

DVS 4U SWARM8-10G-A6000 Pro



Overview

DVS SWARM Media Servers are multi-laned, multi-channel, high performance systems designed to handle extreme bandwidth data rates, high thread count and high-quality media playback across multiple outputs.

The 4U SWARM8-10G-A6000 Pro is a high performance eight output media server, utilising two of the nVidia RTX A6000s with 48GB of graphics memory each. Making this server ideal for real-time and 3D rendering workloads. This server utilises workstation grade hardware to deliver outstanding performance, whether using your own custom application / content, or running a third-party render engine this server has plenty of overhead. The professional level graphics card gives great performance as well as additional features such as EDID emulation, supplying an extra level of reliability and in the Pro+ version (sync module) the server can frame lock between multiple units, or Genlock to an external source. The professional nVidia cards also support Mosaic, allowing a single desktop to be virtualised across multiple graphics cards.

Each output on the server can run up to 8k@60Hz RGB, although the framerate of the final output is software / content dependant.

Specifications

- DVS 4U Rackmount Chassis - 465.2 x 430.0 x 176.0mm (D x W x H)
- 1600 Watt PSU: 100 – 240V~, 20 – 8.5A, 47 – 63Hz
- E-ATX Motherboard (AMD WRX80 Chipset)
- AMD Threadripper PRO Processor (16, 32 or 64 cores with Hyper Threading)
- 64 / 128 / 256 GB DDR4 Octa Channel ECC Memory
- 2 x nVidia A6000 Graphics Card (Up to 4 concurrent displays each)
- 3 x NVMe M.2 Storage
- 2 x 10 Gigabit Network Ports
- Intel WiFi 6
- Operating System - Windows Enterprise IoT LTSC 2019 or Windows 10 Pro
- Optional Extras (Variants)
 - Sync Module
 - Up to 8 x NVMe Storage via RAID Controller Card (RAID 0, 1, and 10)
 - 2 x 4K@60 Capture Card
 - 4 x HD@60 Capture Card
 - 40Gb Network (SFP+)

Variations

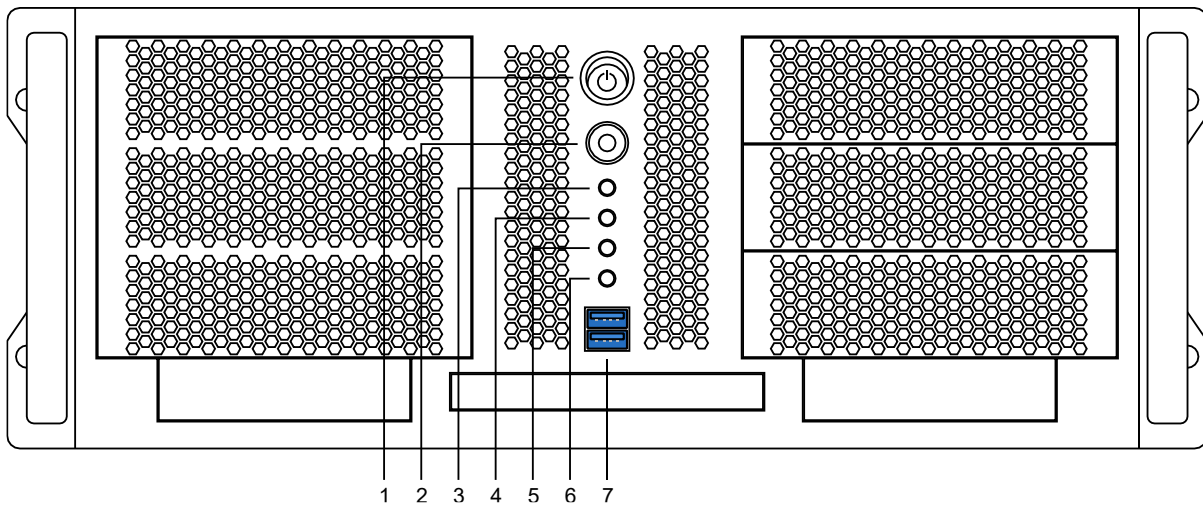
Model Number	NVMe RAID	2 x 4K Capture	4 x HD Capture	40Gb Network	Sync Module
4U SWARM8-10G-A6000 Pro					
4U SWARM8-10G-A6000 Pro+					Yes
4U SWARM8-40G-A6000 Pro				Yes	
4U SWARM8-40G-A6000 Pro+				Yes	Yes
4U SWARM8-2C4K10G-A6000 Pro		Yes			
4U SWARM8-2C4K10G-A6000 Pro+		Yes			Yes
4U SWARM8-2C4K40G-A6000 Pro		Yes		Yes	
4U SWARM8-2C4K40G-A6000 Pro+		Yes		Yes	Yes
4U SWARM8-4CHD10G-A6000 Pro			Yes		
4U SWARM8-4CHD10G-A6000 Pro+			Yes		Yes
4U SWARM8-4CHD40G-A6000 Pro			Yes	Yes	
4U SWARM8-4CHD40G-A6000 Pro+			Yes	Yes	Yes
4U SWARM8-RE10G-A6000 Pro	Yes				
4U SWARM8-RE10G-A6000 Pro+	Yes				Yes
4U SWARM8-RE40G-A6000 Pro	Yes			Yes	
4U SWARM8-RE40G-A6000 Pro+	Yes			Yes	Yes
4U SWARM8-RE2C4K10G-A6000 Pro	Yes	Yes			
4U SWARM8-RE2C4K10G-A6000 Pro+	Yes	Yes			Yes
4U SWARM8-RE2C4K40G-A6000 Pro	Yes	Yes		Yes	
4U SWARM8-RE4CHD10G-A6000 Pro	Yes		Yes		
4U SWARM8-RE4CHD10G-A6000 Pro+	Yes		Yes		Yes
4U SWARM8-RE4CHD40G-A6000 Pro	Yes		Yes	Yes	

Graphics Card

Chipset	RTX A6000
Microarchitecture	Ampere
Memory	48GB GDDR6
Memory Bandwidth	768 GB/s
Interface	PCIe 4.0 (x16)
Microsoft DirectX Support	12 API
HDCP Ready	Yes
Maximum Concurrent Displays	4 Displays
Maximum Digital Resolution	7680x4320 @ 60Hz (8K UHD)
Outputs	4 x DisplayPort 1.4
EDID Emulation	Yes
Sync Module Supported	Yes
Supported API's	DirectX 12.0, OpenGL 4.5, Shader Model 5.1, Vulkan 1.0

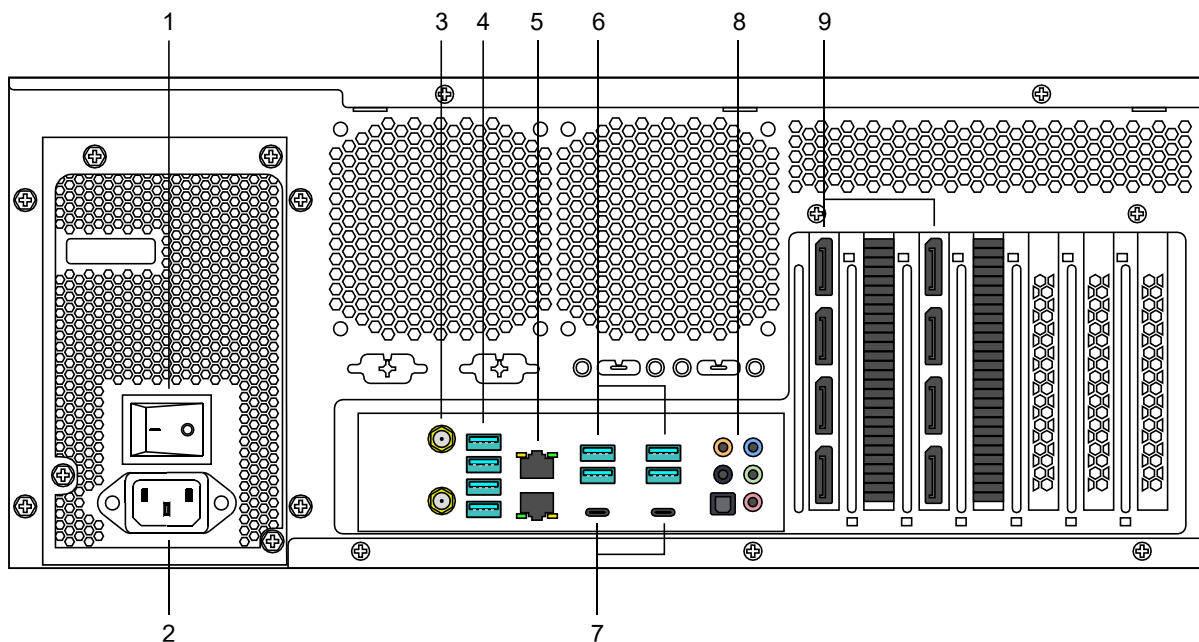
Connectors

Front Panel

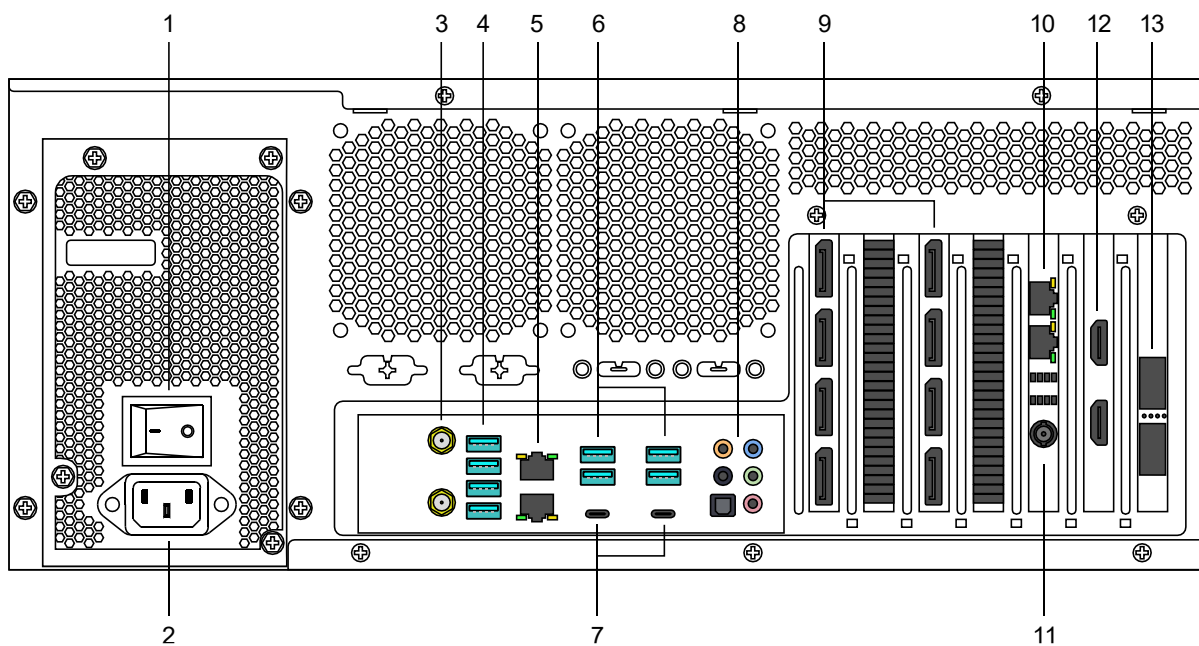


1. **Power Button**
2. **Reset Button**
3. **Power LED**
4. **HDD Activity LED**
5. **LAN1 Activity LED**
6. **LAN2 Activity LED**
7. **USB 3.0 Ports**

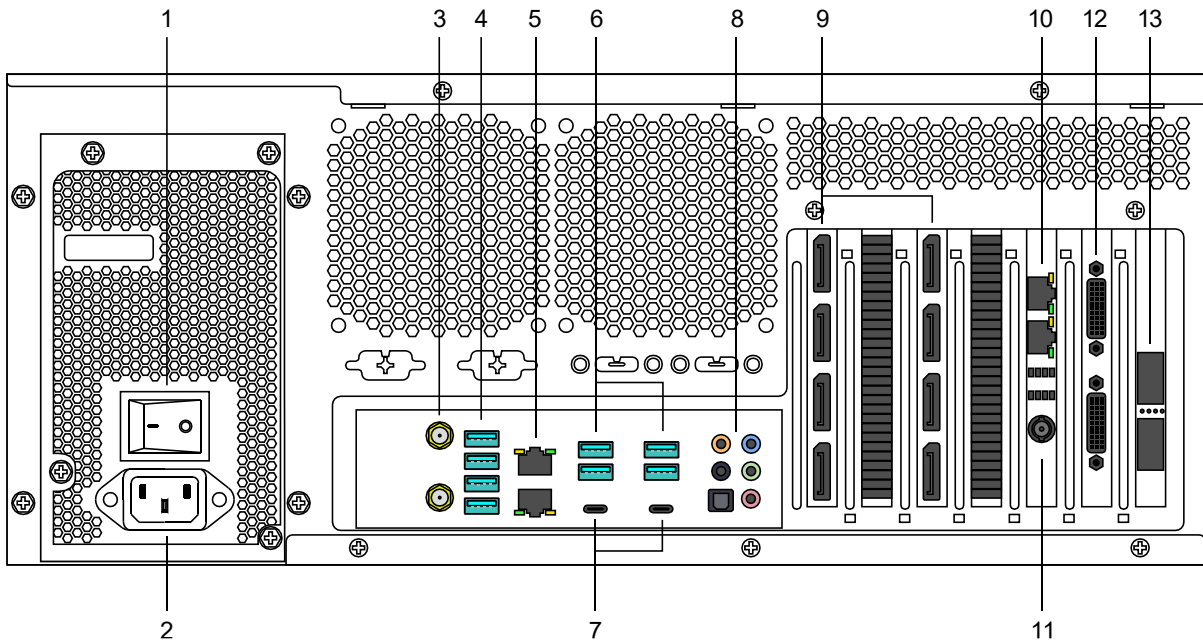
Rear Panel



Variant with Sync Module, 2 x 4K Capture and 40G



Variant with Sync Module, 4 x HD Capture and 40G



- 1. **Power Supply Power Switch**
- 2. **Power IEC.** Mains Power Input: 100 – 240V~, 20 – 8.5A, 47 – 63Hz
- 3. **WiFi 6 (802.11 a/b/g/n/ac/ax), Bluetooth v5.1**
- 4. **USB 3.2 Gen2 Type-A Ports**
- 5. **LAN RJ-45 Ports.** 10 Gigabit Ethernet

LAN port LED Indications

Activity / Link LED		Speed LED		<p>LAN port</p>
Status	Description	Status	Description	
OFF	No link	OFF	100Mbps connection	
GREEN	Linked	GREEN	10Gbps connection	
BLINKING	Data activity	ORANGE	1Gbps connection	

- 6. **USB 3.2 Gen2 Type-A Ports**
- 7. **USB 3.2 Gen2 Type-C Ports**
- 8. **Audio Ports.** Includes Optical S/PDIF Output

Audio Ports Channel Configuration				
Port	Headset / 2 Channels	4 Channel	5.1 Channel	7.1 Channel
Light Blue	Line In	Line In	Line In	Side Speaker Out
Lime	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out
Pink	Mic In	Mic In	Mic In	Mic In
Orange	-	-	Centre / Sub Woofer	Centre / Sub Woofer
Black	-	Rear Speaker Out	Rear Speaker Out	Rear Speaker Out

9. **DisplayPort 1.4 (x 8)**
10. **Sync Module Daisey Chain (RJ45 x 2).** (Sync Module Variant)
11. **BNC Genlock Sync.** (Sync Module Variant)
12. **Capture Ports.** (2 x HDMI 2.0 – 4K Capture Variant, 2 x Custom Connector – HD Capture Variant)
13. **SFP+ Network Ports.** 40 Gb Ethernet (40G Variant)

Internal Expansion

- 3 x M.2 Socket with M key, type 2260/2280 storage devices support (PCIe x4 Gen4 mode)
- Up to 8 x NVMe Storage via RAID Controller Card (RAID 0, 1, and 10)
- 4 x 3.5" Drive bays (SATA), Supports RAID 0, 1, 10 and 5

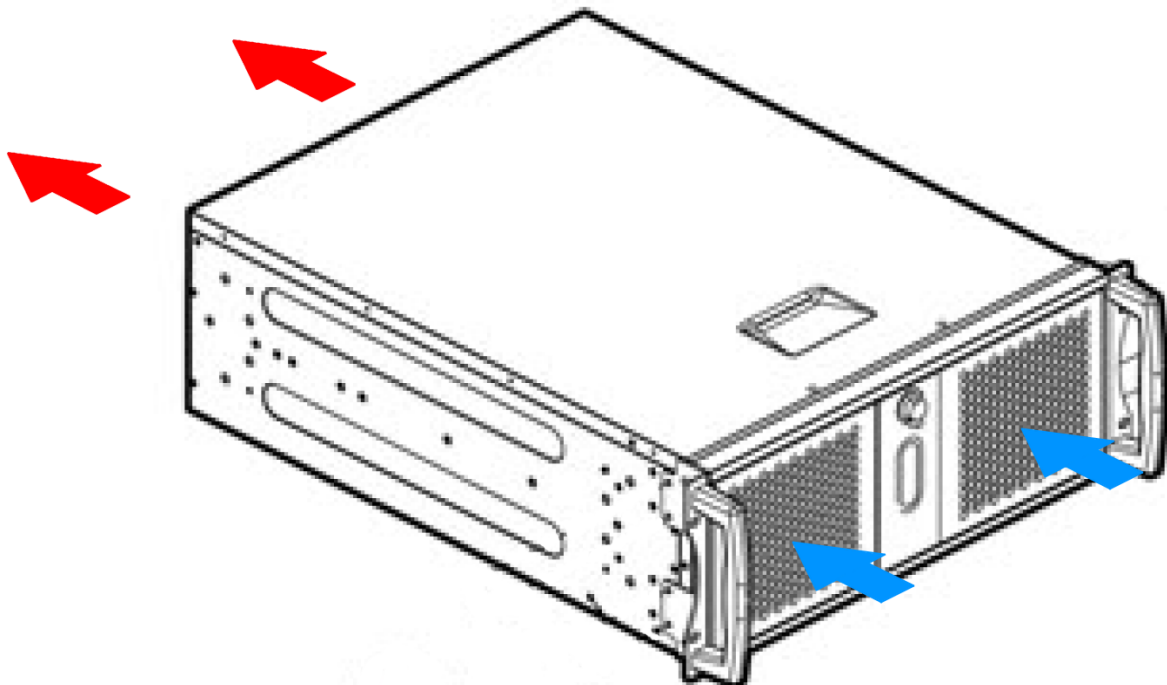
Chassis Specification

The DVS 4U SWARM8-10G-A6000 Pro is a four-rack unit high chassis, designed to fit in standard 19" rack cabinets. Optional rack rails are available for the system.

Colour	Silver, Black Front
Dimension (D x W x H)	465.2 x 430.0 x 176.0 (mm), 18.32" x 16.93" x 6.93"
Drive Bay	Exposed: <ul style="list-style-type: none"> • 3 x 5.25" • 1 x 3.5" • 1 x Slim ODD Internal: <ul style="list-style-type: none"> • 4 x 3.5"

Ventilation

The 4U SWARM8-10G-A6000 Pro is a rack mountable server, all cool air intake is from the front of the chassis and all hot air is actively expelled from the rear of the chassis. The chassis is designed to be in a climate-controlled server room environment.



Supported Video Formats

The system comes with Windows installed as standard. Windows includes Windows Media Player by default. As of Windows Media Player 12 the following video formats are supported:

- Windows Media formats (.asf, .wma, .wmv, .wm)
- Windows Media Metafiles (.asx, .wax, .wvx, .wmx)
- Windows Media Metafiles (.wpl)
- Microsoft Digital Video Recording (.dvrms)
- Windows Media Download Package (.wmd)
- Audio Visual Interleave (.avi)
- Moving Pictures Experts Group (.mpg, .mpeg, .m1v, .mp2, .mp3, .mpa, .mpe, .m3u)
- Musical Instrument Digital Interface (.mid, .midi, .rmi)
- Audio Interchange File Format (.aif, .aifc, .aiff)
- Sun Microsystems and NeXT (.au, .snd)
- Audio for Windows (.wav)
- CD Audio Track (.cda)
- Indeo Video Technology (.ivf)
- Windows Media Player Skins (.wmz, .wms)
- QuickTime Movie file (.mov)
- MP4 Audio file (.m4a)
- MP4 Video file (.mp4, .m4v, .mp4v, .3g2, .3gp2, .3gp, .3gpp)
- Windows audio file (.aac, .adt, .adts)
- MPEG2 TS Video file (.m2ts)

**Additional video formats can be supported by the installation of additional software.*