



VDURA ActiveStor Ultra Edge 100

High-Performance, Small Form Factor Storage Solution

The ActiveStor® Ultra Edge 100 (ASU-100E) is the VDURA®-certified storage appliance designed for compact primary and remote data centers, as well as hub-and-spoke edge deployments. The ASU-100E delivers parallel file system performance where you need it in a small footprint and at a low-cost entry point.

The ASU-100E is powered by PanFS®, the VDURA parallel file system, and is based on the ActiveStor architecture to orchestrate multiple computers into a single entity that serves data to AI/ML and HPC applications for today's modern HPC. This is performed without manual intervention while continuously balancing the load across the system, scrubbing the stored data for the highest levels of data protection, and encrypting the stored data to protect it from unwanted exposure.

The ASU-100E is built on an industry standard 2U rack height enclosure chassis with a carefully balanced architecture. Each enclosure contains four server nodes that are configured together to provide flexible and scalable ASU-100E storage solutions.

Together with the PanFS DirectFlow® driver on client systems, the ASU-100E provides parallel and redundant storage access to deliver the highest performance with unlimited scalability, enterprise reliability, and ease of management. The ASU-100E is the ideal compact choice for a high-performance storage solution in manufacturing, life sciences, energy, financial services, media & entertainment, and university & government research.

ASU-100E Enclosure

As shown in Figures 1 and 2, the ASU-100E enclosure is a 2U, 19-inch rack-mount chassis that contains four nodes and two redundant 2200 W titanium-level power supplies.

The ASU-100E enclosure is available as two model versions: a "Smart" enclosure and an "Expansion" enclosure. The enclosures are differentiated by the number of director and storage nodes as defined in the following table.



Figure 1. ASU-100E enclosure, front-top view.



Figure 2. ASU-100E enclosure, rear view.

Enclosure Model	Director Nodes	Storage Nodes
Smart	1	3
Expansion	0	4

ASU-100E Storage Nodes

ASU-100E storage nodes are servers in the ASU-100E enclosure that run the PanFS parallel file system and are the core of the data plane, storing data and metadata. Each storage node communicates directly and in parallel with client systems.

ASU-100E Director Nodes

The ASU-100E appliance uses ASD-200 director nodes to manage system activity and provide clustered metadata services. These nodes orchestrate file system activity and speed data transfers while facilitating scalability and virtualizing data objects across all available storage nodes. This enables the system to be viewed as a single, easily-managed global namespace.

ASU-100E Configurations

ASU-100E enclosures are combined into two standard configurations, “Minimum” and “Base”, detailed in the table below. In addition, as the ASU-100E has limitless scalability, standard configurations can be expanded to meet growing demands. Figure 3 shows the “Minimum” configuration.

Configuration	Minimum	Base
Smart Enclosures	3	3
Expansion Enclosures	0	1
Director Nodes	3	3
Storage Nodes	9	13
Usable Capacity	265 TB	477 TB
Rack Height	6 RU	8 RU

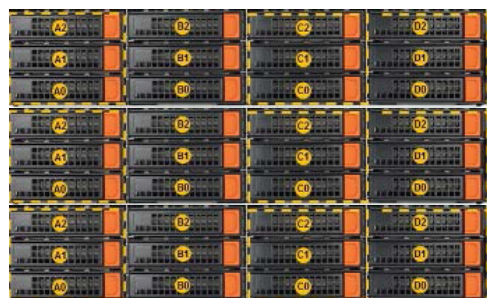


Figure 3. ASU-100E “Minimum” configuration of three “Smart” enclosures.

PanFS Software Suite

ASU-100E systems include the PanFS Software Suite with DirectFlow Client, NFS, and SMB/CIFS protocol support, PanFS and realm manageability, and security/encryption. The suite also features PanMove™ and PanView™ software families for data mobility, visibility, and analytics.

PanFS Software Suite

The ASU-100E has an affordable cost of acquisition due to its optimized storage architecture and smaller footprint on commodity hardware. In addition, PanFS reduces operational cost and complexity—only minimal staff are needed to administer and manage the system, with no extensive training required. It takes only part-time attention from a single person to manage an ASU-100E system, no matter how large the storage configuration is.

About VDURA



VDURA is at the forefront of AI and HPC data storage and management, catering to on-premises, public cloud, and hybrid environments. Renowned for its unparalleled blend of performance, durability, and reliability, our Data Platform builds upon our legacy as pioneers and leaders in parallel NAS technology. Offering a unique integration of diverse storage media within a single architecture and global namespace, VDURA empowers customers with unmatched flexibility, simplicity, and cost-effectiveness. Our integrated approach ensures the highest levels of data protection, integrity, and availability, fueling relentless innovation in AI and HPC. Explore more at www.VDURA.com.

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ASU-100E Specifications

ASU-100E 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	30.11 inches (765 mm)
Operating Temp.	0–35°C (32–95°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

ASU-100E Storage Node	
Storage Capacity	TCG-SED HDDs: 48 TB (3x 16 TB HDDs) M.2 NVMe TCG-SED SSD: 1x 7.68 TB
Memory	2x 16 GB DDR4 ECC RDIMMs
NVDIMM	1x 16 GB DDR4 ECC NVDIMM-N
SSD	2x M.2 NVMe TCG-SED
HDD	3x TCG-SED
NIC	25 GbE Dual SFP28 Network SIOM
Other	Integrated BMC, IPMI, VGA, USB

ASU-100E Director Node	
Storage Capacity	M.2 NVMe SSD: 480 GB
Memory	6x 16 GB DDR4 ECC RDIMMs
NVDIMM	1x 16 GB DDR4 ECC NVDIMM-N
SSD	1x M.2 NVMe
NIC	25 GbE Dual SFP28 PCIe
Other	Integrated BMC, IPMI, VGA, USB

More Information and Ordering Details

For more ASU-100E information and ordering details, contact your local VDURA representative.