

# Technical Note

TN# MCSTN291

Rev# 1.0

Release Date : 2023 / 8 / 22

Category: Software

Support Model: ATC3200 / ATC3750

## Subject

How to recovery image with console in ATC3200 / ATC3750

## Introduction

The step of recovery image with console

## Trouble Shooting Step-by-Step

### Prepare materials

1. One system with Ubuntu OS and install Putty.
2. USB to RS232 transfer tool as below picture (any brand will do):

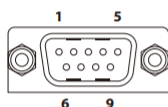


3. Connect the RX/TX of USB to RS232 transfer tool to ATC Console port TX/RX (RX/TX docking).

### ATC3200

#### COM1/Console Connector

Connector number: 4

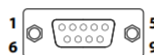


Pin	RS232	RS422	RS485
1	DCD	TX-	D-
2	RXD	TX+	D+
3	TXD	RX+	
4	DTR	RX-	
5	GND		
6	CONSOLE_TX		
7	RTS		
8	CTS		
9	CONSOLE_RX		

### ATC3750

#### Console Connector

Connector number: 2

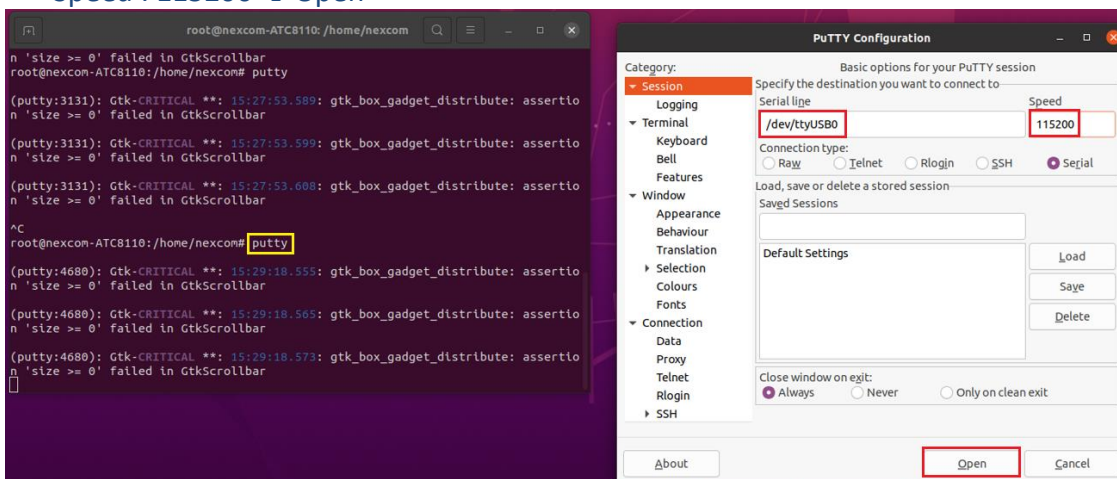


Pin	Definition	Pin	Definition
1	NC	6	NC
2	RXD	7	NC
3	TXD	8	NC
4	NC	9	NC
5	GND		

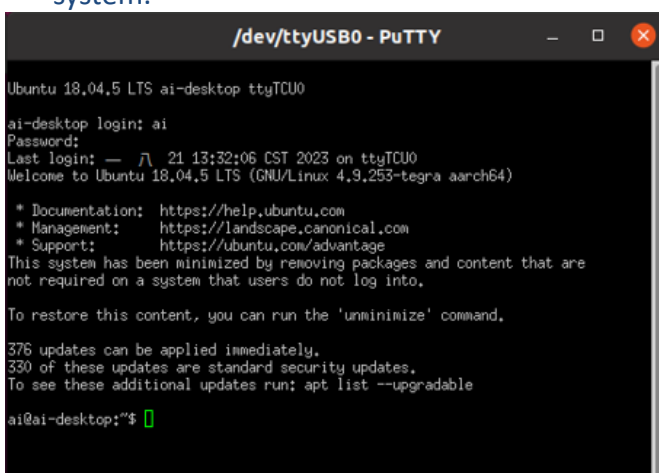


## Recovery

1. Execute Putty in host system.  
Serial Line : /dev/ttyUSB0  
Speed : 115200 → Open



2. Press Enter in Putty window and entry password, it will shows the information about updated system.



- Entry command : **sudo reboot --force forced-recovery** and password then ATC system into recovery mode.

```

/dev/ttyUSB0 - PuTTY
ai-desktop login: ai
Password:
Last login:  21 13:32:06 CST 2023 on ttyTCU0
Welcome to Ubuntu 18.04.5 LTS (GNU/Linux 4.9.253-tegra aarch64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage
This system has been minimized by removing packages and content that are
not required on a system that users do not log into.

To restore this content, you can run the 'unminimize' command.

376 updates can be applied immediately.
330 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

ai@ai-desktop:~$ sudo reboot --force forced-recovery
[sudo] password for ai:
Rebooting with argument: 'forced-recovery'.
WARNING: at platform/drivers/pg/pg-gpu-t194.c:185
[ 154.284870] reboot: Restarting system with command 'forced-recovery'
Shutdown state requested 1
Rebooting system .
  
```

- Go back to image folder and un-tar image file:  
**# tar xvf ATC3750\_mfi\_v1.4.0\_AGX\_ORIN\_64G.tar.gz**

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

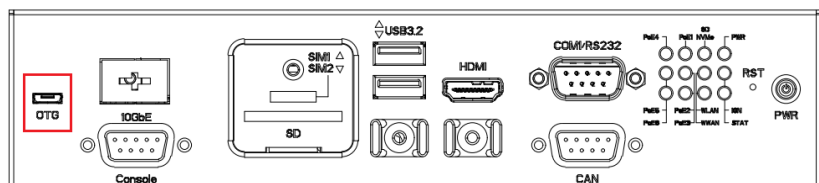
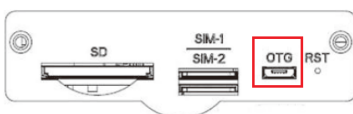
```

root@nexcom-ATC8110: /home/nexcom
root@nexcom-ATC8110: /home/nexcom# ll
total 6249432
drwxr-xr-x 18 nexcom nexcom 4096 22 11:52 ./
drwxr-xr-x  3 root  root  4096 21 09:20 ../
drwxr-xr-x  6 nexcom nexcom 4096 21 15:40 ATC3530_mfi_v3.0.1_NX_8G/
-rw-r--r--  1 root  root 3055319598 22 11:53 ATC3750_mfi_v1.4.0_AGX_ORIN_64G.tar.gz
-rw-r--r--  1 nexcom nexcom 323 21 18:01 .bash_history
-rw-r--r--  1 nexcom nexcom 220 15 09:20 .bash_logout
-rw-r--r--  1 nexcom nexcom 3771 15 09:20 .bashrc
drwxr-xr-x 14 nexcom nexcom 4096 21 15:53 .cache/
drwx----- 11 nexcom nexcom 4096 21 22:07 .config/
drwxr-xr-x  2 nexcom nexcom 4096 22 11:00 Desktop/
drwxr-xr-x  2 nexcom nexcom 4096 21 21:58 Documents/
drwxr-xr-x  3 nexcom nexcom 4096 21 15:12 Downloads/
drwx-----  3 nexcom nexcom 4096 21 18:21 .gnupg/
drwxr-xr-x  3 nexcom nexcom 4096 21 21:58 .local/
drwx-----  4 nexcom nexcom 4096 21 18:21 .mozilla/
drwxr-xr-x  2 nexcom nexcom 4096 21 21:58 Music/
drwxr-xr-x  2 nexcom nexcom 4096 21 15:52 Pictures/
-rw-r--r--  1 nexcom nexcom 807 15 09:20 .profile
drwxr-xr-x  2 nexcom nexcom 4096 21 21:58 Public/
drwx-----  3 nexcom nexcom 4096 21 15:09 snap/
drwx-----  2 nexcom nexcom 4096 21 21:59 .ssh/
-rw-r--r--  1 nexcom nexcom 0 21 22:04 .sudo_as_admin_successful
drwxr-xr-x  2 nexcom nexcom 4096 21 21:58 Templates/
drwxr-xr-x  2 nexcom nexcom 4096 21 21:58 Videos/
root@nexcom-ATC8110: /home/nexcom# tar xvf ATC3750_mfi_v1.4.0_AGX_ORIN_64G.tar.gz
  
```

- Using Micro USB cable connects Host system to ATC serial OTG USB port.

ATC3750

ATC3200



6. Execute recovery command :

```
sudo ./tools/kernel_flash/l4t_initrd_flash.sh --flash-only --massflash 1
```

Start to recovery image.

```
root@nexcom-ATC8110: /home/nexcom/ATC3750_mfi_v1.4.0_AGX_ORIN_64G
root@nexcom-ATC8110: /home/nexcom/ATC3750_mfi_v1.4.0_AGX_ORIN_64G# sudo ./tools/kernel_flash/l4t_initrd_flash.sh --flash-only --massflash 1
```

7. Recovery finished, it will shows "Success".

```
root@nexcom-ATC8110: /home/nexcom/ATC3750_mfi_v1.4.0_AGX_ORIN_64G
[ 403]: l4t_flash_from_kernel: Successfully flash the emmc
[ 403]: l4t_flash_from_kernel: Flashing success

Reboot target
Run command: sync; nohup reboot &>/dev/null & exit on root@fe80::1%usb0
SSH ready
Success
Cleaning up...
Log is saved to Linux_for_Tegra/initrdlog/flash_1-7_0_20230821-154000.log
```

8. In ATC serial side, it will start to configure the system.

