SUPERMICRO®

SAS 3.0

12Gbps Speed Doubles I/O Throughput • Available Now!
Hardware and Software RAID Options

SYS-1027R-WC1R/WC1RT

SYS-2027R-AR24NV

New! **TwinPro™**
SYS-2027PR-DC0(T)R
SYS-2027PR-DC1(T)R

New! **TwinPro²™**
SYS-2027PR-HC0TR/HC0FR/HC0QR
SYS-2027PR-HC1TR/HC1FR/HC1QR

Ultra High-Performance, Application Optimized Server and Building Block Solutions

- **LSI® 3108 or 3008 SAS 3.0 (12Gbps) 8-port HW or SW RAID controller**
- **Up to 16 DIMMs and 512GB RDIMM or 1TB of LRDIMM DDR3 up to 1866MHz**
- **Server Management with onboard IPMI 2.0 / Dedicated LAN**
- **Redundant Platinum Level (95%+) Power Supplies Available**
- **High IOPS storage / SSD caching (2027R); Data Center / Cloud Computing (1027R) applications**
- **New Dual Intel® Xeon® Processor E5-2600 and E5-2600 v2 product families**

80 PLUS PLATINUM

Digital!

SUPERMICRO X9 SERVER PLATFORMS

We Power the Cloud

www.supermicro.com/SAS3

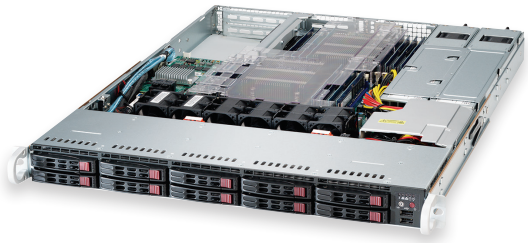
December 2013

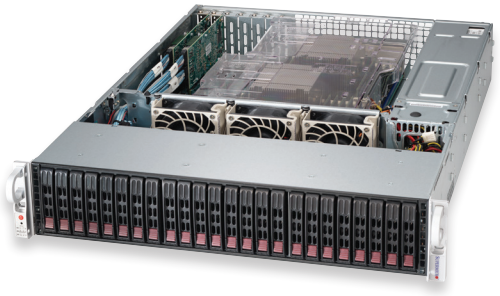
New!
WIO
12Gbps SAS3 HW RAID
8 SAS3 + 2 SATA3/SAS2 Bays

Storage
3x LSI® 3008 IT Mode Adapters
Low Latency

We Power the Cloud

SUPERMICRO X9 SERVER PLATFORMS





MODEL	SuperServer® SYS-1027R-WC1R SYS-1027R-WC1RT	SuperStorage SSG-2027R-AR24NV
Processor Support	Dual Intel® Xeon® Processor E5-2600 and E5-2600 v2 product families with QPI up to 8GT/s	Dual Intel® Xeon® Processor E5-2600 and E5-2600 v2 product families with QPI up to 8GT/s
Key Applications	• Cloud and Virtualization needs • Compute Intensive Storage Environments • Front-end Server and other Computing Intensive Applications	• Corporate Database • Database Processing & Storage • HPC • Large Database • Web Cache
Outstanding Features	• 10x 2.5" SAS/SATA drive bays • LSI® 3108 controller for 8 SAS3 (12Gbps) hot-swappable drives • Up to 2 add-on cards (2 full-height & half-length) • 700W Redundant Gold Level high-efficiency power supplies	• 130W CPU support • 16 DIMM sockets • IPMI 2.0 + KVM with dedicated LAN • NV-DIMM support • SAS3.0 (12Gbps) support
Serverboard	-WC1R: SUPER® X9DRW-CF31 -WC1RT: SUPER® X9DRW-CTF31	SUPER® X9DRH-iF-NV
Chipset	Intel® C602J chipset	Intel® C602 chipset
System Memory (Max.)*	Up to 1TB ECC LRDIMM, 512GB ECC RDIMM, or 128GB ECC/non-ECC UDIMM; DDR3 up to 1866MHz, in 16 DIMM slots	Up to 1TB ECC LRDIMM, 512GB ECC RDIMM, or 128GB ECC/non-ECC UDIMM; DDR3 up to 1866MHz, in 16 DIMM slots; Supports ADR based NV-DIMM technology
Expansion Slots	2 PCI-E 3.0 x16 (FH, HL); Both CPUs need to be installed for full access to PCI-E slots	1 PCI-E 3.0 x16; 6 PCI-E 3.0 x8
Onboard Storage Controller	LSI® 3108 SAS3 (12Gbs) HW RAID controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60; 2GB DDR3 Cache; C602J AHCI controller for 2 SATA3 (6Gbps) ports; RAID 0,1	LSI® 3008 controller for 24 SAS3 (12Gbps) ports; Intel® C602 SCU controller for 4 SATA2 (3Gbps) ports; RAID 0,1,10; Intel® C602 AHCI controller for 2 SATA3 (6Gbps) ports; RAID 4SATA2 (3Gbps) 0,1,5,10
Connectivity	-WC1R: Dual port Intel® i350 Gigabit LAN -WC1RT: Dual LAN with Intel® X540 10GBase-T Ethernet Controller;	Dual LAN with Intel® Ethernet Controller i350-AM2
VGA/Audio	Matrox 200 core	Matrox 200 core
Management	IPMI 2.0 + KVM with dedicated LAN, SuperDoctor III; Watch Dog	IPMI 2.0, KVM/media over LAN with dedicated LAN port
Drive Bays	10x 2.5" hot-swap SAS/SATA drive bays (8 SAS3 + 2 SATA3/SAS2)	24x 2.5" hot-swap SAS 3.0 drive bays
Peripheral Bays	N/A	Optional 2x 2.5" Rear Hot-Swap Drive Bays
Power Supply	700W Redundant Gold Level high-efficiency power supplies with I²C & PMBus	920W Redundant high-efficiency power supplies
Cooling System	4x 40x56mm counter-rotation PWM fan; 2x fans for AOC cooling, (Total of 6 fans included)	3x 8cm high-performance PWM fans
Form Factor	1U Rackmount 437 x 43 x 597mm (17.2" x 1.7" x 23.5")	2U Rackmount 437 x 89 x 630mm (17.2"x 3.5" x 24.8")

** Please check with your Supermicro sales representative for compatibility*

New!

2U TwinPro™

New Generation Twin System

New!

2U TwinPro²™

New Generation Twin System

MODEL	SuperServer® SYS-2027PR-DC0(T)R SYS-2027PR-DC1(T)R	SuperServer® SYS-2027PR-HC0TR/HC0FR/HC0QR SYS-2027PR-HC1TR/HC1FR/HC1QR
Processor Support	Twin set of Dual Intel Xeon Processor E5-2600 and E5-2600 v2 product families, up to 8 core processors; Socket R (LGA 2011) supported; QPI up to 8.0GT/s; CPU support up to 135W TDP	Quad set of Dual Intel Xeon Processor E5-2600 and E5-2600 v2 product families, up to 8 core processors; Socket R (LGA 2011) supported; QPI up to 8.0GT/s; CPU support up to 135W TDP
Key Applications	• HPC • Finance/Banking, e-Commerce • Compute Intensive Applications • Enterprise/Mission Critical Server	• HPC • Finance/Banking, e-Commerce • Compute Intensive Applications • Enterprise/Mission Critical Server
Outstanding Features	• Up to 24x 2.5" drives • Hot-swappable computing modules • More than double computing density and efficiency • Independent power & cooling control • IPMI 2.0 + KVM w/ dedicated LAN • 1280W Redundant Platinum Level Digital high efficiency power supplies • SATA-DOM / M-SATA support	• Up to 24x 2.5" drives • Hot-swappable computing modules • More than double computing density and efficiency • Independent power & cooling control • IPMI 2.0 + KVM w/ dedicated LAN • 2000W Redundant Platinum Level high efficiency power supplies • SATA-DOM / M-SATA support
Serverboard	SUPER® X9DRT-P(T)/-PIBQ/-PIBF	SUPER® X9DRT-P(T)/-PIBQ/-PIBF
Chipset	Intel® C606 chipset	Intel® C606 chipset
System Memory (Max.)*	Twin set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM; DDR3 up to 1866MHz, in 16 DIMM slots	Quad set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, or 128GB ECC/non-ECC UDIMM; DDR3 up to 1866MHz, in 16 DIMM slots
Expansion Slots	Twin set of 1 PCI-E 3.0 x16, 1 PCI-E 3.0 x8	Quad set of low-profile PCI-E x16
Onboard Storage Controller	Twin set of Intel C606 AHCI controller for 2 SATA3 (6Gbps) and 4 SATA2 ports; RAID 0,1,10; Intel C606 SCU controller for 3 SATA2 (3Gbps) -DC0(T)R: Twin set of LSI® 3008 12Gbps SAS3 controller (8 ports) + 4 SATA 3; RAID 0,1,10 -DC1(T)R: Twin set of LSI® 3108 12Gbps SAS3 controller (8 ports) + 4 SATA 3; RAID 0,1,5,6,10,50	Quad set of Intel® C606 AHCI controller for 2 SATA3 (6Gbps) and 4 SATA2 ports; RAID 0,1,10 -HC0(T)R: Quad set of LSI® 3008 12Gbps SAS3 controller; RAID 0,1,10 -HC1(T)R: Quad set of LSI® 3108 12Gbps SAS3 controller; RAID 0,1,5,6,10,50
Connectivity	Twin set of Dual LAN with Intel i350 Gigabit Ethernet controller Twin set of Dual 10GBase-T with Intel X540 (for -T version)	Quad set of Dual LAN with Intel® i350 Gigabit Ethernet controller Quad set of Dual 10GBase-T with Intel X540 (for -T version)
VGA/Audio	Twin set of Matrox 200 core	Quad set of Matrox 200 core
Management	Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® III, Watch Dog	Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® III, Watch Dog
Drive Bays	Twin set of up to 12x 2.5" hot-swap SAS/SATA drive bays	Quad set of 6x 2.5" hot-swap SAS/SATA drive bays
Peripheral Bays	N/A	N/A
Power Supply	1280W Redundant Platinum Level Digital high-efficiency power supplies with I²C & PMBus	2000W Redundant Platinum Level high-efficiency power supplies with I²C & PMBus
Cooling System	4x 8cm heavy duty PWM fans with air shroud with optimal fan speed control	4x 8cm heavy duty PWM fans with air shroud with optimal fan speed control
Form Factor	2U Rackmount 438 x 88 x 724mm (17.25" x 3.47" x 28.5")	2U Rackmount 438 x 88 x 724mm (17.25" x 3.47" x 28.5")

SAS 3.0 - 12 Gbps

Unlock the Full Potential of PCI Express® 3.0-Based Systems and Solid-State Storage Solutions

Supermicro continues its technology leadership in the server industry with the introduction of 12Gbps SAS 3.0. This exciting new I/O technology addresses the need for a higher performance storage interface to speed the access to data by critical applications. This strong need has become apparent only recently, driven by the explosive growth of data in cloud and enterprise data centers, from web, HPC, and Big Data applications.

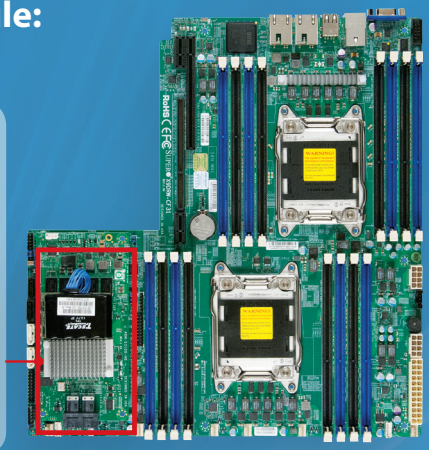
Supermicro's SYS-1027R-WC1R/WC1RT, among many other advanced features, has allocated 1 PCI-E 3.0 x16 slot for an Add-on Mezzanine Card that utilizes an 8-port LSI® 3108 controller to deliver 12Gbps SAS 3.0 performance, while the SSG-2027R-AR24NV 2U Storage Server employs Supermicro PCI-E 3.0 Add-on-Cards with 8-port LSI® 3008 controllers to deliver 12Gbps SAS 3.0 I/O performance. The new generation 2U TwinPro and 2U TwinPro² are SAS3 ready with LSI® 3108/3008 support.

The introduction of 12Gbps SAS 3.0 to the server marketplace by Supermicro will help leading-edge customers create solutions for heretofore intractable data bottlenecks in Big Data/Network Storage, ERP/MRP, Network/Security, and Web Farm/Hosting environments. This will lead to an entirely new generation of customer solutions, courtesy of Supermicro 12Gbps SAS 3.0.

Optimized SAS 3.0 Serverboard w/ Add-on-Module:

AOM-S3108-H8
SAS 3.0 (12Gbps)
Add-on-Module

- 8 SAS 3.0 ports via 2 mini-SAS HD connectors
- RAID Levels 0,1,5,6,10,50,60
- 2GB on-board DDR3 Cache
- Onboard SuperCap to retain Cache during power loss



X9DRW-CF31/CTF31

SAS3 Controllers*

AOC-S3108L-H8iR
- LSI® 3108
- H/W RAID

AOC-S3008L-L8i
- LSI® 3008
- S/W RAID

AOC-S3008L-L8e
- LSI® 3008
- HBA

** Available as integrated solutions with Supermicro servers.*

Optimized Chassis:

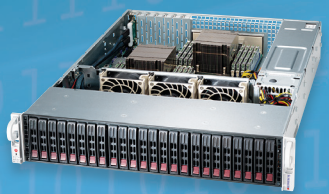
Direct-Attach HDD Backplane Solution

SC116AC-R700WB
(8 SAS3 + 2 SATA3/SAS2 bays)

Direct-Attach HDD Backplane Solution

SC216BAC-R920LPB

Expander HDD Backplane Solution



SC216BE1C/E2C-R920LPB
SC216BE1C/E2C-R920WB

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