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Panasas ActiveStor Infiniband Router 400

Scalable, Cost-Effective, High-Performance Connection to InfiniBand Network Fabric

Scientific and technical computing, mathematical modeling and software simulation, high-performance data analytics, and AI/ML applications require highly robust and scalable networks to support the massive throughput demands of high-speed HPC systems. The Panasas® ActiveStor® Infini-Band™ Router 400 (ASR-400) provides seamless connectivity between InfiniBand-based compute clusters and Ethernet-based Panasas data storage solutions.

ASR-400 nodes have both Ethernet and InfiniBand network interfaces and are configured to route IP traffic between the two. The ASR-400 enclosure can be configured with up to four ASR-400 nodes, providing cost-effective, high-performance, and low-latency InfiniBand fabric connectivity to your Panasas data storage solutions.

With the addition of ASR-400 nodes, Panasas data storage solutions gain scalable, high-bandwidth, fault-tolerant networking paths to compute clusters that use InfiniBand. ASR-400 nodes provide ideal performance for manufacturing, life sciences, financial services, media & entertainment, academia, government, and AI.

ASR-400 Enclosure

The ASR-400 enclosure is a 2U four-node 19" rackmount enclosure. The enclosure ships populated with matching ASR-400 InfiniBand Router nodes (see Figure 1).

Each ASR-400 enclosure includes two redundant, titanium-level, 96% energy efficient power supplies. Should one power supply fail, the other can continue to power the entire enclosure.

ASR-400 Node

ASR-400 InfiniBand Router nodes are industry-standard server nodes and have been configured and tested for CPU strength, DRAM capacities, and networking bandwidth.

Figure 1. ASR-400 enclosure with four router nodes.

Figure 2. ASR-400 enclosure front view.

There are four available ASR-400 InfiniBand Router models of varying node counts. (See the ASR-400 Models section for specific model name and configuration details.)

High Availability, Balanced Performance, and Interoperability

Multiple Panasas ASR-400 ActiveStor InfiniBand Routers can be combined with optional Ethernet switches to provide automated and seamless data path failover for continuous network access. This solution has no single point of failure and provides data path load balancing for optimal performance. The ASR-400 is compatible with all HDR100/EDR/FDR/QDR InfiniBand networks, ensuring the highest levels of system interoperability.

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ASR-400 Models

ASR-400 InfiniBand Router nodes typically are ordered in multiples of two per rack of PanFS storage and are shipped with all nodes pre-installed in an ASR-400 enclosure.

ASR-400 Model	Network
1 node	2x HDR100/EDR/FDR/QDR, 2x 100 GbE
2 nodes	4x HDR100/EDR/FDR/QDR, 4x 100 GbE
3 nodes	6x HDR100/EDR/FDR/QDR, 6x 100 GbE
4 nodes	8x HDR100/EDR/FDR/QDR, 8x 100 GbE

Timely High-Quality Service and Support

Unlike open-source solutions and even commercial alternatives from broad portfolio vendors, Panasas offers timely, world-class L1−L4 support.

More Information and Ordering Details

For more information and ASR-400 ordering details, contact your local Panasas representative or visit **panasas. com/products/activestor-ibrouter**.

ASR-400 Specifications

ASR-400 Enclosure	
Hardware	19″ rackmount chassis with rails
Power Supplies	2x 2200 W titanium-level
Height	3.47 inches (88 mm)−2 rack units
Width	17.6 inches (447 mm)
Depth	28.75 inches (730 mm)
Operating Temp.	10−35°C (50−95°F)
Non-operating Temp.	-40−60°C (-40−140°F)
Operating Humidity	8−90% (non-condensing)
Input Line Voltage	220−240 VAC, 50−60 Hz

ASR-400 Node	
PanFS Comaptibility	PanFS 9.0.2 or higher
Network Bandwidth	100 Gb/s per port
NIC	2x NVIDIA Mellanox ECAT ConnectX-5 VPI Adapter Card, HDR100 EDR IB, 100 GbE, dual-port 1x GbE Dual RJ45 Network SIOM
NVMe	1x 480 GB M.2 NVMe SSD

About Panasas

Panasas builds a portfolio of data solutions that deliver exceptional performance, unlimited scalability, and unparalleled reliability − all at the best total cost of ownership and lowest administrative overhead. The Panasas data engine accelerates AI and high performance applications in manufacturing, life sciences, energy, media, financial services, and government. The company's flagship PanFS® data engine and ActiveStor® storage solutions uniquely combine extreme performance, scalability, and security with the reliability and simplicity of a self-managed, self-healing architecture. The Panasas data engine solves the world's most challenging problems: curing diseases, designing the next jetliner, creating mind-blowing visual effects, and using AI to predict new possibilities.

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