

MTK - Baoshan

Ubuntu Desktop 24.04

genio-server EA (G720/G520) Image Release Notes

Canonical Devices and IoT, Customer Engineering

Project: Baoshan

Milestone: Ubuntu Server 24.04 - genio-server24-ea-g720-g520-01-13 release

Release Date: Jan 13, 2026

Goal of Release and Delivery Summary

This image is an early access (EA) image on MediaTek Genio G520/G720 EVK running with Ubuntu 24.04 Desktop image.

Image Release Deliverables

This is the genio-server EA release for the Mediatek Genio Ubuntu project.

Release image (For G720/G520):

<https://oem-share.canonical.com/partners/baoshan/share/genio-server-24.04/genio-server24-ea-g720-q520-01-13/genio-classic-server-noble-emmc-20260113-31.tar.xz>

boot firmware (For G720/G520):

<https://oem-share.canonical.com/partners/baoshan/share/genio-server-24.04/genio-server24-ea-g720-q520-01-13/genio-g720-evk-boot-assets-20260102-30.tar.xz>

Manifest:

<https://oem-share.canonical.com/partners/baoshan/share/genio-server-24.04/genio-server24-ea-g720-q520-01-13/filesystem.manifest>

Details published on oem-share:

<https://oem-share.canonical.com/partners/baoshan/share/genio-server-24.04/genio-server24-ea-g720-q520-01-13/>

Features Supported in EA

- System boot
- Storage
 - eMMC
- Network
 - Ethernet
 - WiFi
- Display
 - DSI Panel
 - eDP
- GPU
- USB

Linux package

This release contains the following Linux package

Linux package	linux-mtk (6.8.0.9020.20)
GIT Repository	https://git.launchpad.net/~canonical-hwe-team/baoshan/+git/linux-mtk-6.8
Tag	Ubuntu-mtk-6.8.0-9020.20

Boot assets tarballs

Boot assets tarballs are based on following boot firmware released by MediaTek

- boot-firmware--20260102131923.tar.gz

Installation Instructions

Hardware and software requirements

1. A laptop with Ubuntu desktop image installed
2. A released Ubuntu Classic Server image from Canonical
3. A released Mediatek boot assets tarball
4. Mediatek Genio g720 or g520-evk board with power adapter
5. Two USB Type-C to USB Type-A cable for flashing image and for UART Debug port (baudrate: 921600)

Flash the installation image to the MTK board

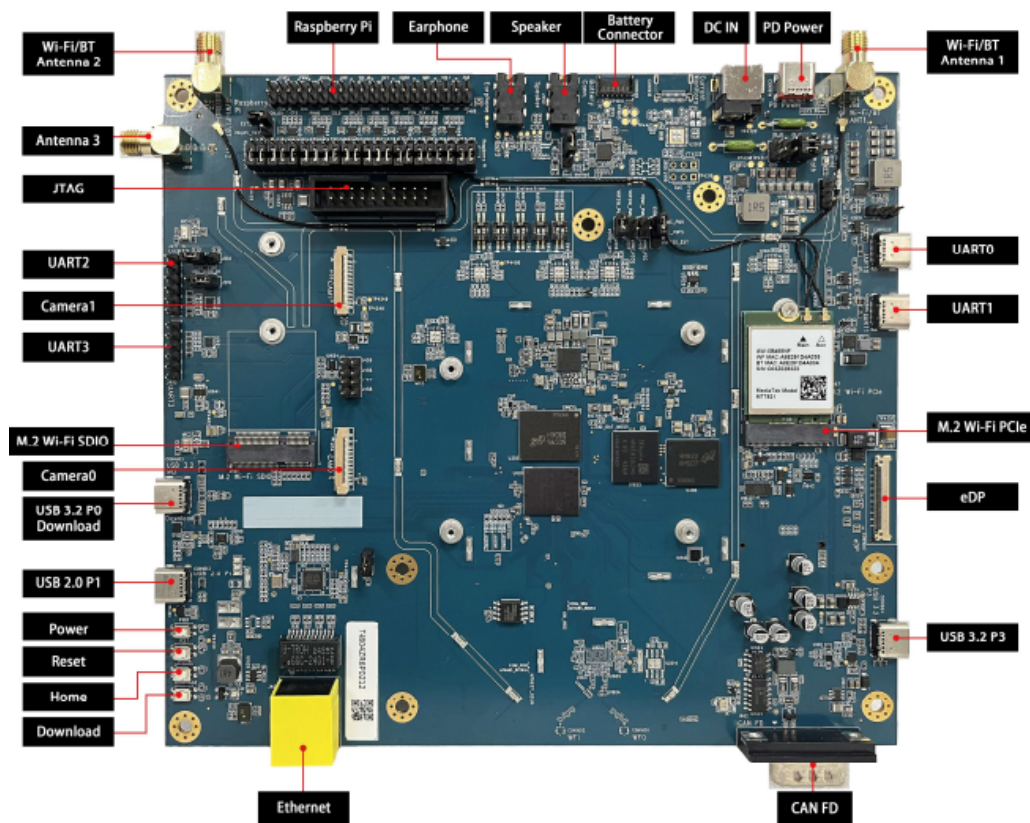


Figure 1: MediaTek Genio G520/G720-evk board

1. For the EA release, only eMMC storage is supported. So please set jumper status as follows:

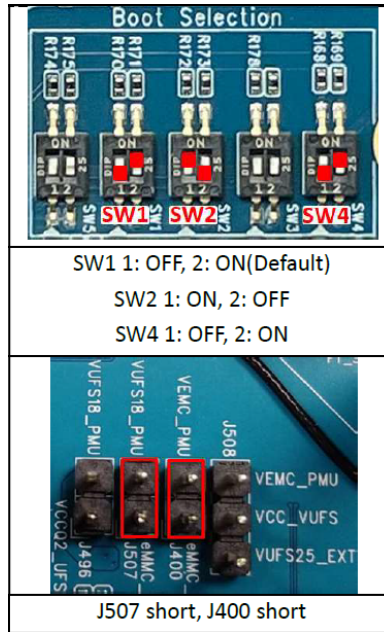


Figure 2: Boot from eMMC Storage

- Set the J516 jumper in correct status:

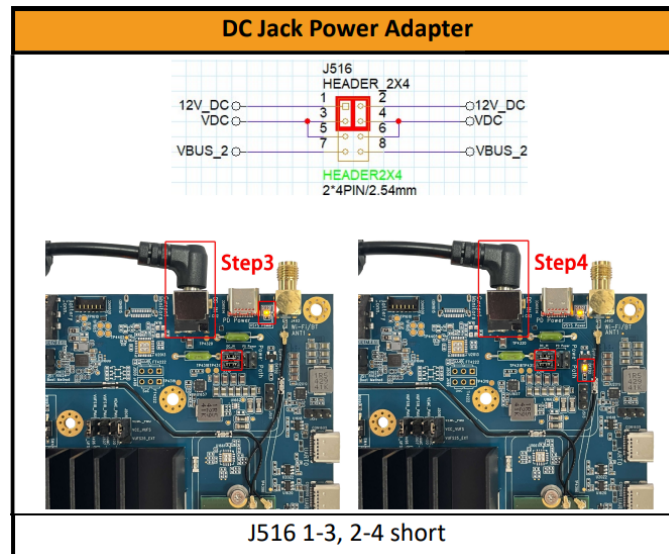


Figure 3: J516 status for DC power supply

- Plug the power adapter
- Connect your laptop to the USB 3.2 P0 Download port.
- Connect your laptop to the USB UART0 port (Serial devices will be generated in your laptop after you connect your laptop to the debug port):

```
$ sudo tio -b 921600 /dev/ttyUSB0
```

6. Open a terminal on your laptop by shortcut key: Ctrl + Alt + T.

7. Install the flash tool

```
$ sudo snap install genio-tools --edge --devmode
genio-tools (edge) 1.7.0a2 from Tzu-Hsien Kao (tzuhsien-kao) installed

$ eval "$(snap run genio-tools.udev-script)"
+ Adding user 'kxuan' to the 'dialout' group for USB device access...
🔧 Installing udev rules for Mediatek Genio devices...
🔄 Reloading udev rules...
✅ udev rules successfully installed.
🖱️ Please **reconnect your USB device** to apply the new rules.
🚪 Please **log out and log back in** (or open a new terminal) for group changes to take effect.

# Then, log out the current user and log back in.
```

8. Extract the released tar file and then run genio-flash

```
$ tar -xvf genio-classic-server-noble-emmc-20260113-31.tar.xz
$ tar --strip-components=1 -xvf genio-g720-evk-boot-assets-20260102-30.tar.xz -C
genio-classic-server-noble-emmc-20260113-31/
$ cd genio-classic-server-noble-emmc-20260113-31
$ genio-tools.genio-flash
Genio Tools: v1.6.2
Ubuntu Image:
    edition: Ubuntu classic/core images
    version: 24.04
    codename: noble
```

9. Press and hold the “Download” key and then press the “Reset” key

10. Release the “Download” key after seeing the message “Connected to MediaTek SoC”

11. Wait for the flash process to complete.

```
$ genio-tools.genio-flash
Genio Tools: v1.6.2
Ubuntu Image:
...
Looking for MediaTek SoC matching USB device 0e8d:0003
```

```
Opening /dev/ttyACM4 using baudrate=115200
Connected to MediaTek SoC: hw_code[0x8168]
Sending bootstrap to address: 0x201000
Jumping to bootstrap at address 0x201000 in AArch64 mode
...
```

12. The system will auto reboot and boot to the login screen after flashing is complete.

13. The Default account/password: ubuntu/ubuntu

At first boot, Cloud-init will create the account and initialize the system.

Please stay tuned. It will take 2~3 minutes to finish the initialization.

Release Verification

Known Issues and Limitations

-

Image Changes and Bugs Fixed

- <https://launchpad.net/baoshan/+milestone/genio-server24-ea-q720-q520-01-13>

Reopened Bugs

-

New Bugs found during QA validation

Critical

- NA

High

- NA

Open Bugs

All open bugs can be found at: <https://bugs.launchpad.net/baoshan>

Appendix A: How To Add Device-Tree Overlays

1. Press any key to stop U-Boot autoboot

```
U-Boot 2022.10 (Jul 24 2023 - 09:23:45 +0000)
...
eth0: usb_ether
Hit any key to stop autoboot:  0
=>
```

2. Get the number of the firmware partition

```
=> part list mmc 0 (For eMMC)

Partition Map for MMC device 0  --  Partition Type: EFI

Part      Start LBA      End LBA      Name
Attributes
Type GUID
Partition GUID
...
3         0x00004400      0x000143ff      "firmware"
attrs:    0x0000000000000000
type:     384e979b-eb76-435a-a3a6-1a071dbad91d
          (384e979b-eb76-435a-a3a6-1a071dbad91d)
guid:     31ed96c7-d17c-4cf4-aca4-755c0053fed4
...
```

3. Find all supported DTBO files

```
=> fatls mmc 0:3 FIRMWARE/mediatek/genio-720-evk
...
5316  camera-imx258-csi0-ov5640-csi1-std.dtbo
5085  video.dtbo
5536  camera-ov5640-csi1-std.dtbo
2298  display-lvds.dtbo
...
```

4. Add DTB files to list_dtbo

```
# Current list_dtbo
=> echo $list_dtbo
emmc.dtbo video.dtbo apusys.dtbo display-dsi.dtbo
# Add a dtbo file to list_dtbo. Take display-edp-4k.dtbo as an example:
=> setenv list_dtbo "emmc.dtbo video.dtbo apusys.dtbo display-dsi.dtbo
display-edp-4k.dtbo"
```

```
=> saveenv  
# Reboot system to make new settings work  
=> reset
```