

DVS 4U HYDRA8-RTX4000 Pro



Overview

DVS HYDRA Media Servers are multi-channel, high performance systems designed to handle high quality media playback across multiple outputs.

The 4U HYDRA8-RTX4000 Pro is a high performance eight output media server, utilising two nVidia Quadro RTX4000s with 8GB of graphics memory. 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. nVidia Mosaic technology allows multiple graphics cards to be linked together to form a single desktop.

Each output on the server can run up to 4k@60Hz RGB, although the frame-rate 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)
- 850 Watt PSU: 100 – 240V~, 10 – 5A, 47 – 63Hz
- ATX Motherboard (Intel X299 Chipset)
- Intel Processors (10, 12, 14 or 18 cores with Hyper Threading)
- 16 / 32 / 64 / 128 GB DDR4 Quad Channel Memory
- 2 x nVidia Quadro RTX4000 Graphics Card (Up to 4 concurrent displays each)
- 2 x NVMe M.2 Storage
- 2 x Gigabit Network Ports
- Operating System - Windows Enterprise IoT LTSC 2019 or Windows 10 Pro
- Optional Extras (Variants)
 - Sync Module
 - 2 x 4K@60 Capture Card
 - 4 x HD@60 Capture Card
 - 10Gb Network

Variations

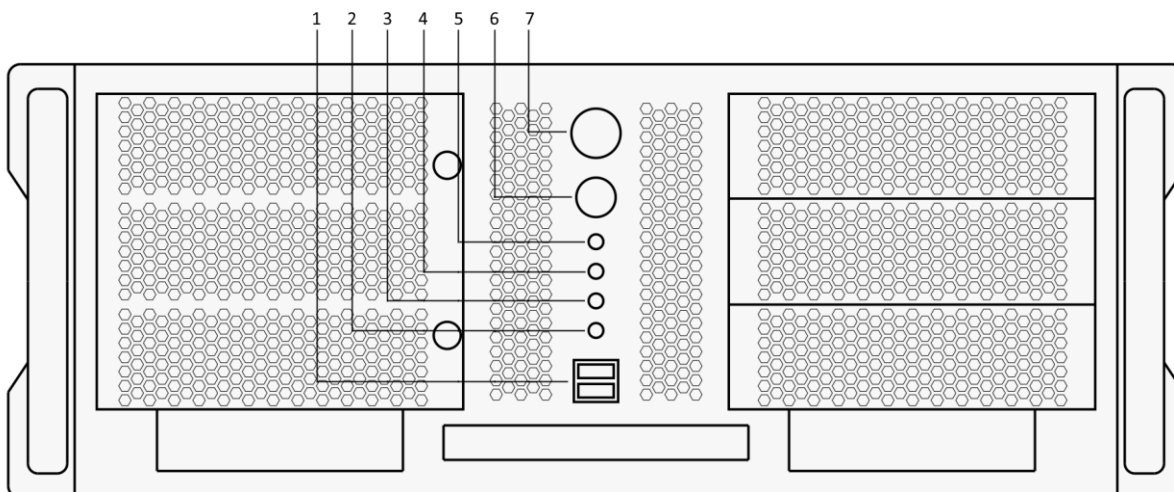
Model Number	NVMe RAID	2 x 4K Capture	4 x HD Capture	10Gb Network	Sync Module
4U HYDRA8-RTX4000 Pro					
4U HYDRA8-RTX4000 Pro+					Yes
4U HYDRA8-10G-RTX4000 Pro				Yes	
4U HYDRA8-10G-RTX4000 Pro+				Yes	Yes
4U HYDRA8-2C4K-RTX4000 Pro		Yes			
4U HYDRA8-2C4K-RTX4000 Pro+		Yes			Yes
4U HYDRA8-2C4K10G-RTX4000 Pro		Yes		Yes	
4U HYDRA8-2C4K10G-RTX4000 Pro+		Yes		Yes	Yes
4U HYDRA8-4CHD-RTX4000 Pro			Yes		
4U HYDRA8-4CHD-RTX4000 Pro+			Yes		Yes
4U HYDRA8-4CHD10G-RTX4000 Pro			Yes	Yes	
4U HYDRA8-4CHD10G-RTX4000 Pro+			Yes	Yes	Yes

Graphics Cards

Chipset	Quadro RTX4000
Microarchitecture	Turing
Memory	8GB GDDR6
Memory Bus	256 Bit
Interface	PCIe 3.0 (x16)
Microsoft DirectX Support	12 API
HDCP Ready	Yes
Maximum Concurrent Displays	4 Displays
Maximum Digital Resolution	7680x4320 @ 60Hz (8K UHD)
Outputs	3 x DisplayPort 1.4, 1 x USB Type C (Virtual Link)
EDID Emulation	Yes
Sync Module Supported	Yes

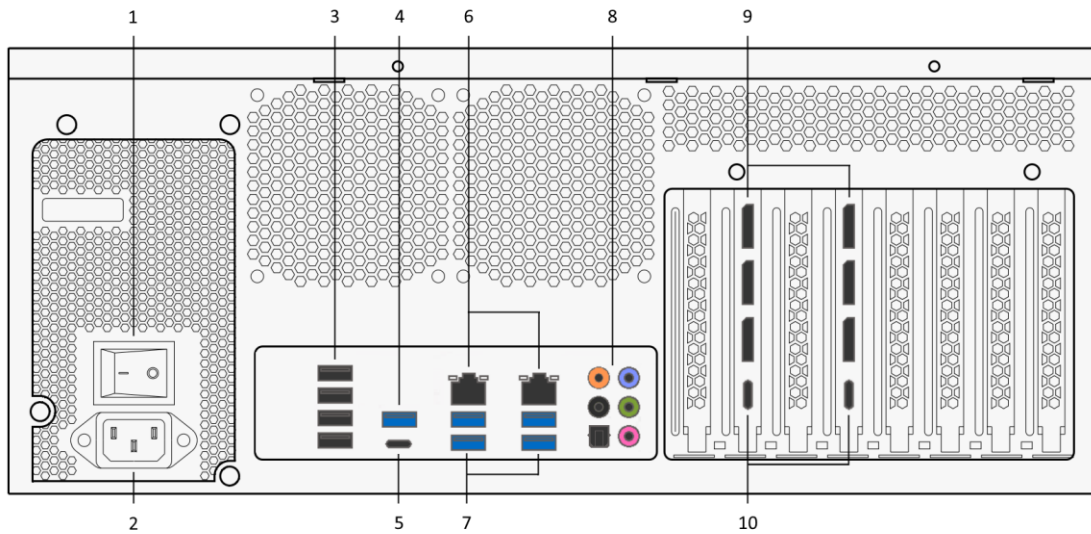
Connectors

Front Panel

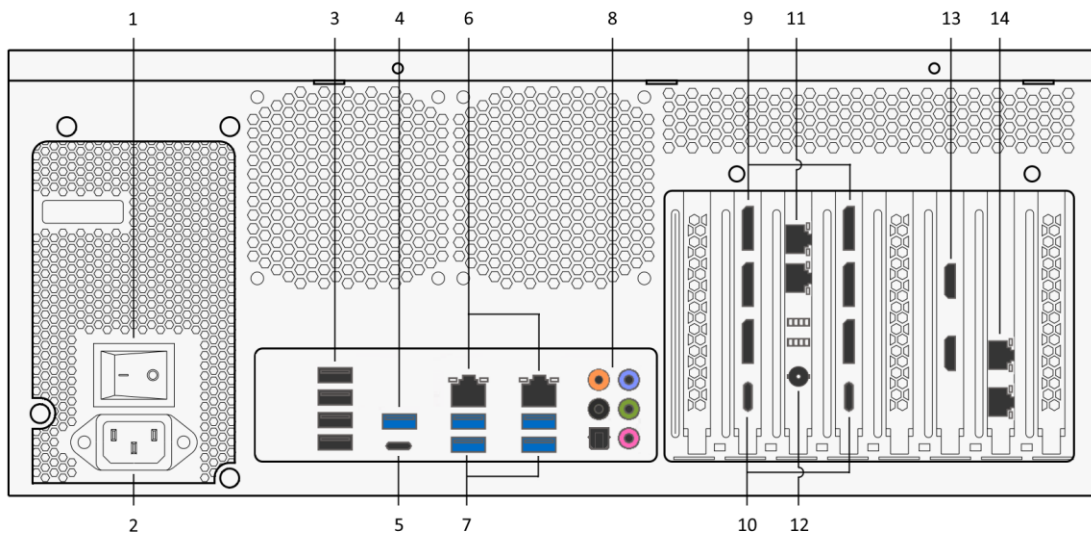


1. **USB 2.0 Ports**
2. **LAN2 Activity LED**
3. **LAN1 Activity LED**
4. **HDD Activity LED**
5. **Power LED**
6. **Reset Button**
7. **Power Button**

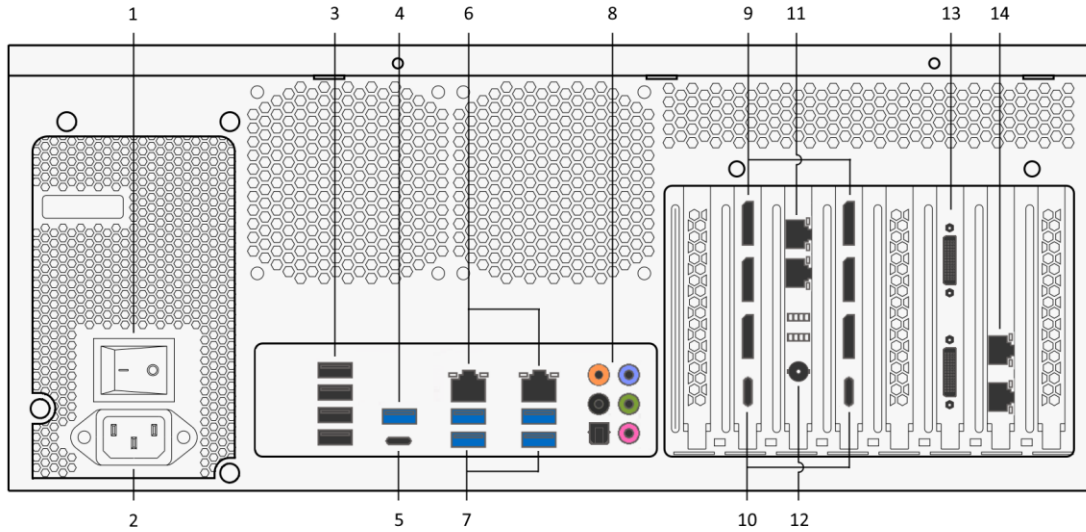
Rear Panel



Variant with Sync Module, 2 x 4K Capture and 10G



Variant with Sync Module, 4 x HD Capture and 10G



1. **Power Supply Power Switch**
2. **Power IEC.** Mains Power Input: 100 – 240V~, 10 – 5A, 47 – 63Hz
3. **USB 2.0 Ports**
4. **USB 3.1 Gen2 Type-A Port**
5. **USB 3.1 Gen2 Type-C Port**
6. **LAN RJ-45 Ports.** Gigabit Ethernet

LAN port LED Indications

Activity / Link LED		Speed LED		
Status	Description	Status	Description	
Off	No link	OFF	10Mbps connection	
On	Linked	ORANGE	100Mbps connection	
Blinking	Data activity	GREEN	1Gbps connection	
Blinking then steady	Ready to wake up from S5 mode			

7. **USB 3.1 Gen1 Type-A 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 6)**
10. **USB Type C (Virtual Link) (x 2)**
11. **Sync Module Daisey Chain (RJ45 x 2).** (Sync Module Variant)
12. **BNC Genlock Sync.** (Sync Module Variant)
13. **Capture Ports.** (2 x HDMI 2.0 – 4K Capture Variant, 2 x Custom Connector – HD Capture Variant)
14. **RJ45 Network Ports.** 10 Gb Ethernet (10G Variant)

Internal Expansion

- M.2 Socket 3 with M key, type 2242/2260/2280/22110 storage devices support (PCIE x4 Gen3 mode)
- M.2 Socket 3 with M key, type 2242/2260/2280 storage devices support (both SATA & PCIE x4 Gen3 mode)
- 4 x 3.5" Drive bays (SATA), Supports RAID 0, 1, 10 and 5

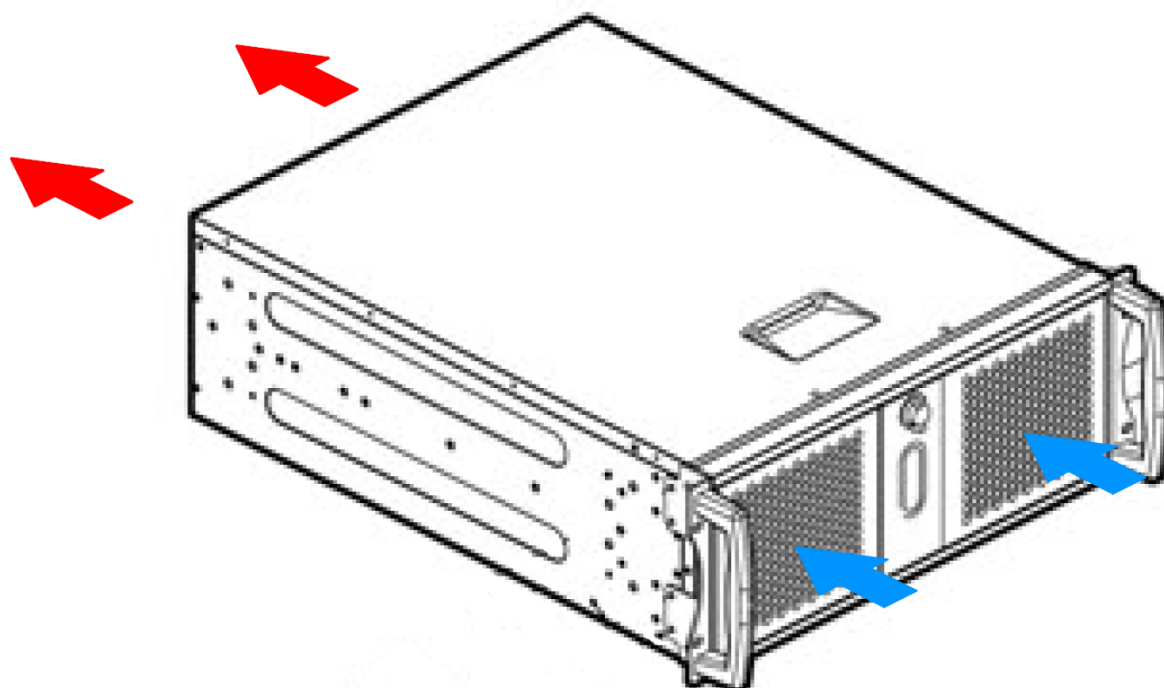
Chassis Specification

The DVS 4U HYDRA8-RTX4000 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 HYDRA8-RTX4000 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.*