PCIe 3.0 2U Expansion Optimized Server

Part Number: OSS-EOS-2U-2i

FEATURES

- Dual Intel® Xeon™ Scalable Processors
- Up to 6 x16 PCIe 3.0 x16 expansion slots
- Up to 24x 2.5" NVMe or SAS storage devices
- Dual 1+1 redundant universal input power supplies
- Resource expanded BIOS for large expansion capability
- Guaranteed to operate with all OSS expansion products

The EOS-2U-2i server revolutionizes the capabilities of homogenous systems containing closely coupled processors, NVMe solid-state storage, high-speed networking and accelerator co-processing elements such as GP-GPUs and FPGAs. The EOS-2U-2i contains two Intel Scalable Processors and provides the widest BIOS compatibility with dense storage and accelerator expansion systems. This allows the highly integrated server to stand alone or form the core CPU and memory resources for a scale-out, rack level, expandable solution. The EOS-2U-2i server features two storage and I/O configurations providing up to six PCIe 3.0 x16 half-height slots or 24 U.2 NVMe drives. The server supports up to 4TB of memory and a resource expanded BIOS for scale-out device enumeration and large memory mapped I/O used for GP-GPUs and accelerators.

SPECIFICATIONS

Dimensions	3.45" H x 17.2" (19" with rack ears) W x 28" D (8.7 x 43.7 x 71 cm)
CPUs	Dual Intel® Xeon® Scalable Processors up to 205W TDP and 28 cores (Sky Lake, Cascade Lake, Cascade Lake-X) LGA 3647 socket P with 3 UPI chip-to-chip bus up to 10.7GT/s
System Memory	16x 288-pin DDR4 DIMM sockets Up to 4TB DDR4-2933MHz 3DS ECC RDIMM or LRDIMM, 1.2V low profile 2933/2666/2400/2133MHz Frequencies in 64GB, 128GB and 256GB capacities each module Up to 2TB Intel® Optane™ DC Persistent Memory in memory mode (Cascade Lake/-X only)

Expansion Slots	EOS configuration:
	   o 4 x PCIe 3.0 x16 HH/FL Double Width slots
	   o 2 x PCIe 3.0 x16 HH/HL Single Width slots
	   o 1 x PCIe 3.0 x4 HH/HL slot with x8 physical connector
	   o 1x PCIe3.0 x4 M.2 slot for 2280 and 22110 M-Key modules
	NVMe configuration:
	   o 1 x PCIe 3.0 x16 FH/HL Single Width slot available with 48 PCIe 3.0 lanes routed to NVMe drives
	   o 2 x PCIe 3.0 x16 HH/HL Single Width slots
	   o 1 x PCIe 3.0 x4 HH/HL slot with x8 physical connector
	   o 1x PCIe3.0 x4 M.2 slot for 2280 and 22110 M-Key modules

Storage Subsystem	EOS configuration:
	   o 24x hot-swap configurable SATA-3, SAS-3 or NVMe x4 2.5" x 15mm drive carriers
	   o 12Gb SAS-3 or 6Gb SATA-3 SFF-8680 slots -or-
	   o NVMe x4 32Gb slots
	   o Up to 10 SATA-3 slots use no PCIe slots
	   o 12x and 24x SAS-3 slots require 1 and 2 PCIe x16 HHHL slots respectively
	   o 8x and 16x NVMe x2 slots require 1 and 2 x16 PCIe HHHL slots respectively (for 24x NVMe x4 use NVMe config)
	   o Further expansion up to 4PB possible using OSS JBOF expansion systems
	   o 1x M.2 x4 and 2x SATA-DOM internal drive connections
	NVMe configuration
	   o 24x hot-swap NVMe x4 2.5" x 15mm drive carriers
	   o Up to 10 NVMe drive bays can be SATA-3 configured
	   o 1x M.2 x4 and 2x SATA-DOM internal drive connections

On-board Devices	Intel® C621 Express chipset ASPEED AST2500BMC IPMI support for IPMI 2.0 with virtual medial over LAN and KVM-over-LAN support

SPECIFICATIONS CONTINUED

Network Controllers	2x Intel® X550 10Gigabit Ethernet each with an RJ-45 Additional 25, 40 and 100Gb Ethernet, 100Gb Infiniband or 32Gb Fiber Channel interfaces available
USB	5 USB 3.0 with 2 on rear panel, 2 on front panel and 1 Type A internal 4 USB 2.0 with 2 on rear panel and 2 internal headers
Input/Output	7.1HD Audio Header, 1 VGA port, 2 COM ports (1 rear and 1internal header) 2 Disk-on-Module ports 1 Trusted Platform Management TPM 1.2 20-pin header
BIOS	128 Mb SPI flash EEPROM with AMI BIOS Supports PnP, PCI 3.0, ACPI 1.0-4.0, USB keyboard support, UEFI 2.3.1 1TB BAR1 max size and 256 PCI bus enumeration support
Cooling Fans	Four 80mm x 38mm PWM hot-swap Cooling fans
Chassis	Rugged steel enclosure Liquid paint with customizable front bezel
Weight	33-48lbs (15-22 kg)

Power Supply	1000W 90-264VAC, 47-63Hz Input:
	   o 1+1 Redundant 80plus Silver efficiency with Active PFC, PM Bus and Over Voltage Protection
	   o 15A input current at 115VAC and 7.5A at 230VAC each module
	   o 15A @ 115VAC and 30A @ 230VAC max inrush current each module

Environment	Operating:
	   o 5°C to 35°C (41°F to 95°F) at 0 to 915m (3,000ft) altitude
	   o 5% to 90% non-condensing relative humidity, max dew point 21°C, max rate of change 5°C/hr
	Non-Operating:
	   o -20°C to 60°C (-40°F to 140°F)
	   o 5% to 90% non-condensing relative humidity, max dew point 27°C, max rate of change 5°C/hr

Agency	Tested to conform to the following standards:
	   o FCC - Verified to comply with Part 15 of the FCC Rules, Class A
	   o Canada ICES-003, issue 4, Class A
	   o CE Mark (EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3)
	   o CISPR 22, Class A
	Designed to conform to the following extended standards:
	   o NOM-019
	   o Argentina IEC60950-1
	   o Japan VCCI, Class A
	   o Australia/New Zealand AS/NZS CISPR 22, Class A
	   o China CCC (GB4943), GB9254 Class A, GB17625.1
	   o Taiwan BSMI CNS13438, Class A; CNS14336-1
	   o Korea KN22, Class A; KN24
	   o Russia/GOST ME01, IEC-60950-1, GOST R 51318.22, GOST R 51318.24, GOST R 51317.3.2,
	   o GOST R 51317.3.3
	   o TUV-GS (EN60950-1 /IEC60950-1,EK1-ITB2000)

Compliance	RoHS 6 of 6, WEEE