



XDC2026 Qualcomm Update

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New platforms: initial support (since 6.18)

Platform	Display	GPU (drm/msm)	GPU (mesa)
Glymur (18 core) / x2-90 / DPU 12.2	v6.19	v6.19	v26.0
Mahua (12 core) / x2-85 / DPU 12.2	v6.19	v7.4	v26.2
Hawi / a850 / DCP	v7.5-v7.6?	v7.4	v26.3?
Maili / a845 / DCP	v7.5-v7.6?	v7.4	v26.3?
Kaanapali / a840 / DPU 13.0	v7.0	v6.19	v26.0
Milos / a810 / DPU 10.2	v7.2	v7.2	v26.2
Eliza / a722 / DPU 12.4	v7.1 (DT in 7.2)	v7.3	v26.3
Shikra / a704 / DPU 6.5	v7.3	v7.3	v26.2
Talos / a612 / DPU 5.3	v6.14	v6.19	v23.2
msm8960 / a225 / MDP4	-	v7.0	v26.2

Display updates

- DPU
 - GAMMA LUT, v7.0
 - 4k on Kodiak (SC7280), v7.0
 - Virtualized planes, on by default since v7.1
 - QUAD pipes (>4k), most of the code in since v6.19 - v7.1.
 - To be enabled in v7.4
- MDP5
 - MSM8998/SDM660/630 transitioned to DPU, v7.0
- DisplayPort
 - eDP link rate tables, v7.0
 - HPD rework, v7.2
 - MST groundwork, v7.3
- DSI
 - 10-bit support, v7.1

GPU updates

- Gen8 (a8xx, x2-*) support!
- Rusticl enabled by default, cl3.1
- GL_EXT_yuv_target
- Additional formats, incl packed RGB
- PERFCNTR_CONFIG

GPU: PERFCNTR_CONFIG

- Previously perfcntr usage was a bit YOLO
 - pps-producer parsed `/proc/device-tree`, ioremapped perfcntr registers for sampling
 - Doesn't play nicely with IFPC, or PM in general
 - Detect GPU suspend, reconfigure counters from cmdstream, rely on runpm autosuspend!
 - Global vs inline conflicts: hope for the best!
- Enter `PERFCNTR_CONFIG` ioctl (v7.2, v26.2)
 - Single ioctl for configure global counter stream
 - And reserving counters for local/inline counter collection
- Solves PM / IFPC
 - Global counter stream stops/restarts around suspend/resume
 - Coordinates with GMU to keep GPU alive while reading counters
- Solves conflicts
 - vk/gallium can request/reserve counters for local/inline collection
 - pps-producer can configure global counter collection
 - First come, first serve, ioctl will return error if not enough remaining counters

CI: qualcomm lava farm

- First devices: a702 (June 2026)
 - The tiny GPUs tend to be a bit odd
- Upcoming devices: a8xx (prob a840?)
 - And more? Tbd
- Looking fwd to mesa-ci jobs in drm-ci!

Display: The future

- DPU
 - Quad pipe enabled, 7.4
 - Vblanking fixes, 7.4
 - WB / CWB fixup, CWB for SM8150+, 7.4-7.5
 - Encoders rework, 7.5-7.7
- DCP
 - New driver for Hawi, Mali
- DisplayPort
 - MST, 7.4-7.6
 - USB4
- HDMI
 - Eliza
- MDP5
 - Removal of legacy cursor, 7.4
 - Further migration of platforms
- MDP4
 - Removal of legacy cursor, 7.5?
 - New old platforms?

GPU: The future

- GPU fwsched
 - Push GPU + DPU (?) + other (??) fences to fw to reduce scheduling latency
- CL SVM, get_reqd_subgroup, etc
- MALU



Thank you

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