Canonical

Ubuntu 26.04 for Qualcomm Dragonwing™ Evaluation Kits

2026.10 Release Notes

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Revision 1.0

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Purpose

This is an increment post **Beta** release for the **Qualcomm Dragonwing IQ-X7181 EVK** and **Beta** release for the **Qualcomm Dragonwing IQ-X5121 EVK** of Ubuntu 26.04. This is also the **Early Access** (EA) release for **IQ-9075 Evaluation Kit (EVK) with GMSL Mezzanine board** and **IQ-8275 Evaluation Kit (EVK) with GMSL Mezzanine board**. This is the Ubuntu image with Ubuntu **7.0.0-10017.21-qcom** kernel. The board requires device-specific bootassets distributed by Qualcomm.

Image download and installation instructions

Ubuntu Server

- Ubuntu Server 26.04 image
- Ubuntu Server 26.04 manifest
- Ubuntu Server 26.04 device-tree
- Ubuntu Server 26.04 rawprogram0.xml (UFS)
- Ubuntu Server 26.04 SHA256SUMS

Ubuntu Desktop

- Ubuntu Desktop 26.04 image
- Ubuntu Desktop 26.04 manifest
- Ubuntu Desktop 26.04 device-tree
- Ubuntu Desktop 26.04 rawprogram0.xml (UFS)
- Ubuntu Desktop 26.04 SHA256SUMS

Qualcomm boot assets

- IQ-X7181 Evaluation Kit (EVK), IQ-X5121 Evaluation Kit (EVK): https://people.canonical.com/~platform/images/qualcomm-iot/boot-assets/IQ-X.2.0-Ver.1.4-ubuntu-modified-X1E80100-nhlos-bins.tar.gz

- IQ9075+GMSL Evaluation Kit (EVK) with GMSL Mezzanine board: https://artifacts.codelinaro.org/artifactory/qli-ci/flashable-binaries/ubuntu-fw/QCS9100/QLI.2.1-Ver.1.1/QLI.2.1-Ver.1.1-ubuntu-QCS9100-nhlos-bins.tar.gz

- IQ-8275 Evaluation Kit (EVK) with GMSL Mezzanine board: https://artifacts.codelinaro.org/artifactory/qli-ci/flashable-binaries/ubuntu-fw/QCS8300/QLI.2.1-Ver.1.1/QLI.2.1-Ver.1.1-ubuntu-QCS8300-nhlos-bins.tar.gz

Qualcomm CDT

- IQ-X7181 Evaluation Kit (EVK), IQ-X5121 Evaluation Kit (EVK): https://artifacts.codelinaro.org/artifactory/codelinaro-le/Qualcomm_Linux/X1E80100/cdt/IQ-X.1.4-EVK-CDT.tar.gz
- IQ9075+GMSL Evaluation Kit (EVK) with GMSL Mezzanine board: https://artifacts.codelinaro.org/artifactory/codelinaro-le/Qualcomm_Linux/QCS9100/cdt/qcs9075-iq-9075-evk.zip
- IQ-8275 Evaluation Kit (EVK) with GMSL Mezzanine board: https://artifacts.codelinaro.org/artifactory/codelinaro-le/Qualcomm_Linux/QCS8300/cdt/qcs8275-iq-8275-evk-pro-sku.zip

Qualcomm UFS provisioning

- IQ-X7181 Evaluation Kit (EVK), IQ-X5121 Evaluation Kit (EVK): https://artifacts.codelinaro.org/artifactory/codelinaro-le/Qualcomm_Linux/X1E80100/provision.zip
- IQ9075+GMSL Evaluation Kit (EVK) with GMSL Mezzanine board: https://artifacts.codelinaro.org/artifactory/codelinaro-le/Qualcomm_Linux/QCS9100/provision.zip
- IQ-8275 Evaluation Kit (EVK) with GMSL Mezzanine board: https://artifacts.codelinaro.org/artifactory/codelinaro-le/Qualcomm_Linux/QCS8300/provision.zip

Installation instruction

- IQ-X7181 Evaluation Kit (EVK): https://docs.qualcomm.com/doc/80-77183-262/topic/Integrate-and-flash-software.html
- IQ-X5121 Evaluation Kit (EVK): https://docs.qualcomm.com/doc/80-77183-270/topic/Integrate-and-flash-software.html
- IQ9075+GMSL Evaluation Kit (EVK) with GMSL Mezzanine board:
- IQ-8275 Evaluation Kit (EVK) with GMSL Mezzanine board:

Note: If you had already set up your device with a previous release, you need some extra installation steps. When flashing the new CDT, you also need to do those commands just before (from the CDT extracted folder):

```
Shell
qdl --storage spinor xbl_s_devprg_ns.melf rawprogram0_WIPE_PARTITIONS.xml
qdl --storage spinor xbl_s_devprg_ns.melf rawprogram0_BLANK_GPT.xml
```

You also need to reprovision UFS (`provision.zip` has changed).

Additional Notes

Enabling eDP panel

eDP output is disabled by default in the kernel cmdline (by using `video=eDP-1:d` parameter). If you have an eDP panel connected and want to enable it, you have to modify the Grub environment by running following commands:

```
Shell
sudo rm /etc/default/grub.d/99-dragonwing-disable-edp.cfg
sudo update-grub2
sudo reboot
```

After rebooting, `video=eDP-1:d` should not be present in `/proc/cmdline` and the eDP output should be enabled.

Non-functional HCI interface

The IQ-X platform supports two different types of Bluetooth M.2 cards - the UART mode and the USB mode. While USB is a more modern interface that is self discoverable, UART does not support this. For this reason the UART Bluetooth module has to be statically described in the Device Tree.

This means that even if the UART Bluetooth module is not present (because USB one is used, for example), the kernel will anyway register an hciX device for it even if the probe fails. This causes two minor issues:

1. Two hci devices are seen in the sysfs or by hcitool even though only one of them is UP.
2. There are a few kernel error logs during boot:

```
None
ubuntu kernel: Bluetooth: hci1: command 0xfc00 tx timeout
ubuntu kernel: Bluetooth: hci1: Reading QCA version information failed (-110)
ubuntu kernel: Bluetooth: hci1: Retry BT power ON:0
```

Tested on hardware platforms

- Qualcomm Dragonwing™ IQ-X7181 Evaluation Kit (EVK)
- Qualcomm Dragonwing™ IQ-X5121 Evaluation Kit (EVK)
- Qualcomm Dragonwing™ IQ-9075 Evaluation Kit (EVK) with GMSL Mezzanine board
- Qualcomm Dragonwing™ IQ-8275 Evaluation Kit (EVK) with GMSL Mezzanine board

List of new features enabled in this release

Platform	Features Description
IQ-X7181 Evaluation Kit (EVK)	• Fixed suspend and resume • Fixed minor bug with eDP panel • TPM now supported • Fix loss of RTC on some boots
IQ-X5121 Evaluation Kit (EVK)	• Fixed suspend and resume • Fixed minor bug with eDP panel • Fix loss of RTC on some boots • DP audio is now supported
IQ-9075 Evaluation Kit (EVK) with GMSL Mezzanine board	• All the peripherals and components on the EVK except the audio have been enabled • All the peripherals and components on the GMSL mezzanine have been enabled
IQ-8275 Evaluation Kit (EVK) with GMSL Mezzanine board	• All the peripherals and components on the EVK except the audio have been enabled • All the peripherals and components on the GMSL mezzanine have been enabled

List of features

Qualcomm Dragonwing™ IQ-X7181 Evaluation Kit

Devices / Features	Features Description	Feature Implementation Status (*)
OS Version	Ubuntu Server 26.04	Enabled
	Ubuntu Desktop 26.04	Enabled
Kernel	Linux kernel 7.0	Enabled
Boot Loader	UEFI (Linux boot flow)	Supported

Boot Media	NVMe	Not supported
	UFS	Supported
I/O PCIe	PCIe Gen 3 and Gen 4 (Switch and configurations)	Enabled
I/O USB	USB 3.x Gen1/ Gen2	Enabled
	USB Type-C	Enabled
WLAN	ath12k driver	Enabled
BT	BT over UART	Enabled
	BT over USB	Enabled
Ethernet	ASIX AX88179 Ethernet controller	Enabled
Peripherals and Buses	UART	Enabled
	SMBus	Enabled
	SDIO	Enabled
	SPI	Enabled
	I2C	Enabled
	SPI-NOR	Enabled
	GPIO	Enabled
	CAN	Supported
Security	TPM	Enabled
	QTEE	Enabled
Graphics GPU	Support via Freedreno (Mesa 25.2)	Enabled
	OpenGL ES 3.2	Enabled
Display	DP (DDI)	Enabled
	eDP	Enabled
Video	H.264	Enabled
	H.265	Enabled
	VP9 encode/decode	Enabled
Audio	ALSA / Pipewire	Enabled
	Playback	Enabled
	Record	Enabled
Camera	MIPI CSI IMX577	Supported
	IMX676	Not supported
	IMX688	Not supported
NPU	Enable NPU support	Enabled
DSP	fastrpc	Enabled

Qualcomm Dragonwing™ IQ-X5121 Evaluation Kit

Devices / Features	Features Description	Feature Implementation Status (*)
OS Version	Ubuntu Server 26.04	Enabled
	Ubuntu Desktop 26.04	Enabled
Kernel	Linux kernel 7.0	Enabled
Boot Loader	UEFI (Linux boot flow)	Supported
Boot Media	NVMe	Not supported
	UFS	Supported
I/O PCIe	PCIe Gen 3 and Gen 4 (Switch and configurations)	Enabled
I/O USB	USB 3.x Gen1/ Gen2	Enabled
	USB Type-C	Enabled
WLAN	ath12k driver	Enabled
BT	BT over UART	Enabled
	BT over USB	Enabled
Ethernet	ASIX AX88179 Ethernet controller	Enabled
Peripherals and Buses	UART	Enabled
	SMBus	Enabled
	SDIO	Enabled
	SPI	Enabled
	I2C	Enabled
	SPI-NOR	Enabled
	GPIO	Enabled
	CAN	Supported
Security	TPM	Enabled
	QTEE	Enabled
Graphics GPU	Support via Freedreno (Mesa 25.2)	Enabled
	OpenGL ES 3.2	Enabled
Display	DP (DDI)	Enabled
	eDP	Enabled
Video	H.264	Enabled
	H.265	Enabled
	VP9 encode/decode	Enabled

Audio	ALSA / Pipewire	Enabled
	Playback	Enabled
	Record	Enabled
Camera	MIPI CSI IMX577	Supported
	IMX676	Not supported
	IMX688	Not supported
NPU	Enable NPU support	Enabled
DSP	fastrpc	Enabled

Qualcomm Dragonwing™ IQ-9075 Evaluation Kit

Devices / Features	Features Description	Feature Implementation Status (*)
OS Version	Ubuntu Server 26.04	Enabled
OS Version	Ubuntu Desktop 26.04	Enabled
Kernel	Linux kernel 7.0	Enabled
Updates		Enabled
Bootloader	Bootloader will be provided by the HW the vendor, but not included in Ubuntu ISO. Qualcomm boot process should be scalable for the derivative platform.	Enabled
UEFI Secure Boot		Not supported
systemd		Enabled
GPU		Enabled
Memory: SDRAM	LPDDR5, 3 × 128 GB	Enabled
Storage: UFS	2x128 GB UFS	Enabled
PCIe	1x PCIex4 slot or expansion (switched) 1x m.2 E key (wifi) or expansion (switched)	Enabled
Display	2x mini-DP (one with MST) DSI flex connection (display not included)	Enabled
Camera	4x MIPI CSI (C/D PHY) flex connectors OV9282	Enabled
Camera	GSML camera X3F10-Bayer	Enabled
Camera	GSML camera X3F10-YUV	Enabled
UVC/UAC Host mode		Enabled
	USB Type-C (host or device mode)	Enabled

USB

	USB Type-C (host mode)	Enabled
	uUSB 2.0 (host or device mode)	Enabled
WLAN / BT	M.2 module (NFA765), directly to PCIE0 (M.2 connector on main board) WLAN ath11k, wpa_supplicant WLAN concurrency, WiFi-6, MU-MIMO, OFDMA WLAN coex. SSR, halphy, WPA3 OPP/HID/PAN/PBAP/MAP Client, FTM BT concurrency, BT SSR BLE profiles (GAP/GATT/HOGP), SPP/SDP	Enabled
WLAN / BT (Mezzanine board)	M.2 module (NFA765) - downstream of QPS615 (M.2 connector)	Not supported
Ethernet	RJ45 2.5 GbE MD	Enabled
Ethernet (Mezzanine board)	RJ45 connector 2.5 GbE MD RJ45 connector 1 GbE SAIL RJ45 connector 2.5 GbE QPS/PCIE RJ45 connector 10 GbE QPS/PCIE	Not supported
I2C		Out-of-Scope
SPI		Out-of-Scope
CAN	1x CAN-FD on LS expansion	Out-of-Scope
CAN (Mezzanine board)	7x CAN-FD connector	Not supported
TPM	ST33HTPH2X32AHE4 on main board	Enabled
microSD card (Mezzanine board)	microSD card	Not supported
microSD card (Core board)	microSD card	Enabled
Debug UART	microUSB connector Connector with FTDI USB to UART converter	Enabled
GPIO driver		Enabled
Pinctrl		Enabled
IPC Controller support		Enabled
SCM drivers		Enabled
Baseport CPU Hotplug		Enabled
Power Management	Suspend and Resume	Enabled
	Cold boot	Enabled
	Warm boot	Enabled
Dev utilities (SSH, SCP)		Enabled
Container Orchestration		Enabled
Remote proc		Enabled
ZRAM enablement		Enabled

Audio	ALSA and PipeWire	Not supported
	Playback	Not supported
	Recording	Not supported
Audio amplifiers x2	2x I2S speaker amps	Not supported
Digital microphone	1x I2S mic	Not supported
Sensors	ICM-42688	Out-of-Scope
	IMU (Accel & Gyro)	Out-of-Scope
	Magnato Meter	Out-of-Scope
Display	Overlays, GBM, Splash (applicable with the AMSS license)	Enabled
	DSPP	Enabled
	SSPP	Enabled
	HDR	Enabled
	GBM	Enabled
	Pixman Rendering	Enabled
	DisplayPort over Type-C	Enabled
	Native DP	Enabled
	eDP interface	Enabled
Graphics	3D rendering	Enabled
	EGL1.4, GLES 3.2	Enabled
	UBWC4.0	Enabled
	Vulkan 1.1	Enabled
	OpenGL ES3.1	Enabled
	Open CL Support for Wayland/Weston	Enabled
	IFPC	Enabled
Camera	Preview	Enabled
	Snapshot	Enabled
	3A	Enabled
	Auto-Exposure compensation (AEC)	Enabled
	Auto White Balance (AWB)	Enabled
	JPEG	Enabled
	Tintless	Enabled
	Single/Multi Camera Support	Enabled
	ML based Face Detection in Camera backend	Enabled
	High Frame Rate (HFR)	Enabled
	Lens Distortion Correction (LDC)	Enabled

	Lens Shading Correction (LSC)	Enabled
	Noise Reduction - Snapshot	Enabled
	Noise Reduction - Video	Enabled
Video	V4L2	Enabled
	Playback	Enabled
	Recording	Enabled
	Dynamic flip and rotation (180 degree)	Not supported
	Video concurrency	Enabled
DSP	Support fastrpc to manage DSP. This also enable any Qualcomm Hexagon workload	Enabled
Computer Vision	OpenCV	Enabled
	OpenCV with FastCV module	Not supported
	FastCV	Enabled
SDKs	QIMP SDK (Intelligent Multimedia)	Enabled
	QIRP SDK support	Enabled
Security	User data protection (FBE)	Enabled
	Secure boot (including UEFI secboot)	Not validated
	PKCS#11 based secure key management	Not validated
	QTEE	Not validated
	Global Platform	Not validated
	Secure File System	Not validated
	SMCInvoke and Qseecomcompat	Not validated
	QCrypto + PRNG	Not validated
	QWES	Not validated
	Public Sec Tools	Not validated

Qualcomm Dragonwing™ IQ-8275 Evaluation Kit

Devices / Features	Features Description	Feature Implementation Status (*)
OS Version	Ubuntu Server 26.04	Enabled
OS Version	Ubuntu Desktop 26.04	Enabled
Kernel	Linux kernel 7.0	Enabled
Updates		Enabled
UEFI Secure Boot		Not supported
CPU	Octo-core (2.35 GHz) (2x Gold+, 2x Gold, 4x Silver)	Enabled

	DMIPS: Up to 138K (inline optimized)	
GPU	A623 MH 3.0 @ 73 fps / 1.3 TOPS FP32 Mesa and Adreno are available from PPA	Enabled
Storage: UFS	1x128 GB UFS	Enabled
PCIe	1x PCIex4 slot or expansion (switched) 1x m.2 E key (wifi) or expansion (switched)	Enabled
Display	1x DP/eDP MST2 v1.4a 1x DSI v1.2	Enabled
Display	2x mini-DP (through KTM switch) DSI flex connection (display not included)	Enabled
Camera	4x MIPI CSI (C/D PHY) flex connectors (3x CSI Ports [D-PHY 3x 10 Gb/s; C-PHY 3x 30 Gb/s] 24b HDR ISP pipe with throughput: 2.4GPix/s pipe, supports 12MP max sensor) OV9282	Enabled
UVC/UAC Host mode		Enabled
USB	USB Type C (host or device mode) - primary USB	Enabled
	USB Type C (host mode) - not concurrent with primary (need to change with a DIP switch)	Enabled
	uUSB 2.0 (host or device mode)	Enabled
WLAN / BT	m.2 module (NFA765A - HSP) - directly to PCIE0 2x printed antennas	Enabled
Ethernet	RJ45 2.5 GbE MD	Enabled
Ethernet (Mezzanine board)	RJ45 connector 2.5 GbE MD RJ45 connector 1 GbE SAIL RJ45 connector 2.5 GbE QPS/PCIE RJ45 connector 10 GbE QPS/PCIE	Not supported
I2C		Out-of-Scope
SPI		Out-of-Scope
CAN	1x CAN-FD on LS expansion	Out-of-Scope
TPM	ST33HTPH2X32AHE4 on main board	Enabled
microSD card (Mezzanine board)	microSD card	Not supported
microSD card (Core board)	microSD card	Enabled
GPIO driver		Enabled
Pinctrl		Enabled
IPC Controller support		Enabled
SCM drivers		Enabled
Power Management	Suspend and Resume	Not supported
	Cold boot	Enabled
	Warm boot	Enabled
Dev utilities (SSH, SCP)		Enabled

Container Orchestration		Enabled
Remote proc		Enabled
ZRAM enablement		Enabled
Audio	ALSA and Pipewire	Not supported
	Playback	Not supported
	Recording	Not supported
	Audio amplifiers 2x I2S speaker amps	Not supported
	Digital microphone 1x I2S mic	Not supported
Sensors (via SAIL)	ICM-42688	Out-of-Scope
	IMU (Accel & Gyro)	Out-of-Scope
	Magnato Meter	Out-of-Scope
Display	Overlays, GBM, Splash (applicable with the AMSS license)	Enabled
	DSPP	Enabled
	SSPP	Enabled
	HDR	Enabled
	GBM	Enabled
	Pixman Rendering	Enabled
	DisplayPort over Type-C	Enabled
	Native DP	Enabled
	eDP interface	Enabled
	3D rendering	Enabled
	EGL1.4, GLES 3.2	Enabled
	UBWC4.0	Enabled
	Vulkan 1.1	Enabled
	OpenGL ES3.1	Enabled
	Open CL Support for Wayland/Weston	Enabled
	IFPC	Enabled
Camera	Preview	Enabled
	Snapshot	Enabled
	3A	Enabled
	Auto-Exposure compensation (AEC)	Enabled
	Auto White Balance (AWB)	Enabled
	JPEG	Enabled
	Tintless	Enabled
	Single/Multi Camera Support	Enabled
	ML based Face Detection in Camera backend	Enabled
	High Frame Rate (HFR)	Enabled
	Lens Distortion Correction (LDC)	Enabled

	Lens Shading Correction (LSC)	Enabled
	Noise Reduction - Snapshot	Enabled
	Noise Reduction - Video	Enabled
Video	Decode: 4K135 Encode: 2x 4K85	Enabled
DSP	Support fastrpc to manage DSP. This also enable any Qualcomm Hexagon workload	Enabled
Computer Vision	OpenCV	Enabled
	OpenCV with FastCV module	Not supported
	FastCV	Enabled
SDKs	QIMP SDK (Intelligent Multimedia)	Enabled
	QIRP SDK support	Enabled
Security	User data protection (FBE)	Enabled
	Secure boot (including UEFI secboot)	Not validated
	PKCS#11 based secure key management	Not validated
	QTEE	Not validated
	Global Platform	Not validated
	Secure File System	Not validated
	SMCInvoke and Qseecomcompat	Not validated
	QCrypto + PRNG	Not validated
	QWES	Not validated
	Public Sec Tools	Not validated

(*) Feature Implementation Status

- Supported: The feature is implemented and supported in Ubuntu as long term solution
- Enabled: The feature is available, but may have some limitations, such as
    - implemented using downstream solution
    - available from PPA
    - may not be maintained in Ubuntu as long term solution
- Not Supported: The feature has not been implemented yet, but planned to be implemented in the future releases
- Not Validated: The feature is integrated but Canonical is unable to validate it
- Out-of-Scope: The feature is not applicable to the HW or Ubuntu

Known issues

- IQ-X
    - RTC wake alarm is not working

    - CamX support is not enabled by default yet (device tree overlay for CamX has to be loaded manually at the moment)
- IQ9, IQ8
    - Audio is not working
    - Suspend and Resume not working

Report Bugs

- To report a bug, identify the related package in https://launchpad.net/ubuntu, create a bug, then subscribe the ubuntu-qcom-iot team to it.
- For the issues related to Qualcomm's packages, file the bugs in the https://launchpad.net/ubuntu-qcom-iot Launchpad project, managed by ubuntu-qcom-iot team.