



Flash Storage Array Storage Area Network (FSA-SAN)

The FSA-SAN is comprised of the 3U Flash Storage Array (FSA) and the 2U Expansion Optimized Server (EOS)

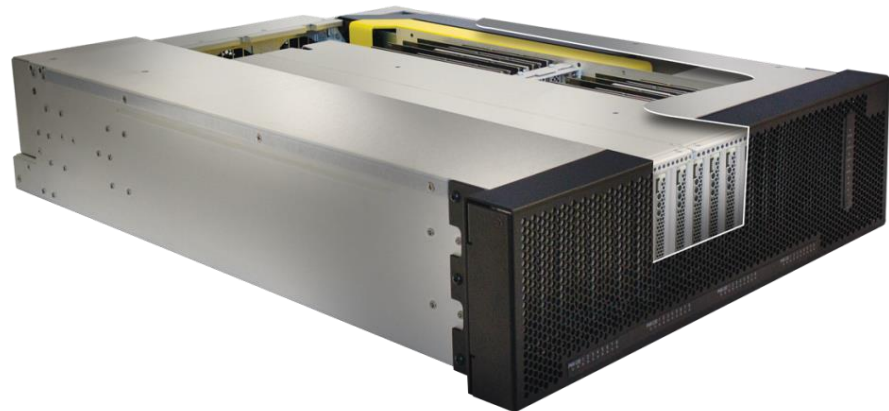
PN: OSS-FSA-SAN



3U Flash Storage Array FSA

Features

- 3U High
- Four removable canisters with four Fusion ioMemory-SX300 cards each with 6.4TB of Flash Memory
- Fully IPMI v2.0-compliant system monitoring capability
- Two 1200-watt power supplies
- Superior Cooling with four temperature controlled fans
- Up to four PCIe x16 Gen3 cable connections to host server(s)



Specifications

Enclosure

Enclosure

- Dimensions: 17W x 5.25H x 33D inches (43W x 13.3H x 83.8D cm)
- Sturdy steel construction
- Weight: 33 lbs. (17.25 kg)
- Four 141 CFM fans

Front Panel

- Removable front bezel with air filter
- Power switch
- 28 front panel status LEDs

Rear Panel

- Four rear panel red/green LEDs
- Four rear panel PCIe x16 Gen3 connectors
- System monitor Ethernet connector

PCIe Backplane

- Full height, double-wide slots
- Supports four canisters holding four PCIe x16 boards
- Four PCIe x16 cable connectors on rear of enclosure

Canisters

- Independently power controlled by host system
- Scalable to accept 1 to 4 NAND Flash or GPU boards

Power Supplies

- Two 1200W hot-swappable, redundant power supplies
- AC input, 46-63Hz
 - Power per canister: +12V @ 20A; +3.3V @ 12A; 3aux @ 2A

System Monitoring/Alarming

- Monitors 8 temp sensors
- Monitors 4 fan tachometers
- Monitors 3 voltages including standard +12V, +5V, +3.3

Temperature Range

Canister LEDs

Operating: 32° – 122°F (0° – 50°C) Storage: -40° - +185° (-40° - +85°)

- Four slot status LEDs
- One power LED
- One PCIe cable status LED

Agency Compliance

- Designed to meet:
- FCC Class A
 - CE
 - RoHS

Fusion ioScale 6.4TB	
NAND Type	MLC (Multi Level Cell)
Read Bandwidth (GB/s)	2.7
Write Bandwidth (GB/s)	2.1
Ran. Read IOPS (4K)	285,000
Ran. Write IOPS (4K)	385,000
Read Access Latency	92 μs
Write Access Latency	15 μs
Bus Interface	PCIe 2.0 x8
Endurance (PBW)	22
Weight	7.25 ounces
Form Factor	Standard Height, Half-Length
Operating Systems	Microsoft Windows: Windows Server 2012 R2, Windows Server 2012, Windows 2008 R2 SP1 Linux: RHEL 5/6; SLES 11; OEL 5/6; CentOS 5/6; Debian Squeeze; Ubuntu 12/13 UNIX: Solaris 11.1/11 x64; Solaris 10 U11 x64 Hypervisors: VMware ESXi 5.0/5.1/5.5, Windows Server 2012 with Hyper-V, Windows Server 2012 R2 with Hyper-V



Specifications subject to change without notice





Expansion Optimized Server

The 2U server revolutionizes the capabilities of homogenous systems containing closely coupled processors, solid-state storage and accelerator co-processing elements such as GPGPUs, Intel Xeon Phi and FPGAs. The 2U EOS contains the newest Intel E5-2600 v3 "Broadwell" processors and provides the widest compatibility with dense accelerator expansion systems. It features up to eleven PCIe 3.0 ½ height, full-length slots and has a variety of front panel storage options. The two configurations consist of either eighteen 2.5" removable SAS SSD/HDD carriers and one slim DVD location, or twenty-four 2.5" removable SAS SSD/HDD carriers. The server features several motherboards optimized to support up to 10 PCIe 3.0 NAND flash cards, advanced network interfaces and supports up to 1TB of memory mapped IO for memory intensive GPUs and accelerators.

PN: OSS-MB-2U-X10Q

Features

- Features Broadwell-based motherboard
- 11 PCIe 3.0 Expansion Slots
- Guaranteed to work with expansion
- Variety of front panel storage options



Specifications

Dimensions:

Motherboards

CPUs:

3.45" H x 17.2" (19" with rack ears) W x 28" D

Supermicro X10DRG-Q, X9DRG-QF or X9DRX+-F

X10DRG-Q :

- Dual Intel® Xeon® E5-2600 v3 family processors up to 135W TDP, 3.8GHz, 18 Core, 45MB Cache
- LGA 2011 socket R3 with QPI System Bus up to 9.6GT/s

X9DRG-QF or X9DRX+-F:

- Dual Intel® Xeon® E5-2600 v2 family processors up to 135W TDP, 4GHz, 12 Core, 37.5MB Cache
- LGA 2011 socket R with QPI System Bus up to 8GT/s

System Memory

X10DRG-Q :

- 16x 288-pin DDR4 DIMM sockets, Up to 1TB ECC LRDIMM or 512GB ECC RDIMM
- 2133/1866/1600MHz ECC DDR4 SDRAM 72-bit, 1.2V Low Profile

X9DRG-QF or X9DRX+-F:

- 16x 240-pin DDR3 DIMM sockets, Up to 1TB ECC LRDIMM, 512GB ECC RDIMM, 128GB ECC UDIMM
- 1866/1600/1333/1066/800 MHz ECC DDR3 SDRAM 72-bit, 1.5V or 1.35V Low Profile

Expansion Slots:

X10DRG-Q or X9DRG-QF :

- 4 x PCIe 3.0 x16 HH/FL Double Width slots
- 2 x PCIe 3.0 x8 HH/HL slots, 1 with x16 physical connector
- 1 x PCIe2.0 x4 HH/HL slot with x8 physical connector

X9DRX+-F:

- 10 x PCIe 3.0 x8 HH slots, 8 FL/ 2 HL
- 1 x PCIe2.0 x4 HH/HL slot with x8 physical connector

Storage Capacity:

2U 16+2 Configuration, All Motherboards

16x front hot-swap 12Gb 2.5" SAS slots using 4x SFF-8087 connectors

2x front hot-swap 2.5" SATA3 6Gbps or SAS 12Gbps slots using single or dual 7-pin internal connectors

Slim DVD-RW drive bay or optional internal/external SAS expander bay

2U 24 Configuration, All Motherboards

24x 6Gb front hot-swap 2.5" SAS modules with internal SAS expander backplane using 2 x SFF-8087 connectors
