ONE STOP SYSTEMS

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 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:	3.45" H x 17.2" (19" with rack ears) W x 28" D
Motherboards	Supermicro X**10DRG-Q, X9DRG-QF or X9DRX+-F**
CPUs:	**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 • 1x PCIe2.0 x4 HH/HL slot with x8 physical connector **X9DRX+-F:** • 10 x PCIe 3.0 x8 HH slots, 8 FL/ 2 HL • 1x 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

On-board devices:	**X10DRG-Q:** • Intel® C612 Express chipset • ASPEED AST2400BMC IPMI support for IPMI 2.0 with virtual medial over LAN and KVM-over-LAN support **X9DRG-QF or X9DRX+-F:** • Intel® C602 chipset • Renesas SH7757 BMC IPMI support for IPMI 2.0 with virtual medial over LAN and KVM-over-LAN support
Network Controllers:	2x Intel® i350 Gigabit Ethernet with Virtual Machine Device Queues at 10/100/1000BASE-T each with an RJ-45 1x Realtek RTL8211E PHY dedicated to the IPMI on an RJ-45 connector
USB:	**X10DRG-Q:** • 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 **X9DRG-QF or X9DRX+-F:** • 10 USB 2.0 with 4 on rear panel, 2 on front panel, 2 internal headers and 2 Type A internal
Input/Output:	**X10DRG-Q:** • 7.1HD Audio with optical S/PDIF, 1 VGA port, 2 COM ports (1 rear and 1internal header) • 2 Super Disk-on-Module ports and 1 Trusted Platform Management TPM 1.2 20-pin header • 1 Thunderbolt add-on-card AOC header **X9DRG-QF or X9DRX+-F:** • 1 VGA port, 2 COM ports (1 rear and 1 internal header) • 1 Disk-on-Module power connector and 1 Trusted Platform Management TPM 1.2 20-pin header
BIOS:	128 Mb SPI flash EEPROM with AMI BIOS Supports PnP, APM 1.2, PCI 2.3, ACPI 1.0-4.0, rescue hot-keys, USB keyboard support, SMBIOS 2.7.1, UEFI 2.3.1
Cooling Fans:	Four 80mm x 38mm PWM hot-swap Cooling fans
Air Filter:	Optional front filtered bezel with 160ppi (pores per inch) filter
Chassis:	Rugged steel enclosure, Black medium texture liquid paint with front logo area on front bezel
Weight:	48 -52lbs
Power Supply	**750W 90-264VAC, 47-63Hz Input:** • 1+1 Redundant 80plus Silver efficiency with Active PFC, PM Bus and Over Voltage Protection • 12A input current at 115VAC and 6A at 230VAC each module with 15/30A @ 115/230VAC max inrush current • EPS 12V Output type with 36A at+5V, 62A at +12V, 0.5A at -12V, 31A at+3.3V and 3A at +5V Standby
Environment:	**Operating:** • 5°C to 35°C (41°F to 95°F) at 0 to 915m (3,000ft) altitude • 8% to 90% non-condensing relative humidity, max dew point 21°C, max rate of change 5°C/hr **Non-Operating:** • -40°C to 60°C (-40°F to 140°F) • 8% 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: • FCC - Verified to comply with Part 15 of the FCC Rules, Class A • Canada ICES-003, issue 4, Class A • UL/IEC 60950-1 • CSA C22.2 No. 60950-1 • IEC 60950-1 (CB Certificate and CB Test Report) • CE Mark (EN55022 Class A, EN60950-1, EN55024, EN61000-3-2, EN61000-3-3) • CISPR 22, Class A Designed to conform to the following extended standards: • NOM-019 • Argentina IEC60950-1 • Japan VCCI, Class A • Australia/New Zealand AS/NZS CISPR 22, Class A • China CCC (GB4943), GB9254 Class A, GB17625.1 • Taiwan BSMI CNS13438, Class A; CNS14336-1 • Korea KN22, Class A; KN24 • Russia/GOST ME01, IEC-60950-1, GOST R 51318.22, GOST R 51318.24, GOST R 51317.3.2, • GOST R 51317.3.3 • TUV-GS (EN60950-1 /IEC60950-1,EK1-ITB2000)
Compliance:	RoHS 6 of 6, WEEE