



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 |

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.
- NPU/IPU device driver is part of Catalyst driver and gets installed with Catalyst.
- 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 <ul style="list-style-type: none"> • R8845HS • R8640HS • R8840U • R8640U | <ul style="list-style-type: none"> • 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.

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