

# PCI Express 4.0 Render Accelerator Platform

Designers and artists across industries are experiencing growing demand to produce more visually rich content with increases in rendering complexity being driven by ever increasing resolutions and new large scale output formats. They need access to the highest performance tools possible. The OSS PCI Express 4.0 Render Accelerator delivers. It is a rackmount expansion system that provides high performance GPU rendering capabilities to any PCI Express 4.0 rendering server or workstation. The platform connects to the host system with 2 PCIe 4.0 x16 host-connections providing over 512Gb/s bandwidth (duplex) and supports up to 8 of the latest technology rendering GPUs. Two additional x16 single wide slots are available for high speed networking or storage.

## Features

- 8 Rendering GPUs
- 4U Rackmount Design
- Two PCIe 4.0 x16 Host Connections
- PCIe x16 Cables (up to 3-Meters)



## Specifications

<b>GPU Support</b>	<b>Supports:</b> <ul style="list-style-type: none"> <li>• Up to 8 High Performance Rendering GPUs (NVIDIA Quadro RTX8000, GTX 2080Ti, AMD W9100 etc.)</li> <li>• NVIDIA Quadro RTX8000 <ul style="list-style-type: none"> <li>○ 48 GB memory</li> <li>○ 16.3 TFLOPS FP32</li> <li>○ 72 NVIDIA RT Cores</li> <li>○ Ray Casts 10 Giga Rays/sec</li> </ul> </li> <li>• NVIDIA GTX 2080Ti <ul style="list-style-type: none"> <li>○ Xx GB memory</li> <li>○ xx TFLOPS FP32</li> <li>○ xx NVIDIA RT Cores</li> <li>○ Ray Casts xx Giga Rays/sec</li> </ul> </li> <li>• AMD W9100 <ul style="list-style-type: none"> <li>○ Xx GB memory</li> <li>○ xx TFLOPS FP32</li> <li>○ xx NVIDIA RT Cores</li> <li>○ Ray Casts xx Giga Rays/sec</li> </ul> </li> </ul>
<b>Enclosure</b>	<b>Enclosure:</b> <ul style="list-style-type: none"> <li>• 19"W x 18.5"D x 7"H (4U)</li> <li>• System Status Tri-Color LED Panel (Power and Fan-Status)</li> </ul> <b>Aesthetics:</b> Black Medium-Texture Liquid-Paint Finish with Optional OEM-Logo Area <b>Rackmounts:</b> Toolless Rack-Slides Included
<b>Host/Target Interface</b>	Two PCIe 4.0 x16 Host/Target Adapter Cards for Expansion-to-Host Uplink <b>Host/Target Interface Boards:</b> <ul style="list-style-type: none"> <li>• <b>Form Factor:</b> Half-Height/Half-Length, Single-Slot PCIe 4.0 x16 Add-in-Card</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Card-Edge Connector:</b> PCIe4 x16 Physical (256 Gbps)</li> <li>• <b>Cable Connector:</b> PCIe Cable Specification 4.0 x16 (256 Gbps) <ul style="list-style-type: none"> <li>○ <b>Host Interface Board</b> <ul style="list-style-type: none"> <li>▪ SFF-8644 Connector</li> <li>▪ Accepts Mini-SAS HD Cables with SFF-8644 Connectors</li> </ul> </li> </ul> </li> <li>• <b>Switch:</b> <ul style="list-style-type: none"> <li>○ Fast Cut-Through (132ns Latency)</li> <li>○ SSC Isolation</li> <li>○ Non-Blocking Switch Fabric</li> <li>○ Integrated 4-channel DMA Engine</li> </ul> </li> <li>• <b>Average Power Consumption:</b> 6.4W Typical</li> </ul>
<b>Cables</b>	<b>Host Interface Board Option (Includes 8 Cables per System)</b> <ul style="list-style-type: none"> <li>• 1-Meter Mini-SAS HD Cables</li> <li>• 2-Meter Mini-SAS HD Cables</li> <li>• 3-Meter Mini-SAS HD Cables</li> </ul>
<b>Cooling</b>	Three High-Power Fans, Mounted to Front Bezel of the Chassis <ul style="list-style-type: none"> <li>• <b>Airflow:</b> 250CFM</li> <li>• <b>Monitoring:</b> Tachometer Monitoring via Front-Panel LED</li> </ul>
<b>Power</b>	Dual Load-Sharing Power Supplies, Pluggable from the Rear of the Chassis <ul style="list-style-type: none"> <li>• <b>Two 2000W 80Plus Titanium Efficiency Power Supplies with Dual IEC C14 AC Input Connectors</b></li> <li>• <b>Redundancy:</b> <ul style="list-style-type: none"> <li>○ 1 + 1 redundant and Hot-Swap with 220-240Vac input power, 10A max, 50-60 Hz</li> <li>○ Non-redundant with 100-127Vac input power, 12.5A max, 50-60 Hz</li> </ul> </li> </ul>
<b>Operating Environment</b>	0-35°C 10-90% relative humidity 0-10,000 feet above sea level
<b>Storage Environment</b>	-40 to 85°C 5-96% relative humidity 0-50,000 feet above sea level
<b>Agency Compliance</b>	<b>Agency Certifications (testing pending):</b> <ul style="list-style-type: none"> <li>• FCC Class A</li> <li>• CE Safety &amp; Emissions</li> <li>• UL, cUL</li> <li>• RoHS2</li> </ul>

## Architecture

