

Panasas ActiveStor InfiniBand Router 400

A Scalable and 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® InfiniBand Router (ASR-400) provides seamless connectivity between InfiniBand-based compute clusters and Ethernet-based Panasas ActiveStor Ultra 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 ActiveStor storage solutions.

With the addition of ASR-400 Nodes, the Panasas HPC storage solutions gain scalable, high-bandwidth, fault-tolerant networking paths to compute clusters that use InfiniBand in manufacturing, life sciences, financial services, energy, universities, government and media & entertainment industries.

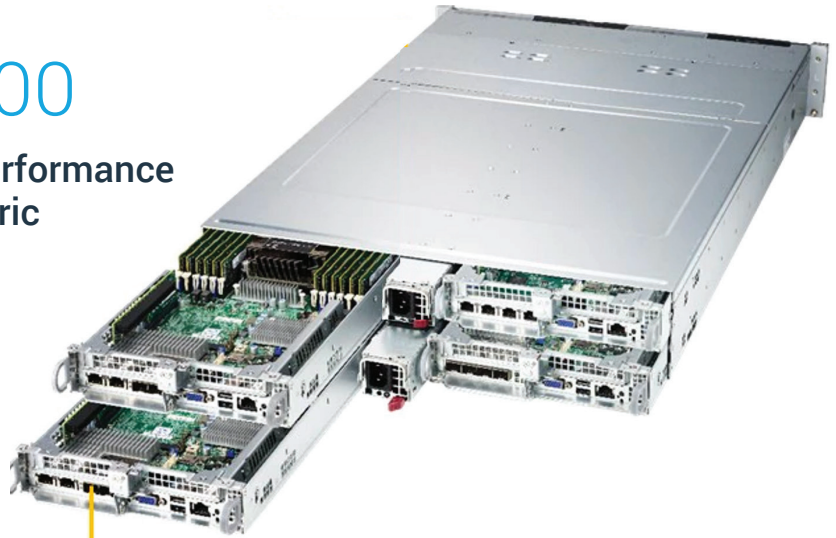
ASR-400 InfiniBand Router Node

As shown in Figure 1, ASR-400 InfiniBand Router Nodes are industry-standard compute server nodes. ASR-400 nodes run the OpenSUSE Leap 15 operating system and have been configured and tested for CPU strength, DRAM capacities, and networking bandwidth.

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.)

ASR-400 Enclosure

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



ASR-400 Node

Figure 1. ASR-400 InfiniBand Router Node and Enclosure



Figure 2. ASR-400 Enclosure Front Panel Cover

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.

High Availability, Balanced Performance, and Interoperability

Multiple Panasas ASR-400 ActiveStor InfiniBand Routers can be combined with optional Ethernet switches providing automated and seamless data path failover for continuous network access. The multiple ASR-400 InfiniBand Routers and switch solution also provides data path load balancing for optimal performance. The ASR-400 InfiniBand Router is compatible with all HDR100/EDR/FDR/QDR InfiniBand networks ensuring the highest levels of system interoperability.

ASR-400 Models

ASR-400 InfiniBand Router nodes typically are ordered in multiples of 2 per rack of ASU-100 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 100GbE
2 nodes	4x HDR100/EDR/FDR/QDR, 4x 100GbE
3 nodes	6x HDR100/EDR/FDR/QDR, 6x 100GbE
4 nodes	8x HDR100/EDR/FDR/QDR, 8x 100GbE

Timely, High-Quality Service and Support

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

More Information

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



About Panasas

Panasas helps the world’s leading companies and organizations to cure diseases, design and build the next jetliner, create mind-blowing visual effects, utilize AI/ML to predict new possibilities, and reveal slight adjustments that could win Formula One races. With a pioneering parallel file system architecture that uniquely combines ease of management with scalability, performance, and reliability, Panasas provides purpose-based storage solutions to enable the most innovative HPC projects in manufacturing, life sciences, financial services, energy, academia, government, and media & entertainment.

ASR-400 Specifications

ASR-400 InfiniBand Router Node

System	
Server	Supermicro Superserver 2029BT-HNTR
Motherboard	Supermicro X11DPT-B
BIOS	AMI 32Mb SPI Flash ROM
Processor	2x Intel Xeon Silver 4210, 10 cores, 2.2GHz
Memory	12x 16GB DDR4 ECC REG DIMM
Input/Output	
NVMe	1x Micron 480GB M.2 NVMe SSD
NIC	2x NVIDIA Mellanox ECAT ConnectX-5 VPI Adapter Card, HDR100 EDR IB, 100GbE, dual-port 1x Intel i350 SIOM, RJ45, GbE, dual-port
Software	
OS	OpenSUSE Leap 15
PanFS Compatibility	PanFS 9.0.2 or later
Throughput	
Network BW	100 Gb/s per port

ASR-400 Enclosure

System	
Chassis	2U Rackmount
Dimensions	17.6"W x 3.47"H x 28.75"D (447mm x 88mm x 730mm)
Power	
Power Supply	2x 2200W Titanium-level 1800W: 200-220Vac / 50-60Hz 1980W: 220-230Vac / 50-60Hz 2090W: 230-240Vac / 50-60Hz 2090W: 180-220Vac (UL/cUL only) 2200W: 220-240Vac (UL/cUL only) 2090W: 230-240Vdc (CCC only)
Environmental	
RoHS	RoHS Compliant
Oper Temp	10°C – 35°C (50°F – 95°F)
Non-oper Temp	-40°C – 60°C (-40°F – 140°F)
Oper RH	8% – 90% (non-condensing)
Non-oper RH	5% – 95% (non-condensing)

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