



AMD Windows Catalyst Driver Release Notes

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Version History

Version	Details	Date
1.0	Ryzen7000 Windows Catalyst & Chipset Drivers refresh	Oct'2024

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

- Enabled Catalyst & Chipset drivers refresh for Ryzen7000.
- Catalyst driver on WinSrv22 is WHQL certified.
- Win11 24H2 OS version support is enabled.

3. Windows Driver Support

OS (x64 bit)	Graphics Driver		Chipset Driver
	Driver Version	WHQL	
Win 10 & Win11	240823a-407010C	Yes	AMD_Software_6.0722.037
Win Server 2022	240910a-408054C	Yes	AMD_Server_Software_6.05.21.049

4. OS & Processor Family support

Processor Family	AMD Program	Supported OS Version (x64 bit)
Ryzen 7000 Series	Rapheal	<ul style="list-style-type: none"> ○ Win11 24H2 ○ Win10 21H2 LTSC ○ Win Server 2022

5. Supported feature list.

Features Group	Features category	Ryzen 7000 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	PT-GPIO	Yes

6. Processor Display support

APUs	Max No of display
Ryzen 7000 Series <ul style="list-style-type: none"> • R7700x • R7745 • R7945 • R7600 • R7645 	<ul style="list-style-type: none"> • 4 • 4 [Single Display 4k@60] • 4 • 4 [Single Display 4k@60] • 4 [Single Display 4k@60]

7. Platform configurations

Ryzen7000 Platform (Splinter)	
Processor family	Ryzen7000 Series
Model (CPU config, CPU Base Frequency, GPU config, nominal TDP)	R7945 (12 –Core, 3.69 GHz,2200 MHz GPU Max, 2GPU CU ,65W) R7745 (8-Core, 3.79 GHz, 2200 MHz GPU Max, 2GPU CU ,65W)

	R7700x (8-Core, 4.49 GHz, 2200 MHz GPU Max, 2GPU CU, 105W) R7600x (6-Core, 4.69 GHz, 2200 MHz GPU Max, 2GPU CU, 105W) R7645 (6-Core, 3.79 GHz, 2200 MHz GPU Max, 2GPU CU, 65W)
BIOS version	RSI1002A_18
RAM (DDR5)	R7945 : 32 GB (2400Mhz) R7745 : 32 GB (2400 Mhz) R7700x : 32 GB (2400 Mhz) R7600x : 32 GB (2400 Mhz) R7645 : 32 GB (2400 Mhz)
Display Convertors / Dongles Used	USB –C, DP Direct Cable, HDMI Direct Cable
Storage disk	NVMe SSD

8. SW Package

SW Component	WHQL Certified drivers	Catalyst Installer Package	Chipset Installer Package	Comments
Display	Yes	Yes	No	Includes Graphics Drivers for Win10/11
	No	Yes	No	Includes Graphics Drivers for WinSrv22
PSP	Yes	No	Yes	
SBDrv:acpi	Yes	No	Yes	
SBDrv:SFH	Yes	No	Yes	Not supported
SBDrv:SFHI2C	Yes	No	Yes	
SBDrv:I2C	Yes	No	Yes	
SBDrv:SMBus	Yes	No	Yes	Null driver (AMD SMBUS Driver)
SBDrv:UART	Yes	No	Yes	Max 4M baud-rates
Audio:ACPBUS	Yes	Yes	No	
Audio:HDMI	Yes	Yes	No	
Audio:HDABus	Yes	No	No	I2S & I2STDM not applicable.
Audio:I2S	Yes	Yes	No	
Audio:I2STDM	Yes	Yes	No	

Ryzen Power Plan	Yes	No	Yes	
IOV	Yes	No	Yes	Null driver
CIR	Yes	No	Yes	Null driver (Feature not supported)
USB 3.1	Yes	No	Yes	
GPIO2	Yes	No	Yes	

9. SW Package - Graphics Driver Version

The graphics driver package is also termed as ‘ESE Ryzen7000 Driver’ or ‘Radeon Software’.

Below are its release number and AMDVER details.

OS	Release Number	AMDVER
Win10 & Win11	24.10.37.04	32.0.11037.4004
Win Server 2022	24.20.16	32.0.12016.8

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 (Win10 & Win11)	Version (WinServer 2022)
1	Radeon Software Version	24.10.37.04	24.20.16
2	Radeon Software Edition	Adrenalin	Adrenalin
3	AMDVER	32.0.11037.4004	32.0.12016.8
4	Driver Packaging Version	24.10.37.04-240823a-407010C-AMD-Software-Adrenalin-Edition	24.20-240910a-407490E
5	2D Driver Version	8.1.1.1634	8.1.1.1634
.	Direct3D®	9.17.11.0267	9.17.11.0272

7	Direct3D API	12.1	12.2
8	OpenCL®	32.0.11037.4004	32.0.12016.8
9	OpenCL API	2.0	2.0
10	OpenGL®	24.08.240303_ca9407b	24.09.240702_2e2ba6f
11	OpenGL API	4.6	4.6
12	AMD Audio Driver	10.0.1.38	NA
13	Vulkan™ Driver	2.0.310	2.0.317
10	Vulkan™ API	1.3.287	1.3.292

10. Known Issues/Limitations

1. AVT Thermal checker crashes after 3 to 5 seconds of launching the application.
2. Unknown device Yellow bang observed in device manager with Windows Server 2022 OS
 - Workaround
 - i. Use following BIOS settings
 - ii. 1) AMD CBS >SOC Miscellaneous Control > Pluton Security Processor -> Disabled
 - iii. 2) AMD CBS > Embedded Miscellaneous Control > ACP Controller -> Disabled
 - iv. 3) AMD CBS > Embedded Miscellaneous Control > Prom21 and PPM -> Disabled
3. 3 failures observed during OGL conformance KHR-GL46 test.
4. Display not observed after wake from “Suspend to RAM” diagnostic in SST tool.
5. BIOS settings to enable S3 (default settings):
 - I. AMD PBS ->S3/Modern Standby S3 enable.
 - II. Boot UEFI OS Fast Boot Option --> Disable.
6. BIOS settings required for Modern Standby:
 - I. AMD PBS -> S3/Modern Standby Support = <Modern Standby Enable>
 - II. AMD PBS -> Modern Standby Type = <Modern Standby + S0i3>
 - III. AMD PBS -> Reduced Hardware Support = <Enabled>
7. S3 is enabled by default in BIOS. If switched to MSB, re-install OS, graphics & chipset drivers.
8. If OS is installed with MSB enabled in BIOS and switched later to S3 in BIOS, then re-install OS, graphics & chipset drivers.

9. Modern Standby feature not working with AMD Suspend tool on Windows 11 22H2 OS.
10. Vulkan CTS tests are failing with latest Vulkan API-1.3.203.
11. Tearing observed while running 3DMARK 11 Benchmark.
12. OpenCL Driver mismatch observed in AMD Radeon UI and clinfo.
13. Minor stutters observed during 30fps video playback.
14. Refresh rate of 60hz is not getting applied on DirectX D3D10 and D3D11 samples.
15. Vulkan Cinder Samples and Direct X D3D12 HDR sample crashes when minimized.
16. Mouse cursor not visible while playing DirectX D3D9 app in full screen mode.
17. Time Based Profiling and Power Profiling in AMDuProf tool is not supported in Win11 22H2 OS.
18. GPU Utilization mismatch observed between AMD Radeon Performance UI and Task manager.
19. Icon color mismatch observed between AMD Radeon UI and other shortcuts.
20. Sporadically Green color display observed while performing reboot function with HDMI display.
21. Chipset driver Installation is successful, but log file shows as " FAIL" for AMD_Chipset_Drivers.
22. Sporadically system hang observed during reboot long run test.
23. Watchdog, SMBUS and SPI drivers are not supported in this Chipset package.
24. Yellow bang observed for Lavendar_Prom21 chipset after enabling the Prom21 chipset by using J724 jumper.
Workaround: Re-install Chipset package to install PT-GPIO driver to avoid yellow bang.
25. Pluton device yellow bang is observed on Win10.
Workaround: Disable “Pluton Security Processor” in BIOS to avoid yellow bang.

11. Notes on Validation

1. Ryzen7000 platforms are validated with these drivers.

12. Support

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

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