**AMD Windows Catalyst Driver
Release Notes**

Table of Contents

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

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

o Catalyst, Chipset and NPU (RyzenAI) drivers refresh for Embedded Ryzen8000.
o NPU/IPU device driver is part of Catalyst driver and gets installed with Catalyst.
o Ryzen AI SW update to new version.

3. Windows Driver Support

OS	Win11 24H2, Win 10 21H2 LTSC	
Catalyst/Graphics Driver	Driver Packaging Version	240823a-407010C
	WHQL	Yes
Chipset Driver	AMD_Software_6.0722.037	
NPU driver	32.0.201.211 (part of Catalyst)	
Ryzen AI SW	1.2	

4. OS & Processor Family support

Processor family	AMD Program	Supported OS Version
Ryzen 8000 series	Hawk-Point -1	Win11 24H2 Win 10 21H2 LTSC

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	No
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 category	Feature validated
NPU Management Interface	Early Access Feature	Yes
AI Analyzer	Early Access Feature	Yes
LLM	Early Access Feature	No
MobileNet_v2	Model	Yes
ResNet50	Model	Yes
Retinaface	Model	Yes
Segmentation	Model	Yes
Yolox	Model	Yes

Note: Installation and usage details are listed in user-guide document.

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	RHP1000A
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	24.10.37.04
2	Radeon Software Edition	Adrenalin

3	AMDVER	32.0.11037.4004
4	Driver Packaging Version	24.10.37.04-240823a-407010C-AMD-Software-Adrenalin-Edition
5	2D Driver Version	8.1.1.1634
6	Direct3D®	9.17.11.0267
7	Direct3D API	12.1
8	OpenCL®	32.0.11037.4004
9	OpenCL API	2.0
10	OpenGL®	24.08.240303_ca9407b
11	OpenGL API	4.6
12	AMD Audio Driver	10.0.1.38
13	Vulkan™ Driver	2.0.310
10	Vulkan™ API	1.3.287
11	NPU Driver	32.0.201.211

10. Known Issues/Limitations

Ryzen8000 Platform (Lilac-Hawk-Point-1)

1) System can enter to Modern Standby but POST code is observed.
2) AMD AI Analyzer verification is failed due to SSL certification and errors in python file
   - Workaround
     i. Edit prepare_model_data.py and add
        1. import ssl
        2. ssl._create_default_https_context = ssl._create_unverified_context
3) NPU engine is hitting >96% for Segmentation model
4) NPU engine is not getting engaging while running AI Multi Models
5) NPU engine is not displaying in Performance section of AMD Software
6) xrt-smi utility is not working and always getting popup error message "could not be located DLL".

- Workaround
  - i. Delete xrt_coreutil.dll from c:/Windows/system32/AMD/

7) Minor stutter observed during video playback with 4K Display.
8) 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

9) Vulkan GLTF samples are crashed followed by hang while doing resize to minimum.
10) "Error- Device instance lost" error observed during overnight reboot and S3 cycles.

11. Notes on Validation

1) Ryzen8000 are validated with these drivers.

12. Support

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

Trademarks