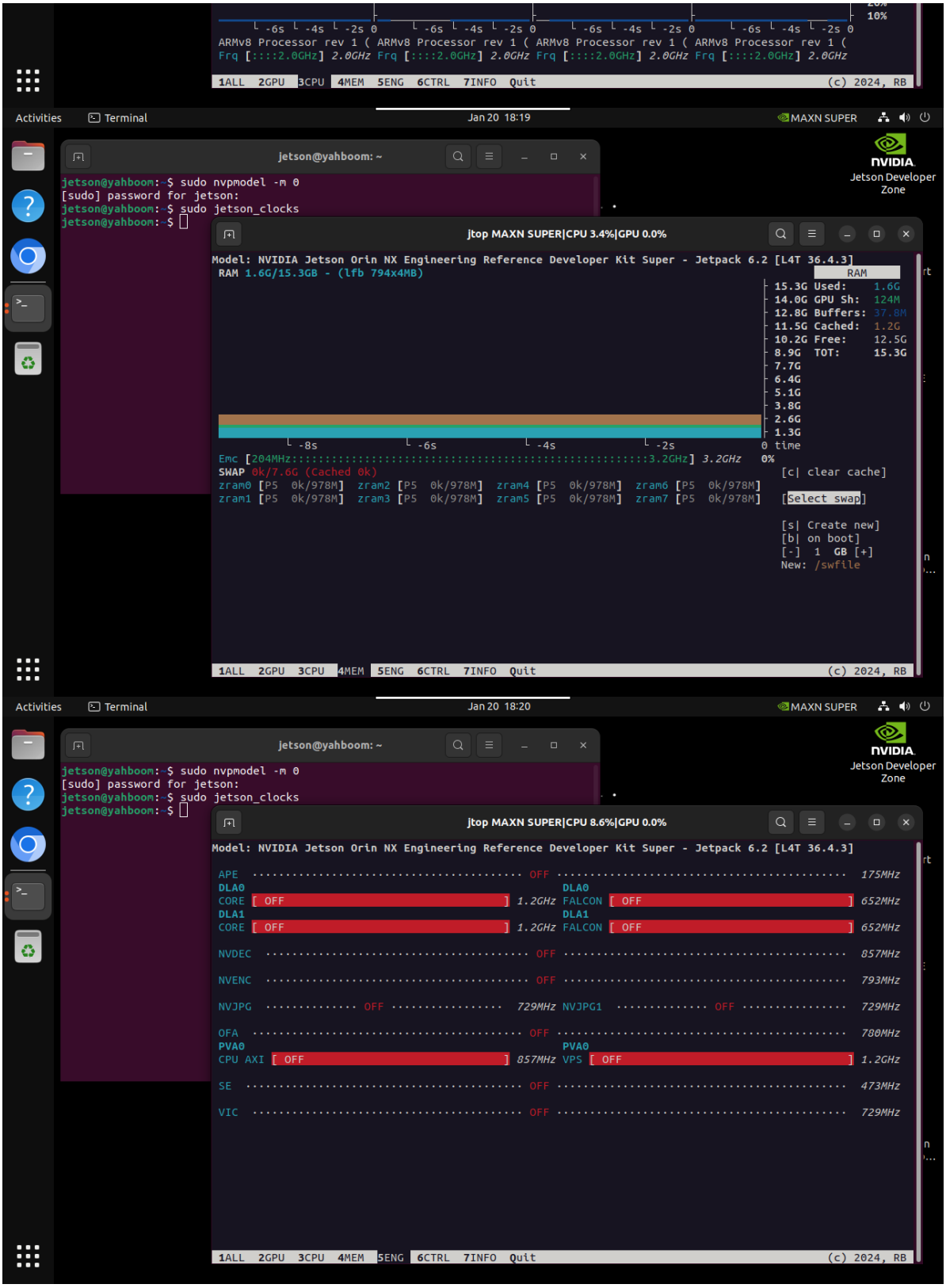
```
jtop
```

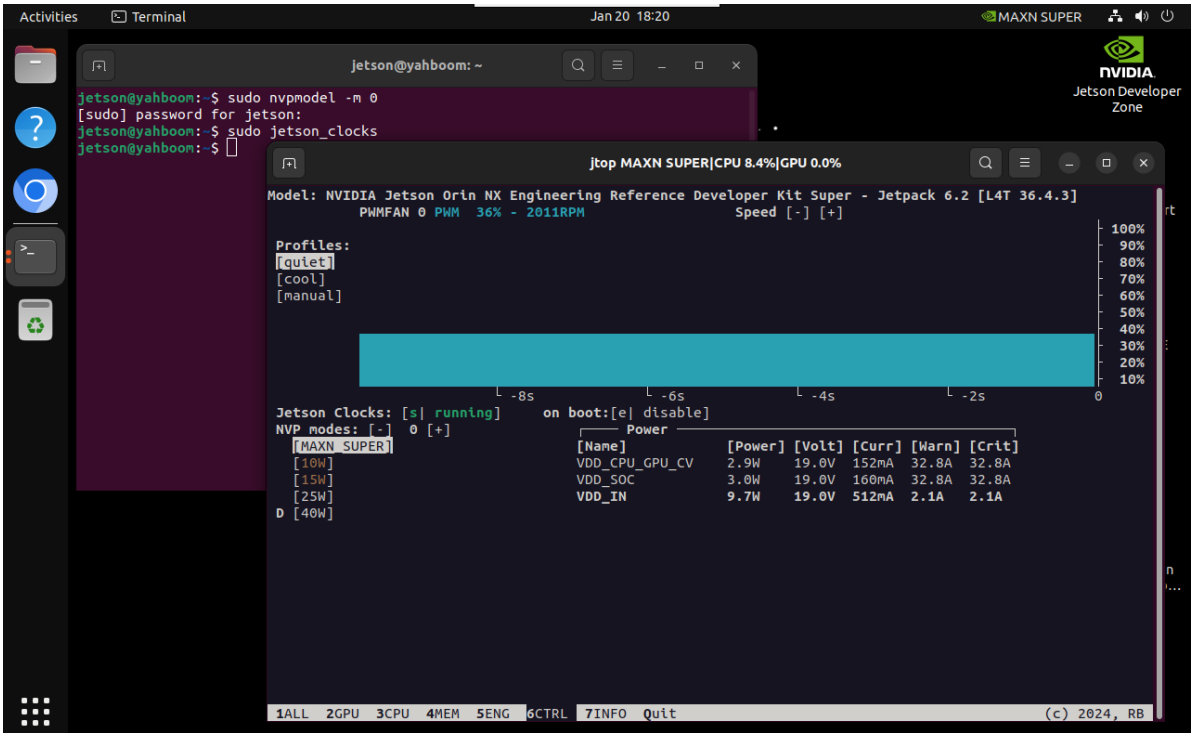
Note: Only when the motherboard power mode is selected as MAXN will the strongest performance parameters be displayed!

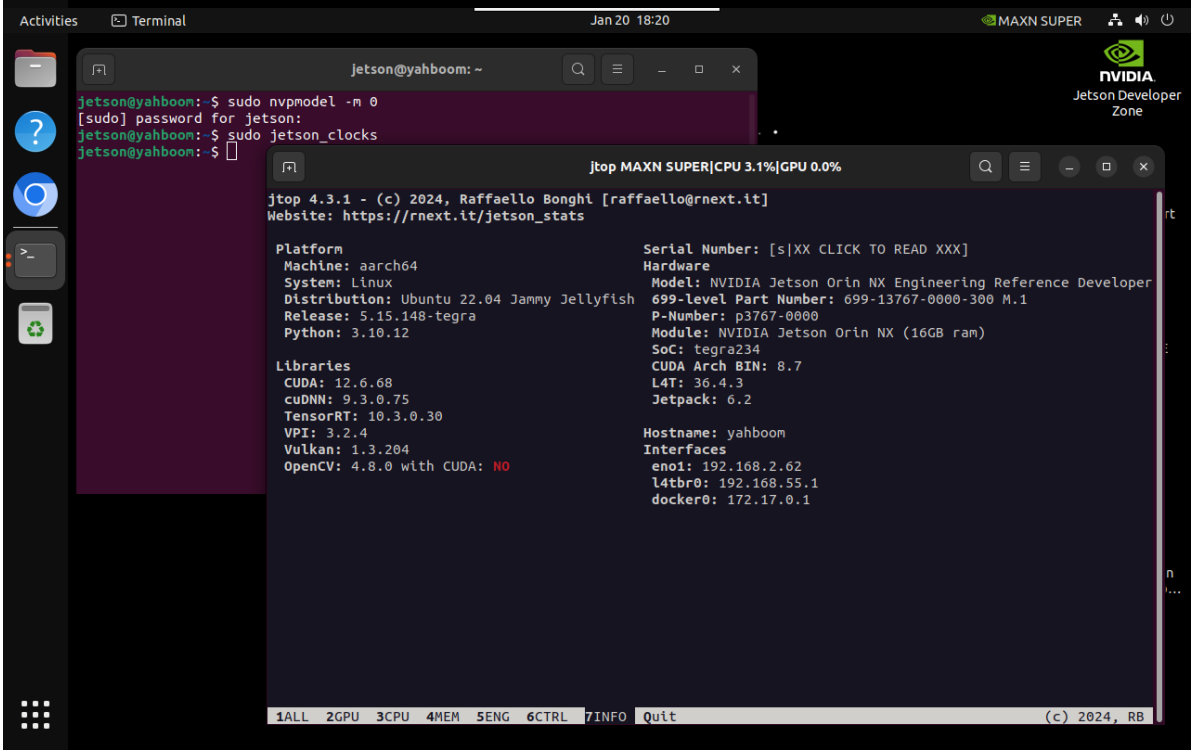

Activities
Terminal
Jan 20 18:18
MAXN SUPER
jetson@yahboom: ~
jetson@yahboom:~$ sudo nvpmodel -m 0
[sudo] password for jetson:
jetson@yahboom:~$ sudo jetson_clocks
jetson@yahboom:~$
jtop MAXN SUPER|CPU 11.6%|GPU 0.0%
Model: NVIDIA Jetson Orin NX Engineering Reference Developer Kit Super - Jetpack 6.2 [L4T 36.4.3]
Jetson Clocks: running
NV Power[0]: MAXN_SUPER
Uptime: 0 days 0:2:42
PID USER GPU TYPE PRI S CPU% MEM [GPU MEM] Command
2806 jetson I G 20 S 12.1 76.0M 77.5M gnome-shell
2653 jetson I G 20 S 2.3 12.3M 42.6M Xorg
2757 jetson I G 20 S 4.7 15.0M 2.9M gnome-remote-de
2950 jetson I G 20 S 0.2 11.1M 1.5M xdg-desktop-por
[HW engines]
APE: [OFF] PVA0a: [OFF]
DLA0c: [OFF] DLA1c: [OFF]
NVENC: [OFF] NVDEC: [OFF]
NVJPG: [OFF] NVJPG1: [OFF]
SE: [OFF] VIC: [OFF]
[Sensor] [Temp]
cpu 61.75C
cv0 57.84C
cv1 58.00C
cv2 52.88C
gpu 58.34C
soc0 57.94C
soc1 56.22C
soc2 55.81C
tj 61.75C
[Power] [Inst] [Avg]
CPU GPU CV 3.0W 3.0W
SOC 3.0W 3.0W
VDD_IN 9.9W 9.9W
1ALL 2GPU 3CPU 4MEM 5ENG 6CTRL 7INFO Quit
(c) 2024, RB


Activities
Terminal
Jan 20 18:18
MAXN SUPER
jetson@yahboom: ~
jetson@yahboom:~$ sudo nvpmodel -m 0
[sudo] password for jetson:
jetson@yahboom:~$ sudo jetson_clocks
jetson@yahboom:~$
jtop MAXN SUPER|CPU 10.9%|GPU 0.0%
Model: NVIDIA Jetson Orin NX Engineering Reference Developer Kit Super - Jetpack 6.2 [L4T 36.4.3]
Temperatures: gpu 57.22C
iGPU gpu 0% - gov: nvhost_podgov
GPU Shared RAM 124M/15.3GB
3D scaling:[Active] Railgate: Disable Power ctrl: auto TPC PG: OFF
PID USER GPU TYPE PRI S CPU% MEM [GPU MEM] Command
2806 jetson I G 20 S 11.3 76.0M 77.5M gnome-shell
2653 jetson I G 20 S 2.1 12.3M 42.6M Xorg
2757 jetson I G 20 S 4.4 15.0M 2.9M gnome-remote-de
2950 jetson I G 20 S 0.2 11.1M 1.5M xdg-desktop-por
1ALL 2GPU 3CPU 4MEM 5ENG 6CTRL 7INFO Quit
(c) 2024, RB


Activities
Terminal
Jan 20 18:18
MAXN SUPER
jetson@yahboom: ~
jetson@yahboom:~$ sudo nvpmodel -m 0
[sudo] password for jetson:
jetson@yahboom:~$ sudo jetson_clocks
jetson@yahboom:~$
jtop MAXN SUPER|CPU 3.5%|GPU 0.0%
Model: NVIDIA Jetson Orin NX Engineering Reference Developer Kit Super - Jetpack 6.2 [L4T 36.4.3]
ALL 3.3%
1 1% Schedutil
3 1% Schedutil
5 7% Schedutil
7 3% Schedutil
2 6% Schedutil
4 5% Schedutil
6 6% Schedutil
8 1% Schedutil
ARMv8 Processor rev 1 (ARMv8 Processor rev 1 (ARMv8 Processor rev 1 (ARMv8 Processor rev 1 (
Frq [:::2.0GHz] 2.0GHz Frq [:::2.0GHz] 2.0GHz Frq [:::2.0GHz] 2.0GHz Frq [:::2.0GHz] 2.0GHz


10%
ARMv8 Processor rev 1 (ARMv8 Processor rev 1 (ARMv8 Processor rev 1 (ARMv8 Processor rev 1 (
Frq [:::2.0GHz] 2.0GHz Frq [:::2.0GHz] 2.0GHz Frq [:::2.0GHz] 2.0GHz Frq [:::2.0GHz] 2.0GHz
1ALL 2GPU 3CPU 4MEM 5ENG 6CTRL 7INFO Quit (c) 2024, RB
Activities Terminal Jan 20 18:19 MAXN SUPER
jetson@yahboom: ~
jetson@yahboom:~$ sudo nvpmodel -m 0
[sudo] password for jetson:
jetson@yahboom:~$ sudo jetson_clocks
jetson@yahboom:~$
jtop MAXN SUPER|CPU 3.4%|GPU 0.0%
Model: NVIDIA Jetson Orin NX Engineering Reference Developer Kit Super - Jetpack 6.2 [L4T 36.4.3]
RAM 1.6G/15.3G - (lfb 794x4MB)
RAM
15.3G Used: 1.6G
14.0G GPU Sh: 124M
12.8G Buffers: 37.8M
11.5G Cached: 1.2G
10.2G Free: 12.5G
8.9G TOT: 15.3G
7.7G
6.4G
5.1G
3.8G
2.6G
1.3G
-8s -6s -4s -2s 0 time
Emc [204MHz:::3.2GHz] 3.2GHz 0%
SWAP 0k/7.6G (Cached 0k)
[c| clear cache]
zram0 [P5 0k/978M] zram2 [P5 0k/978M] zram4 [P5 0k/978M] zram6 [P5 0k/978M]
zram1 [P5 0k/978M] zram3 [P5 0k/978M] zram5 [P5 0k/978M] zram7 [P5 0k/978M]
[Select swap]
[s| Create new]
[b| on boot]
[-] 1 GB [+]
New: /swfile
1ALL 2GPU 3CPU 4MEM 5ENG 6CTRL 7INFO Quit (c) 2024, RB
Activities Terminal Jan 20 18:20 MAXN SUPER
jetson@yahboom: ~
jetson@yahboom:~$ sudo nvpmodel -m 0
[sudo] password for jetson:
jetson@yahboom:~$ sudo jetson_clocks
jetson@yahboom:~$
jtop MAXN SUPER|CPU 8.6%|GPU 0.0%
Model: NVIDIA Jetson Orin NX Engineering Reference Developer Kit Super - Jetpack 6.2 [L4T 36.4.3]
APE OFF 175MHz
DLA0 DLA0
CORE [OFF] 1.2GHz FALCON [OFF] 652MHz
DLA1 DLA1
CORE [OFF] 1.2GHz FALCON [OFF] 652MHz
NVDEC OFF 857MHz
NVENC OFF 793MHz
NVJPG OFF 729MHz NVJPG1 OFF 729MHz
OFA OFF 780MHz
PVA0 PVA0
CPU AXI [OFF] 857MHz VPS [OFF] 1.2GHz
SE OFF 473MHz
VIC OFF 729MHz
1ALL 2GPU 3CPU 4MEM 5ENG 6CTRL 7INFO Quit (c) 2024, RB


Activities
Terminal
Jan 20 18:20
MAXN SUPER
jetson@yahboom: ~
jetson@yahboom:~$ sudo nvpmodel -m 0
[sudo] password for jetson:
jetson@yahboom:~$ sudo jetson_clocks
jetson@yahboom:~$
jtop MAXN SUPER|CPU 8.4%|GPU 0.0%
Model: NVIDIA Jetson Orin NX Engineering Reference Developer Kit Super - Jetpack 6.2 [L4T 36.4.3]
PWMFAN 0 PWM 36% - 2011RPM
Speed [-] [+]
Profiles:
[quiet]
[cool]
[manual]
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
-8s
-6s
-4s
-2s
0
Jetson Clocks: [s| running]
on boot:[e| disable]
NVP modes: [-] 0 [+]
[MAXN SUPER]
[10W]
[15W]
[25W]
D [40W]
Power
[Name] [Power] [Volt] [Curr] [Warn] [Crit]
VDD_CPU_GPU_CV 2.9W 19.0V 152mA 32.8A 32.8A
VDD_SOC 3.0W 19.0V 160mA 32.8A 32.8A
VDD_IN 9.7W 19.0V 512mA 2.1A 2.1A
1ALL 2GPU 3CPU 4MEM 5ENG 6CTRL 7INFO Quit
(c) 2024, RB
NVIDIA
Jetson Developer Zone


Activities
Terminal
Jan 20 18:20
MAXN SUPER
jetson@yahboom: ~
jetson@yahboom:~$ sudo nvpmodel -m 0
[sudo] password for jetson:
jetson@yahboom:~$ sudo jetson_clocks
jetson@yahboom:~$
jtop MAXN SUPER|CPU 3.1%|GPU 0.0%
jtop 4.3.1 - (c) 2024, Raffaello Bonghi [raffaello@rnext.it]
Website: https://rnext.it/jetson_stats
Platform
Machine: aarch64
System: Linux
Distribution: Ubuntu 22.04 Jammy Jellyfish
Release: 5.15.148-tegra
Python: 3.10.12
Libraries
CUDA: 12.6.68
cuDNN: 9.3.0.75
TensorRT: 10.3.0.30
VPI: 3.2.4
Vulkan: 1.3.204
OpenCV: 4.8.0 with CUDA: NO
Serial Number: [s|XX CLICK TO READ XXX]
Hardware
Model: NVIDIA Jetson Orin NX Engineering Reference Developer
699-level Part Number: 699-13767-0000-300 M.1
P-Number: p3767-0000
Module: NVIDIA Jetson Orin NX (16GB ram)
SoC: tegra234
CUDA Arch BIN: 8.7
L4T: 36.4.3
Jetpack: 6.2
Hostname: yahboom
Interfaces
eno1: 192.168.2.62
l4tbr0: 192.168.55.1
docker0: 172.17.0.1
1ALL 2GPU 3CPU 4MEM 5ENG 6CTRL 7INFO Quit
(c) 2024, RB
NVIDIA
Jetson Developer Zone