

ATC3xxx Series User Manual

Warning

***** DO NOT USE APT UPGRADE or DIST-UPGRADE on ATC series system. *****

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It may overwritten some files(bootloader,kernel,dtb...) by standard nvidia packages.

Histories:

Version	Description
v1.1.1	1. Added "Update bootloader" instruction. (2025/11/4)
v1.1.0	2. Added "ATC Series OTA Update" instruction. (2025/10/29)
v1.0.10	1. Updated GMSL2 camera support list. (2025.10.03)
v1.0.9	1. Updated GMSL2 camera support list. (2025.08.26)
v1.0.8	1. Updated GMSL2 camera support list. (2025.07.22)
v1.0.7	1. Removed "switch root from NVMe" chapter. (2025.06.18) 2. Added "ATC products tools" instruction. (2025.06.18)
v1.0.6	1. Modified recovery image of ATC series system. (2024.07.02)
v1.0.5	1. Added ATC3520 product. (2023.08.25)
v1.0.4	1. Added ATC3540 product. (2023.05.16) 2. Corrected the errors in this document.
v1.0.3	1. Added ATC3750 product. (2023.01.07) 2. Updated SDK and AI Demo Guide.
v1.0.2	1. Modified AI Demo. (2022.07.29)
v1.0.1	1. Modified Switch root and added install SDK component. (2022.07.28)
v1.0.0	1. First released. (2021.11.03)



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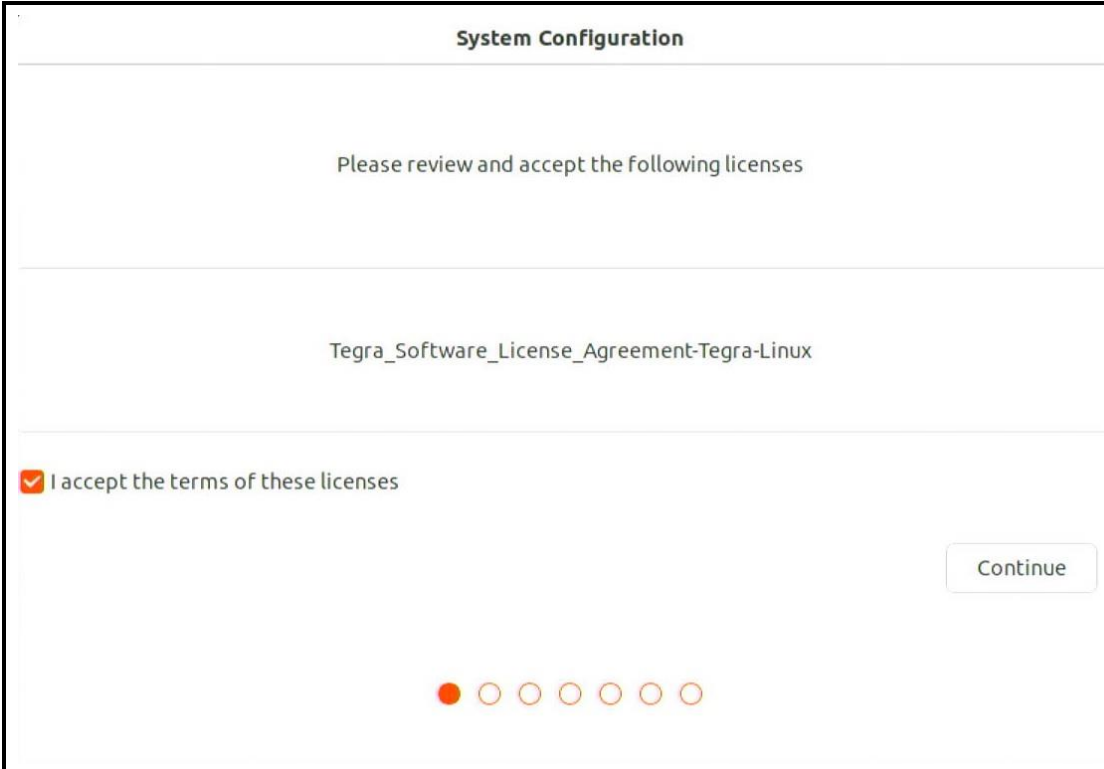
1. Introduction

Thank you for using the Nexcom ATC series Product. When you boot up the system first time, you need to do some settings, like selecting the time zone, setting a user account, etc. After finishing the setting, you have to install MUT package, then you can use all of the functions of ATC series Product.

Initialization

1.1. System Configuration

When you boot up ATC product first time, you will see these screens as follows:



The image shows a 'System Configuration' window. At the top, it says 'System Configuration'. Below that, it says 'Please review and accept the following licenses'. Then, it lists 'Tegra_Software_License_Agreement-Tegra-Linux'. There is a checkbox with a checkmark and the text 'I accept the terms of these licenses'. To the right of this is a 'Continue' button. At the bottom, there is a progress indicator consisting of seven circles, with the first one filled in red and the others empty.

Figure 1. Check the terms.

System Configuration

Welcome

Asturianu	Bahasa Indonesia	Bosanski	Català
Čeština	Cymraeg	Dansk	Deutsch
Eesti	English	Español	Esperanto
Euskara	Français	Gaeilge	Galego
Hrvatski	Íslenska	Italiano	Kurdî
Latviski	Lietuviškai	Magyar	Nederlands
No localization (UTF-8)	Norsk bokmål	Norsk nynorsk	Occitan
Polski	Português	Português do Brasil	Română
Sámegillii	Shqip	Slovenčina	Slovenščina

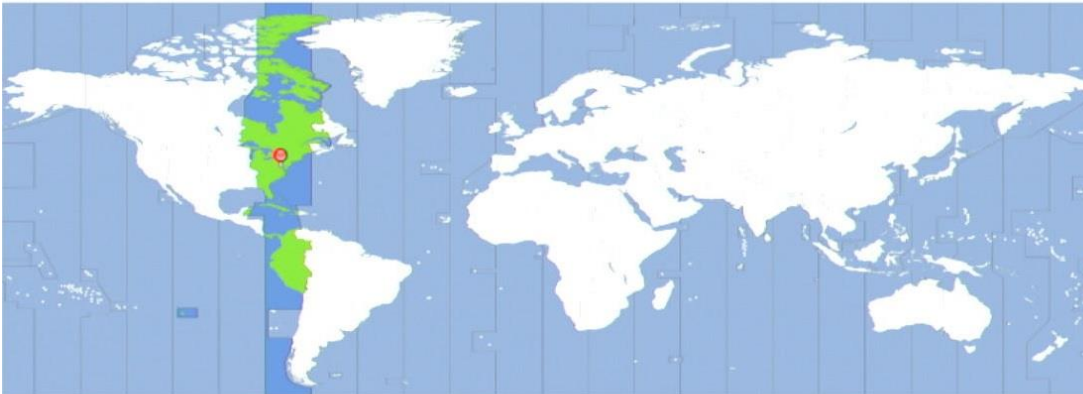
Back

Continue

Figure 2. Select language

System Configuration

Where are you?



New York

Back

Continue

Figure 3. Select location

The image shows a 'System Configuration' window titled 'Who are you?'. It contains several input fields: 'Your name:' (a long text box), 'Your computer's name:' (a text box with a hint 'The name it uses when it talks to other computers.'), 'Pick a username:' (a text box), 'Choose a password:' (a text box with an eye icon), and 'Confirm your password:' (a text box). Below these are two radio buttons: 'Log in automatically' (unselected) and 'Require my password to log in' (selected). At the bottom right are 'Back' and 'Continue' buttons. At the bottom center is a progress bar with seven circles, the last one of which is empty.

Figure 4. Enter name and password

The image shows a 'System Configuration' window titled 'Configuring time zone...'. It features a progress bar with a red segment on the left and a circular icon with a clock face. A 'Skip' button is located in the top right corner.

Figure 5. Download and update

After system configuration, you need install another necessary packages.

2. Recovery image of ATC series system

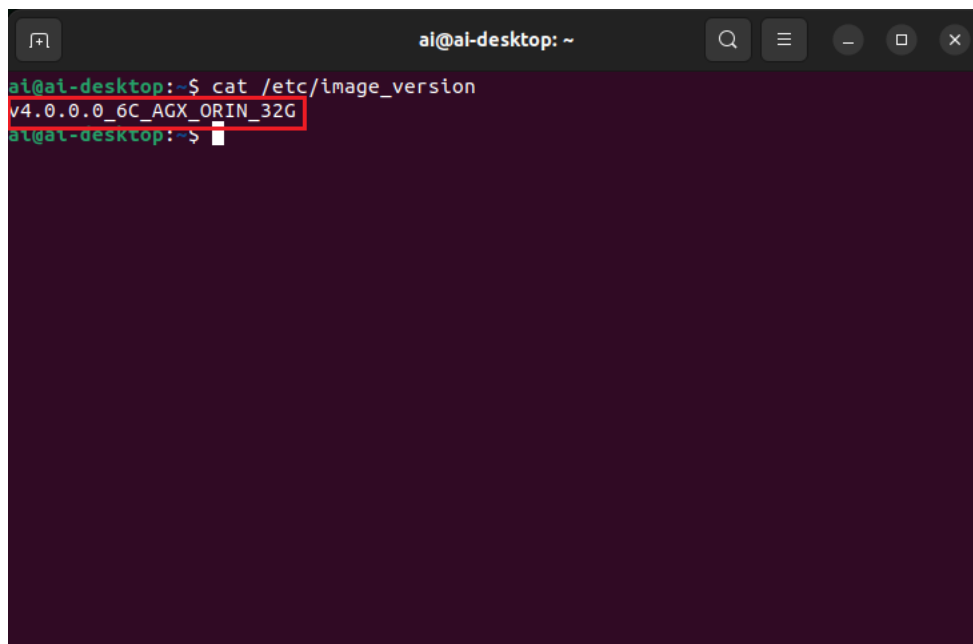
2.1. Prepare materials

1. A computer (Host) and install the Ubuntu 18.04 or 20.04 system.
2. USB flash driver*1 (For images, the capacity depends on the size of the created image, and a minimum capacity of 3GB is required).
3. Micro USB cable.

2.2. Recovery

1. Boot up the ATC series system and check current image version.

\$ cat /etc/image_version



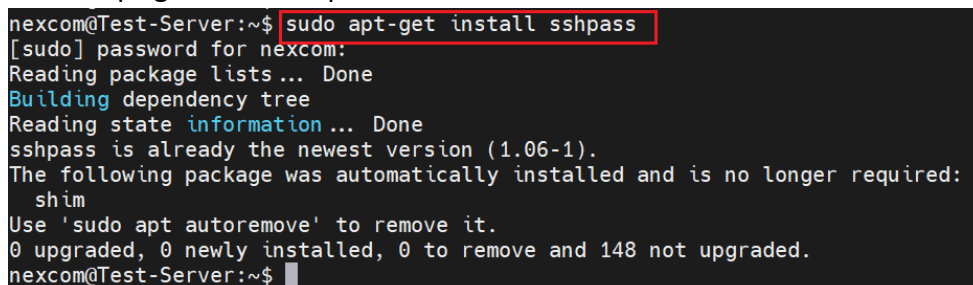
```
ai@ai-desktop: ~  
ai@ai-desktop:~$ cat /etc/image_version  
v4.0.0.0_6C_AGX_ORIN_32G  
ai@ai-desktop:~$
```

2. Find out the corresponding new version, e.g.

ATC3750-6C_mfi_v4.0.0.0_AGX_ORIN_32G.tar.gz

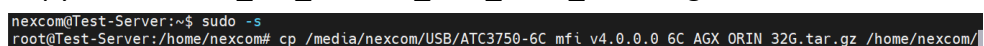
3. In host PC, install sshpass package.

\$ sudo apt-get install sshpass



```
nexcom@Test-Server:~$ sudo apt-get install sshpass  
[sudo] password for nexcom:  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
sshpass is already the newest version (1.06-1).  
The following package was automatically installed and is no longer required:  
  shim  
Use 'sudo apt autoremove' to remove it.  
0 upgraded, 0 newly installed, 0 to remove and 148 not upgraded.  
nexcom@Test-Server:~$
```

4. Copy ATC3750-6C_mfi_v4.0.0.0_AGX_ORIN_32G.tar.gz to host.



```
nexcom@Test-Server:~$ sudo -s  
root@Test-Server:/home/nexcom# cp /media/nexcom/USB/ATC3750-6C_mfi_v4.0.0.0_AGX_ORIN_32G.tar.gz /home/nexcom/
```

5. Untar the ATC3750-6C_mfi_v4.0.0.0_AGX_ORIN_32G.tar.gz file.

\$ sudo tar xpfv ATC3750-6C_mfi_v4.0.0.0_AGX_ORIN_32G.tar.gz

Note. The commands need to be modified according to different file names.

```
nexcom@Test-Server:~$ sudo tar xpfv ./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G.tar.gz
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/p3701-atc3750-6C.conf.common
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/atc3540.conf.common
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/dev/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/dev/null
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/tmp/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/.gitkeep
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/snap/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/srv/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/sys/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/bin/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/var/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/var/lock
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/var/crash/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/var/tmp/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/var/snap/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/var/mail/
./ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G/rootfs/var/log/
```

6. Using Micro USB cable connects host to ATC series system otg usb port.



7. Power on ATC series system and press the reset button immediately, wait for the LED on then release the reset button, after release reset button, the system into recovery mode.



8. Open the terminal in the host PC and type "lsusb" to check, if system has into recovery mode, you will see the information about nvidia.
If not, please do the step 7 again.

```
nexcom@Test-Server:~$ lsusb
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 002: ID 0451:8440 Texas Instruments, Inc.
Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 001 Device 003: ID 0451:82ff Texas Instruments, Inc.
Bus 001 Device 010: ID 0955:7223 NVIDIA Corp.
Bus 001 Device 002: ID 0451:8442 Texas Instruments, Inc.
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
```

2.3. Start Flashing

1. Open the terminal and enter the unzipped folder of ATC3750-

6C_mfi_v4.0.0.0_AGX_ORIN_32G.tar.gz in host.

\$ cd ATC3750-6C_mfi_v4.0.0.0_AGX_ORIN_32G

Note. The commands need to be modified according to different file names.

```
nexcom@Test-Server:~$ cd ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G
```

2. Type commands to start flash.

\$ sudo ./tools/kernel_flash/l4t_initrd_flash.sh --flash-only --massflash <x>

Note. Where <x> is the highest possible number of devices to be flashed concurrently. (minimum = 1, maximum = 5)

```
nexcom@Test-Server:~/ATC3750-6C_mfi_v4.0.0.0_6C_AGX_ORIN_32G$ sudo ./tools/kernel_flash/l4t_initrd_flash.sh --flash-only --massflash 1
```

3. In host pc, it will keep flashing until log show success.

```
Writing gspi_bootblob_ver.txt (partition: A_VER) into /dev/mtd0
Sha1 checksum matched for /mnt/internal/gspi_bootblob_ver.txt
Writing /mnt/internal/gspi_bootblob_ver.txt (109 bytes) into /dev/mtd0:66977792
Copied 109 bytes from /mnt/internal/gspi_bootblob_ver.txt to address 0x03fe0000 in flash
Writing gpt_secondary_3_0.bin (partition: secondary_gpt) into /dev/mtd0
Sha1 checksum matched for /mnt/internal/gpt_secondary_3_0.bin
Writing /mnt/internal/gpt_secondary_3_0.bin (16896 bytes) into /dev/mtd0:67091968
Copied 16896 bytes from /mnt/internal/gpt_secondary_3_0.bin to address 0x03ffbe00 in flash
[ 271]: l4t_flash_from_kernel: Successfully flash the gspi
[ 271]: l4t_flash_from_kernel: Flashing success
[ 271]: l4t_flash_from_kernel: The device size indicated in the partition layout xml is smaller than the actual size. This utility will try to fix the GPT.
Flash is successful
Reboot device
Cleaning up...
Log is saved to Linux_for_Tegra/initrdlog/flash_1-5_0_20240702-161215.log
```

4. Configure finished, the system will reboot into OS and [start system configuration](#).

✂ The AGX Orin SoM(ATC3750-6C/8M) also provides a firmware package for flashing to NVMe.

e.g. ATC3750-8M_mfi_v4.1.5.0_NVMe_AGX_ORIN_32G_NVMe.tar.gz

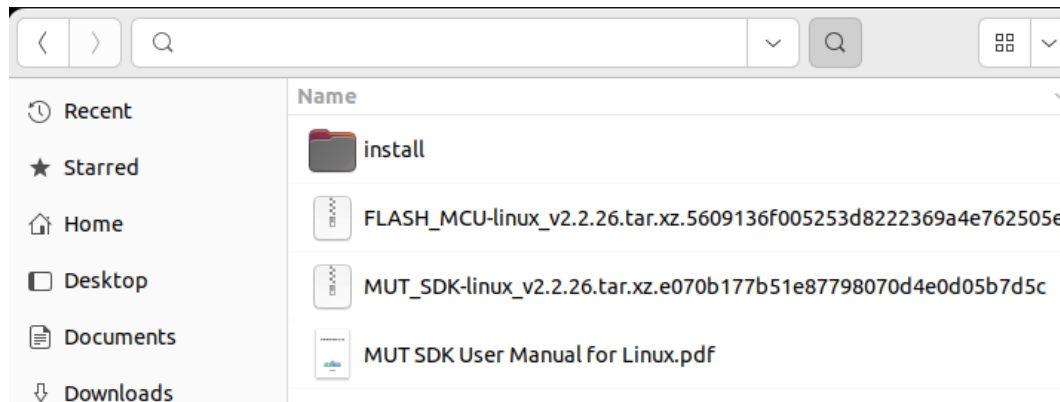
ATC3750-8M_mfi_v4.1.5.0_NVMe_AGX_ORIN_64G_NVMe.tar.gz

3. ATC products tools

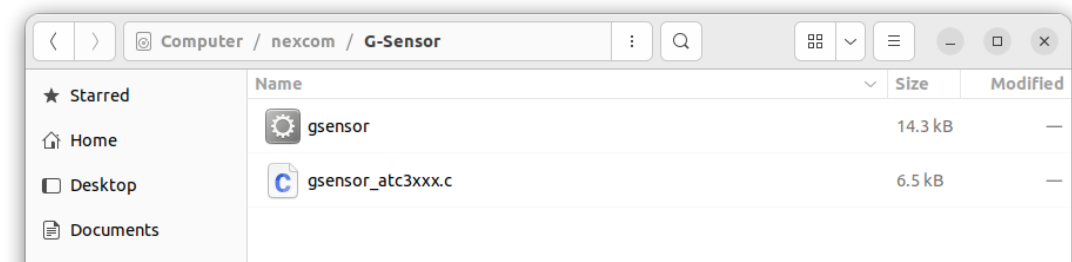
Open the terminal, there are installation packages and documents in the path as following: `/nexcom/`

3.1. MUT SDK

MUT SDK is a service to control the MCU of ATC series products, you can refer to the MUT SDK User Manual document “MUT_SDK_User_Manual_for_Linux.pdf” in the MUT folder.



3.2. G-Sensor



The ATC series use ST LSM6DSL, which supports a 3D digital accelerometer and a 3D digital gyroscope. “gsensor_atc3xxx.c” is a sample code that can read accelerometer and gyroscope data.

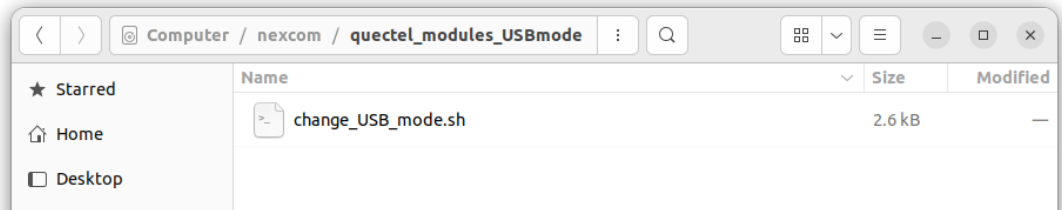
Product	I2C-BUS	Addr
ATC35xx	i2c-7	0x6b
ATC37xx	i2c-0	0x6b

Usage : `$ sudo -s`
`$./gsensor <save_output_as_file> <i2c-bus(only bus number)>`
`$./gsensor output.log 0`

```
root@ai-desktop:/nexcom/G-Sensor# ./gsensor ./output.log 0
/dev/i2c-0
Inititalize LSM6DSL successfully
ACC X:-0.01G Y:-0.01G Z:1.02G
GYRO X:94 Y:FE99 Z:FFEF
Left the machine for 3 seconds ...
ACC X:-0.02G Y:-0.01G Z:1.03G
GYRO X:95 Y:FE96 Z:FFED
Shut down LSM6DSL successfully
```

3.3. quectel_modules_USBmode

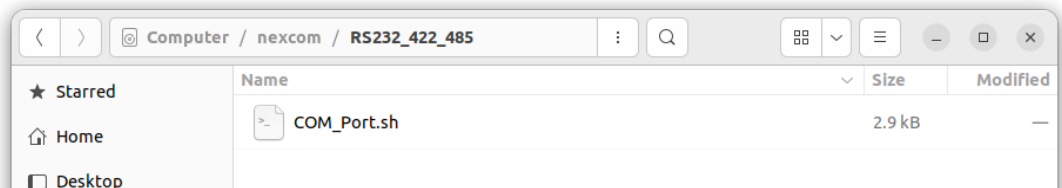
The ATC series supports several LTE/5G modules. This script is intended for Quectel modules(e.g. RM520N-GL, EM05-G) that require USB mode switching when running on linux OS.



Usage : `$ sudo -s`
`$ bash ./change_USB_mode.sh 0`

3.4. RS232_422_485

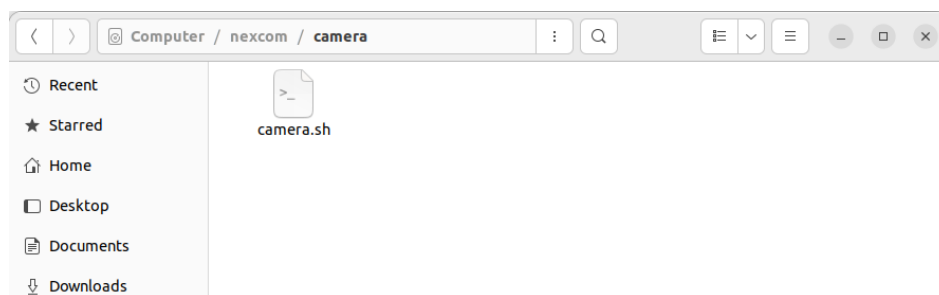
This script only can run on the **ATC3750-8M**. COM1 supports RS232/422/485 conversion.



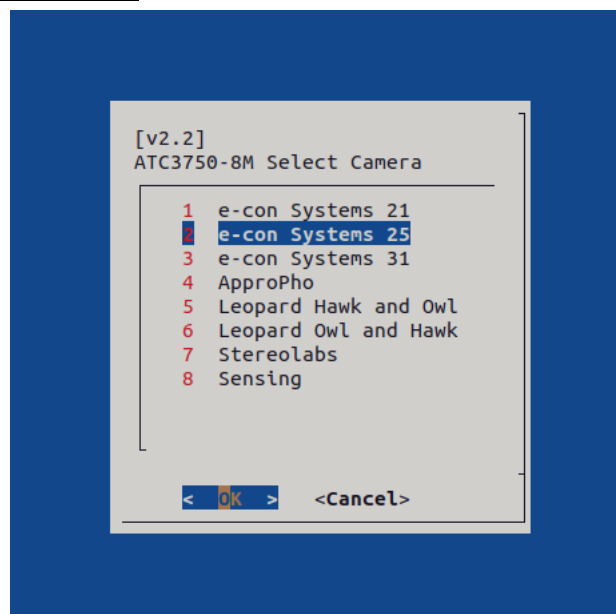
Usage : `$ sudo -s`
RS232 : `$ bash ./COM_Port.sh RS232`
RS422 : `$ bash ./COM_Port.sh RS422`
RS485 – receive : `$ bash ./COM_Port.sh RS485-R`
RS485 – transmit : `$ bash ./COM_Port.sh RS485-W`

3.5. GMSL2_camera

GMSL2 Script Version	GMSL2 Camera Support List				
v1.0	e-con Systems STURDeCAM21 STURDeCAM25 STURDeCAM31	ApproPho AP-AR0234 AP-IMX335 AP-IMX415	Leopard Imaging LI-AR0234-OWL LI-AR0234-HAWK	Stereolabs ZED X	Sensing ISX031C-GMSL2F
v1.1					
v2.0					
v2.1					
v2.2					



Usage : `$ sudo -s`
`$ bash ./camera.sh`



After the driver and dts have been successfully updated, you need to power off the system and install the GMSL2 camera on CAM1~CAM8.

4. Install SDK component

Location: `/nexcom/nvidia_SDK_components/install_sdk.sh` Free disk space required: 10.6 GB (SDK 9924MB, Deepstream 733MB). The script will install SDK automatically following:

1. TensorRT
2. cuDNN
3. CUDA
4. Multimedia API
5. Computer Vision
6. Developer Tools (Nvidia Nsight System and Graphics)
7. Deepstream

```
$ sudo ./install_sdk.sh
```

4.1. How to check the SDK version:

```
$ sudo apt install python3-pip  
$ sudo pip3 install jetson_stats  
$ sudo jtop(Figure 8.)
```

Move the cursor to “6INFO” and you can see the library version.

You can also use another command: (Figure 9)

```
$ jetson_release
```

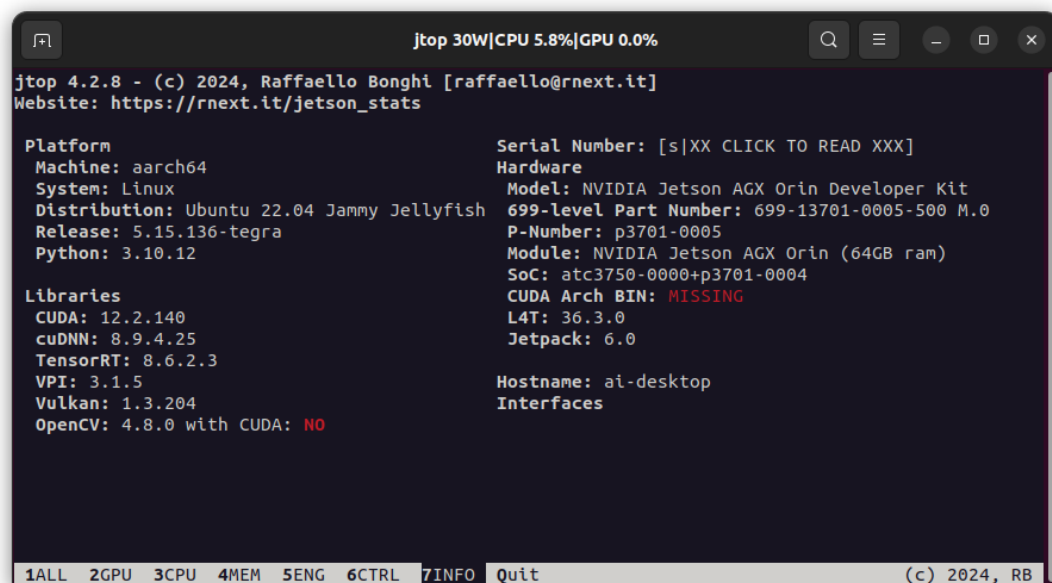


Figure 8. Info tab on jtop

```
root@ai-desktop:/home/ai# jetson_release
Software part of jetson-stats 4.2.8 - (c) 2024, Raffaello Bonghi
Model: NVIDIA Jetson AGX Orin Developer Kit - Jetpack 6.0 [L4T 36.3.0]
NV Power Mode[2]: MODE_30W
Serial Number: [XXX Show with: jetson_release -s XXX]
Hardware:
- P-Number: p3701-0005
- Module: NVIDIA Jetson AGX Orin (64GB ram)
Platform:
- Distribution: Ubuntu 22.04 Jammy Jellyfish
- Release: 5.15.136-tegra
jtop:
- Version: 4.2.8
- Service: Active
Libraries:
- CUDA: 12.2.140
- cuDNN: 8.9.4.25
- TensorRT: 8.6.2.3
- VPI: 3.1.5
- Vulkan: 1.3.204
- OpenCV: 4.8.0 - with CUDA: NO
root@ai-desktop:/home/ai#
```

Figure 9. Info of jetson_release

5. AI Demo

5.1. Installation

Use the `install_sdk.sh` (Chapter 5) to install deepstream and other SDK.

5.2. Run the deepstream demo

Run the demo as following command:

```
$ cd /opt/nvidia/deepstream/deepstream/samples/configs/deepstream-app  
$ deepstream-app -c  
source4_1080p_dec_inferresnet_tracker_sgie_tiled_display_int8.txt
```

The result



Figure 10. deepstream-app demo

6. ATC Series OTA Update

⚠ Updates are only provided within the same Jetpack, (nexcom OS currently does not support Jetpack upgrades e.g., upgrading from Jetpack 6.1 to Jetpack 6.2 ❌)

OTA payload package name	rootfs update block	nexcom OS version	Support status
ATC3750_6C_v4.1.10.0_ota_payload_package.tar.gz	eMMC	v4.1.x.x -> v4.1.10.0	✓
ATC3750_8M_v4.1.10.0_ota_payload_package.tar.gz	eMMC	v4.1.x.x -> v4.1.10.0	✓
ATC3750_NVMe_6C_v4.1.10.0_ota_payload_package.tar.gz	NVMe	v4.1.x.x -> v4.1.10.0	✓
ATC3750_NVMe_8M_v4.1.10.0_ota_payload_package.tar.gz	NVMe	v4.1.x.x -> v4.1.10.0	✓
ATC356x_v4.2.5.0_ota_payload_package.tar.gz	NVMe	v4.2.x.x -> v4.2.5.0	✓

* Nexcom OS **v4.1.x.x** corresponds to **JetPack 6.1** BSP, **v4.2.x.x** corresponds to **JetPack 6.2** BSP.

6.1. Preparing the OTA payload package

- Contact the Nexcom FAE Team to obtain the files “<atc_rel>_ota_payload_package.tar.gz” and “ota_tools_<rel>_aarch64.tbz2”.

⚠ Do not download the ota_tools_<rel>_aarch64.tbz2 from nvidia jetson linux, as this may result in an incomplete update!!

- Set the <WORKDIR> environment variable to the absolute path of your working directory.

```
$ mkdir -p /home/${USER}/work_dir
$ export WORKDIR=/home/${USER}/work_dir
```

- Unpack “ota_tools_<rel>_aarch64.tbz2” into \${WORKDIR}


```
$ sudo tar -C $WORKDIR -xvf ota_tools_<rel>_aarch64.tbz2
```

- Create /ota/ directory and place the <atc_rel>_ota_payload_package.tar.gz OTA payload package inside it.

```
$ sudo mkdir -p /ota/
$ sudo mv /home/${USER}/<atc_rel>_ota_payload_package.tar.gz /ota/
```

6.2. Backing up and restoring files

- Before starting the OTA update, edit the configuration file `ota_backup_files_list.txt` (located at `$WORKDIR/Linux_for_Tegra/tools/ota_tools/version_upgrade/`) to add the paths of files/directories that must be preserved after the OTA update.

 **NVIDIA's OTA update overwrites the rootfs in place. If you have data that needs to be kept, be sure to add those paths to avoid data loss. We have pre-populated a subset of essential items [Figure 11.] (e.g., user configuration files, power-mode settings, GMSL2 camera DTBOs, etc.).**

```
## SPDX-FileCopyrightText: Copyright (c) 2020-2022 NVIDIA CORPORATION & AFFILIATES. All rights reserved.
# SPDX-License-Identifier: MIT
#
# Permission is hereby granted, free of charge, to any person obtaining a
# copy of this software and associated documentation files (the "Software"),
# to deal in the Software without restriction, including without limitation
# the rights to use, copy, modify, merge, publish, distribute, sublicense,
# and/or sell copies of the Software, and to permit persons to whom the
# Software is furnished to do so, subject to the following conditions:
#
# The above copyright notice and this permission notice shall be included in
# all copies or substantial portions of the Software.
#
# THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
# IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
# FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL
# THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
# LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
# FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER
# DEALINGS IN THE SOFTWARE.
#
# This file contains a list of files/directories in the APP partition
# that are to be backed up and restored during OTA.
#
# This file is used by the script "nv_ota_preserve_data.sh"
#
# All the files or directories should be listed with absolute path
# Example:
# etc/passwd
# opt/nvidia
etc/passwd
etc/shadow
etc/group
etc/gshadow
home/
etc/hostname
etc/hosts
etc/default/locale
etc/timezone
etc/sudoers
etc/sudoers.d/
etc/systemd/resolved.conf
etc/NetworkManager/system-connections/
var/lib/AccountsService/users/
var/lib/nvpmodel/
nexuscom/camera/nexcom_cam_setting
```

Figure 11. `ota_backup_files_list.txt`

6.3. Start the OTA update

- Trigger the OTA update

```
$ cd ${WORKDIR}/Linux_for_Tegra/tools/ota_tools/version_upgrade
$ sudo ./nv_ota_start.sh /ota/<atc_rel>_ota_payload_package.tar.gz
```

✚ For AGX Orin SoM (supports ATC3750-6C / ATC3750-IP7-8M), there are two different OTA payload packages: one is for NVMe and the other is for eMMC. After trigger the OTA update, if you see a message indicating a storage-type mismatch [Figure 12.], it means the wrong <atc_rel>_ota_payload_package.tar.gz was used.

```
ai@ai-desktop:~/version_upgrade$ sudo ./nv_ota_start.sh /ota/ATC3750_NVMe_8M_v4.1.10.0_ota_payload_package.tar.gz
Command: ./nv_ota_start.sh /ota/ATC3750_NVMe_8M_v4.1.10.0_ota_payload_package.tar.gz
/usr/bin/efibootmgr
/usr/bin/efibootdump
/usr/sbin/nvme
cam model : Jetson Camera STURDeCAM25-AR0234
write backup config to /nexuscom/camera/nexuscom_cam_setting
Current rootfs is on /dev/mmcblk0
init_ota_log /ota_log
Create log file at /ota_log/ota_20251029-145337.log
OTA_LOG_FILE=/ota_log/ota_20251029-145337.log
Extract /ota/ATC3750_NVMe_8M_v4.1.10.0_ota_payload_package.tar.gz
update_nv_boot_control_in_rootfs /ota_work
Warning: Cannot get compatible board name.
3701--0004--1--atc3750-8M-orin-
TNSPEC 3701-500-0004-G.0-1-1-atc3750-8M-orin-
COMPATIBLE_SPEC 3701--0004--1--atc3750-8M-orin-
TEGRA_BOOT_STORAGE mmcblk0
TEGRA_CHIPID 0x23
TEGRA_OTA_BOOT_DEVICE /dev/mtdblock0
TEGRA_OTA_GPT_DEVICE /dev/mtdblock0
Info: Write TegraPlatformCompatSpec with 3701--0004--1--atc3750-8M-orin-.
Info: The esp is already mounted to /boot/efi.
check_prerequisites
decompress_ota_package ota_package.tar /ota_work
decompress_ota_package: start at 公曆 20廿五年 十月 廿九日 週三 十四時54分十秒
Sha1 checksum for /ota_work/ota_package.tar (678751d37d787e16909625faa1b5fd7b0add9cce) matches
decompress_ota_package: end at 公曆 20廿五年 十月 廿九日 週三 十四時54分廿六秒
Rootfs and OTA payload image mismatch detected, aborting the OTA update process!!
```

Figure 12. indicate storage-type mismatch

6.4. Update bootloader (For Orin-NX & Orin-Nano)

- If you are using Orin-NX or Orin-Nano and want to update the UEFI, please execute the following command:

```
sudo nv_bootloader_capsule_updater.sh -q /<ota_payload>/TEGRA_BL.Cap
```

- For AGX Orin, the bootloader update is already included in nv_ota_start.sh, so there's no need to execute nv_bootloader_capsule_updater.sh.

6.5. Reboot system

- After trigger the OTA update, reboot the system to begin the system update.

```
Verifying image /tmp/recovery-dtb_alt.tmp with sha1 checksum file /tmp/sha1sum.tmp
Sha1 checksum for /tmp/recovery-dtb_alt.tmp (456746166ddff86a786cb16a16f0d7acc57d5829) matches
Write /ota_work/internal_device/images-R36-ToT/tegra234-p3701-0004-atc3750-8M-base_ver.dtb.rec to recovery-dtb_alt(/dev/mmcblk0p12) successfully.
Start swapping partition name and guid.
Set name recovery-dtb_alt to /dev/mmcblk0p9 and recovery-dtb to /dev/mmcblk0p12.
Swap partition name successfully.
Start erasing recovery-dtb_alt.
Erase recovery-dtb_alt(/dev/mmcblk0p9) successfully.
Done. Update recovery-dtb successfully.
Updating recovery-dtb and recovery-dtb_alt partitions done
install_partition_with_alt /ota_work/internal_device/images-R36-ToT esp
prerequisite_check esp
The /ota_work/internal_device/images-R36-ToT/esp.img for partition esp is not found
Skip updating esp partition as no valid image is found
clean_up_boot_partition
update_rootfs /ota_work
update_rootfs_with_a_b disabled /ota_work
update_rootfs_in_recovery /ota_work
force_booting_to_recovery
Force booting to recovery by writing \x07\x00\x00\x00\x03\x00\x00\x00 to UEFI variable L4TDefaultBootMode-781e084c-a330-417c-b678-38e696380cb9
dd if=/tmp/var_tmp.bin of=L4TDefaultBootMode-781e084c-a330-417c-b678-38e696380cb9 bs=8
1+0 records in
1+0 records out
8 bytes copied, 0.00228674 s, 3.5 kB/s
Rootfs is to be updated in recovery kernel once device is rebooted.
check_bootloader_version /ota_work
update_bootloader /ota_work
Bootloader on non-current slot(B) is to be updated once device is rebooted
clean_up_ota_files
ai@ai-desktop:~/version_upgrade$
```

Figure 13. reboot the system to begin the system update

```
$ sudo reboot -h now
```

6.6. Updating bootloader and rootfs

- If you want to observe the update status, you can connect the serial console port to host PC. ⚡ There is no console port on the ATC3750-IP7-8M.

⚠ DO NOT POWER OFF the device or interrupt the process during the update!!

⚠ Any unexpected shutdown can cause update failure and data loss!!

```
Jetson System firmware version 202405.0-ca7f3d9f-dirty date 2025-10-22T06:20:44+
00:00
ESC to enter Setup.
F11 to enter Boot Manager Menu.
Enter to continue boot.

Update Progress - 100% *****Shutdown state requested 1
Rebooting system ...
```

Figure 14. Update progress done

6.7. Check OTA update result

- All update logs are saved under /last_ota_update_log directory. You can check these logs to confirm that the update was successful.
You can also verify the result by checking /etc/image_version and confirming that it matches the version in <atc_rel>_ota_payload_package.tar.gz

 **Reference : OTA Update NVIDIA online documentation**

<https://docs.nvidia.com/jetson/archives/r36.4.3/DeveloperGuide/SD/SoftwarePackagesAndTheUpdateMechanism.html#steps-performed-on-the-jetson-device>