



Canonical

Ubuntu 22.04 for NVIDIA Jetson

2024-08 Release Notes

Purpose

This is the Feature Complete release of Ubuntu 22.04 for Jetson. All release assets are provided by Canonical.

Images

Ubuntu images can be downloaded from <https://ubuntu.com/download/nvidia-jetson> :

- Ubuntu Server 22.04:
 - <https://cdimage.ubuntu.com/releases/jammy/release/nvidia-tegra/ubuntu-22.04-preinstalled-server-arm64+tegra-igx.img.xz>
 - Image SHA256SUM:
5a0a8bc0cd99791e93ab27a0f3edab8d4c27fb9e0c2a5b436619f18eb5fa8556
- Boot firmware 36.3.0:
 - https://developer.nvidia.com/downloads/embedded/l4t/r36_release_v3.0/release/jetson_linux_r36.3.0_aarch64.tbz2
 - SHA256SUM:
b4656540831e74b911e2506d2c567cbb146fddd5942b675f80c2f610d6a40f43

Hardware Platforms Tested

- Jetson AGX Orin Developer kit
- Jetson Orin Nano Developer kit
- Jetson Orin NX SOM on Jeston Orin Nano Developer kit

Fixed issues since the beta release

- On AGX only, the current boot firmware does not allow to automatically launch Ubuntu from UEFI when the image is loaded on a USB disk (does not affect SD cards or NVMe disks). As a workaround, you can press the ESC key (from a terminal) to interrupt the boot process and enter the UEFI menu, select “Boot Manager”, then your USB disk.
- On both AGX and Nano kit, when installing the Ubuntu image on a SD card, it has been observed with few models that the filesystem is getting corrupted after many reboots.
- On rare occasions, the ethernet driver can produce a serial trace “Unable to handle kernel NULL pointer dereference at virtual address”, which will then be followed by a reboot.

Known issues

- On AGX development kit, power cycling the device using an external power switch introduces a noise in the serial input buffer that can, depending on the nature of the power switch, pause the GRUB menu, or directly launch the default entry (action = ‘Enter’).
- On an Orin NX development kit, the very first flash of the QSPI boot firmware might fail due to a write protection bit being set. In this case you need to perform an initrd flash of the QSPI firmware (only necessary once to fix this issue) by following these instructions:
 - Download the [Driver Package](#) and the [Sample Root Filesystem](#)
 - Extract Jetson_Linux_R36.3.0_aarch64.tbz2 which will produce a

- Linux_for_Tegra/ directory
- ```
$ tar -xvf Jetson_Linux_R36.3.0_aarch64.tbz2
```
- Extract Tegra\_Linux\_Sample-Root-Filesystem\_R36.0.0\_aarch64.tbz2 into the Linux\_for\_Tegra/rootfs directory as root. Use the dereference option with tar to properly handle symlinks.  

```
$ cd Linux_for_Tegra/rootfs && sudo tar -h -xvf ../../Tegra_Linux_Sample-Root-Filesystem_R36.3.0_aarch64.tbz2
```
- Run the apply\_binaries.sh script (also as root) from within the Linux\_for\_Tegra/ directory  

```
$ cd .. && sudo ./apply_binaries.sh
```
- Make sure the device is in recovery mode as it will reboot if the first flash fails
- Perform the initrd flash of the QSPI firmware:  

```
$ sudo ./tools/kernel_flash/l4t_initrd_flash.sh \
-p "-c bootloader/generic/cfg/flash_t234_qspi.xml" \
--showlogs --network usb0 jetson-orin-nano-devkit internal
```
- After this operation, every subsequent flash of the QSPI firmware will work the usual way.

## Report Bugs

To report a bug, identify the related package in <https://launchpad.net/ubuntu>, create a bug, then subscribe the team “ubuntu-tegra” to it. For firmware related issues, report a bug [here](#).