

## STORANDER Enterprise One DATASHEET

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STORANDER is a unified Software-Defined Storage platform designed to scale up and out to make storage management easy while reducing overall enterprise storage costs.

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### STORANDER Enterprise One key features:

#### **Storage Grid Technology**

STORANDER Enterprise One's storage grid technology is a built-in federated management system which enables STORANDER Enterprise One servers to be combined together to simplify management and automation via CLI and REST APIs.

#### **Flexible, Modular Architecture**



The layered architecture of STORANDER Enterprise One provides solution engineers with unprecedented flexibility and application design options that maximizes workload performance and fault-tolerance for a wide range of storage workloads.

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### **End-to-End Security**

STORANDER Enterprise One includes end-to-end security coverage enabling multi-layer data protection “on the wire” and “at rest”.

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### **Virtualized Database and OLTP Applications**

STORANDER Enterprise One system is ideal for the heavy IOPS workloads seen with databases and OLTP applications that run within a virtualized environment. No SPOF architecture and failover management technology ensures that applications always have access to their storage even in the event of a component failure or outage. STORANDER Enterprise One delivers both file and block storage via all major protocols including NFS, CIFS, iSCSI, and Fibre Channel so that applications can make use of any given configuration for both structured and unstructured data.

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### **STORANDER Enterprise One architecture**

STORANDER Enterprise One storage system is redundantly built end to end. There is no single point of failure across all components of the system or cluster built on a multi-number of nodes. Power supplies, NVMe controllers, connectivity controllers, and mirrored cache are redundant by design. The online firmware upgrade is offered to maintain business continuity.

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### **NVM Express architecture**

STORANDER Enterprise One storage system is built with dual redundant NVMe controllers. Each of the 24 dual-port NVMe Flash SSDs is connected thru 4 x PCI 5.0 lanes. NVMe controllers are equipped with mirrored cache with capacity size depending on model and quantity of storage expansion units. NVMe controllers implement an innovative “mesh” on-chip interconnect topology that delivers low latency and high bandwidth.

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### Host connectivity architecture

STORANDER Enterprise One storage system is built with dual redundant processors for host connectivity's. The number of redundant host ports is even by design (Fibre Channel, iSCSI, NVMe-oF) and is evenly distributed thru redundant processors by even number of host adapters.

### STORANDER ENTERPRISE One main features:

Feature	Technical specifications
Supported block protocols	iSCSI Fibre Chanel NVMe-oF
Supported file protocols	NFS (optional)
Connectivity ports (hosts)	2 x 100 Gbit Ethernet optical 8 x 32 Gbit Fibre Channel optical 8 x 25 Gbit Ethernet optical
Connectivity ports (internal architecture)	2 x 100 Gbit Ethernet optical 8 x 25 Gbit Ethernet
Capacity // mirrored cache (size)	Model 2438 – 92 TB raw // 128 GB Model 2476 – 184 TB raw // 128 GB Model 2415 – 368 PB raw // 256 GB
Data protection	Single drive failure protection Dual drive failure protection
Data usage effectiveness	Compression Deduplication (optional) Thin provisioning

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SSD PCI high-performing NVMe hot-swap SSD	Capacity: 3.68 TB, 7.68 TB, 15.36 TB Random Read up to 700K IOPS – 4K Blocks Random Write up to 114K IOPS – 4K Blocks Latency < 75 $\mu$ s
Reliability	MTBF – 2 000 000 hours Vibration – Operating 2.17 GRMS (5 - 700 Hz) Max Uncorrectable Bit Error Rate (UBER) 1 sector per $10^{17}$ bits read
Management	ANDRA Grid Storage Manager
Security	Encryption standard – FIPS 140-2 AES 256
Operating Systems validation	MS Windows, Mac OS X, Linux, IBM AIX, HP-UX, VMware, XEN Server, MS Hyper-V
Form factor	2U
Scalability	Up to 8 STORANDER Enterprise Capacity modules Model C2476 – 184 TB raw Model C2415 – 368 PB raw Each two of Capacity modules requires additional 256GB mirrored cache
Input Power Requirements	180VAC-240VAC, 50Hz/60Hz
Power Supplies	Redundant Power Supplies 1600W