AMD Windows Catalyst Driver Release Notes

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Version History

Version	Details	Date
1.0	Ryzen8000 Windows Catalyst & Chipset drivers refresh, RyzenAI package release	July'24
2.0	Ryzen8000 Windows Catalyst , Chipset drivers and RyzenAI package refresh	Oct'24
3.0	Ryzen8000 Windows Catalyst , Chipset drivers and RyzenAI package refresh	Apr'25
4.0	Ryzen8000 Windows Catalyst , Chipset drivers and RyzenAI package refresh	July'25

1. Overview

Windows Embedded Catalyst Drivers include a set of drivers to enable Graphics and peripheral devices on selected development platforms.

2. New in this Release

- Catalyst, Chipset and NPU (RyzenAI) drivers refresh for Embedded Ryzen8000.
- Standalone NPU driver package for latest RAI support
- Ryzen AI SW update to new version.

3. Windows Driver Support

OS	Win11 24H2	
Catalyst/Graphics Driver	Driver Packaging Version	250526a-416003C
	WHQL	Yes
Chipset Driver	AMD_Chipset_Software_7.06.02.123	
NPU driver	32.0.203.280	
Ryzen AI SW	1.5	

4. OS & Processor Family support

Processor family	AMD Program	Supported OS Version
Ryzen 8000 series	Hawk-Point -1	Win11 24H2

5. Supported feature list – Catalyst & Chipset

Features Group	Features category	Ryzen 8000 Series
3D	OGL 4.6	Yes
3D	Vulkan	Yes
Display	4K Cinema	Yes
Display	Number of displays	Refer display support table below
Display	DP MST	Yes
Multimedia	H.264 decode	Yes

Multimedia	H.265 decode	Yes
Multimedia	VP9 decode	Yes
Multimedia	10-bit decode	Yes
Audio	DP Audio	Yes
External discrete graphics card (dGPU) validation	Refer table for dGPU pairing	No
Eyefinity	Advance Feature	Yes
EDID	Advance Feature	Yes
Custom timing	Advance Feature	No
10-bit color	Advance Feature	Yes
dGMA	OpenGL	No
dGMA	OpenCL	No
OpenGL	OpenGL	Yes
OpenCL	OpenCL	Yes
Peripherals	AHCI Drivers	Yes
Peripherals	AMD PSP Drivers	Yes
Peripherals	USB 3.0 Driver (ITB)	Yes
Peripherals	eMMC driver (ITB) (HS400 mode only)	No
Peripherals	Ethernet driver	No
Peripherals	Audio driver	Yes
Peripherals	GPIO2	Yes
Peripherals	I2C	Yes
Peripherals	UART	Yes
Peripherals	NPU [Refer Ryzen AI features table]	Yes

6. Supported feature list – NPU & RyzenAI

Ryzen AI features			
Features Group	**Features type**	**Feature Supported**	**Feature validated**
MobileNetV2	CNN	Yes	No
ResNet50	CNN	Yes	Yes
MobileNetV3	CNN	Yes	No
Yolov3	CNN	Yes	No
Yolov8	CNN	Yes	Yes
MSLR720	CNN	Yes	No
InceptionV4	CNN	Yes	No

DeepLabV3	CNN	Yes	No
Real-ESRGAN	CNN	Yes	No
OPT1.3B	LLM	Yes	No
LLaMA2.7B	LLM	Yes	No
CVML	Use Case App	Yes	Yes
Video Conference – Face detection Yolov8m	Use Case App	No	No
Image Classification resnet50	Use Case App	No	No
Image segmentation – Scene edit	Use Case App	No	No
Super resolution-ECBSR700	Use Case App	No	No
AI Assistance – LLaMA2-7B	Use Case App	No	No
AI Assistance –OPT1.3B	Use Case App	No	No
VitisAI quantizer	Tool	Yes	Yes [AI Analyzer]
VitisAI compiler	Tool	Yes	No
MLPerfClient	Benchmark	Yes	No
Procyon AI Benchmark	Benchmark	Yes	Yes [Onnx Benchmark]

Note:

1. Installation and usage details are listed in user-guide document.
2. OGA flow for LLMs introduced from version 1.4, currently doesn't support hybrid mode on Ryzen 8000.

7. Processor Display support

APUs	Max No of display
Ryzen 8000 Series • R8845HS • R8640HS • R8840U • R8640U	• 1x 4K60

8. Platform configurations

Ryzen8000 Platform (Lilac-HawkPoint-1)	
Processor family	Ryzen8000 Series

Model (CPU config, CPU Base Frequency, GPU config, nominal TDP)	**R8845HS** (8C/16T, 3.79 GHz CPU, 780M Graphics, 45W) **R8640HS**(6C/12T, 4.95 GHz CPU, 760M Graphics, 45W) **R8840U** (8C/16T, 5.125 GHz CPU, 780M Graphics, 28W) **R8640U** (6C/12T, 3.49 GHz CPU, 760M Graphics, 28W)
BIOS version	RHP1002A
VRAM setting	4096 MB DDR5 2400Mhz
RAM (DDR5)	32 GB
Display Convertors / Dongles Used	DP Direct Cable, USB C to DP cable
Storage disk	NVMe SSD

9. SW Package

SW Component	WHQL certified drivers	Catalyst Installer Package	Chipset Installer Package
Display	Yes	Yes	No
PSP	Yes	No	Yes
SBDrv:acpi	Yes	No	Yes
SBDrv:SFH	Yes	No	Yes
SBDrv:SFHI2C	Yes	No	Yes
SBDrv:I2C	Yes	No	Yes
SBDrv:SMBus	Yes	No	Yes
SBDrv:UART	Yes	No	Yes
Audio:ACPBus	Yes	Yes	No
Audio:HDMI	Yes	Yes	No
Audio:HDABus	Yes	No	No
Audio:I2S	Yes	Yes	No
Audio:I2STDM	Yes	Yes	No
XGBE	Yes	No	Yes
Ryzen Power Plan	Yes	No	Yes
IOV	Yes	No	Yes
SMBUS	Yes	No	Yes
CIR	Yes	No	Yes
USB 3.1	Yes	No	Yes
GPIO2	Yes	No	Yes
Serial	Yes	No	Yes
Watchdog	Yes	No	Yes

10. SW Package - Graphics Driver Version

The graphics driver package is also termed as 'ESE Q1 Driver' or 'Radeon Software'.

This package contains various independent drivers. Below are the version numbers of Radeon software and other drivers included. The same should also be visible with Radeon Software->System->Software & Driver Details.

S. No	SW Driver Description	Version
1	Radeon Software Version	25.6.1
2	Radeon Software Edition	Adrenalin
3	AMDVER	32.0.21013.1000
4	Driver Packaging Version	25.10.13.01-250526a-416003C-AMD-Software-Adrenalin-Edition
5	2D Driver Version	8.1.1.1634
6	Direct3D®	9.17.11.0281
7	Direct3D API	12.2 (Win11) 12.1 (Win10 LTSC)
8	OpenCL®	32.0.21013.1000
9	OpenCL API	2.0
10	OpenGL®	25.05.250223_d1f9d32
11	OpenGL API	4.6
12	AMD Audio Driver	10.0.1.40
13	Vulkan™ Driver	2.0.342
10	Vulkan™ API	1.4.308
11	NPU Driver	32.0.203.280

10. Known Issues/Limitations

Ryzen8000 Platform (Lilac-Hawk-Point-1)

1) System can enter 'Modern Standby' but POST code is observed.
2) Display light up failure and sporadic driver timeout observed after hot unplug and hot plug of EDID displays

- Workaround
    i. Remove EDID emulation before hot-unplug
    ii. Enable EDID after hotplug

3) Minor stutter observed during video playback with 4K Display.
4) BSOD observed on running 3DMark 11 application.
    - Workaround
        i. Install 3d Mark 11.
        ii. Download and Run Futuremark_SystemInfo_5_73_1241.msi [downloaded from https://benchmarks.ul.com/downloads/systeminfo/latest].It will install latest SystemInfo and replace existing installed one.
        iii. Run the tests
5) Vulkan GLTF samples are crashed followed by hang while doing resize to minimum.
6) "Error- Device instance lost" error observed during overnight reboot and S3 cycles.
7) SV12 widget not listed in AVT tool
8) Power application analysis option is missing from AMD Uprof GUI
9) Flame graph is not visible in AMD uproof
10) CPU & GPU Utilization mismatch observed between AMD Radeon Performance UI and Task manager
11) GFX option under Die 0 is missing from Thermal Checker in AMD AVT

NPU & RyzenAI:

12) AI Analyzer usage details with only ResNet50 are provided. Not mentioned for other models.
13) HPT-1 NPU models (MobileNet, ResNet50, Yolovx), not getting expected results.
14) NPU engine hits >96% for Segmentation model and other models are hitting avg 50%.
15) NPU engine performance is not displayed in AMD Radeon Software.
16) NPU Management interface shows device as ‘Phoenix’ instead of ‘HPT’ when run the ‘xrt_smi examine’ command.
17) Terminate batch job command not functioning as expected. Quits the run even when selected “N”.

11. Notes on Validation

1) Ryzen8000 OPNs are validated with these drivers.

12. Support

Please contact your Field Application Engineer for support on this release.