

SuperServer F628R3-RC0BPT+



Integrated Board



Super X10DRFR-NT

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Key Features

4 Hot-plug System Nodes in 4U Each node supports:

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v4[†]/ v3 family; QPI up to 9.6GT/s
2. Up to 2TB[†] ECC 3DS LRDIMM , up to DDR4- 2400[†]MHz ; 16x DIMM slots
3. Expansion slots: 1 PCI-E 3.0 x16 (LP)
1 PCI-E 3.0 x8 (Micro Low Profile)
[See Cable Configuration Map](#)
4. I/O ports: 2 10GBase-T ports, 1 video, 2 USB 3.0 ports
5. Built-in Server management tool (IPMI 2.0, KVM/media over LAN) with dedicated LAN port
6. 8x 3.5" Hot-swap SAS/SATA via LSI 3008 or 6x 3.5" Hot-swap SAS/SATA + 2x optional NVMe
7. 2x 80mm 11k RPM middle fans
8. 1280W Redundant Power Supplies Platinum Level (95%)

Note: Image above may show a varied configuration or optional parts, Please refer to parts list for standard parts included.

Specifications

Product SKUs

SYS-F628R3-RC0BPT+

- SuperServer F628R3-RC0BPT+ (Black)

Motherboard

Super X10DRFR-NT

Processor/Cache

CPU

- Intel® Xeon® processor E5-2600 v4[†]/ v3 family (up to 145W TDP) *
- Dual Socket R3 (LGA 2011)

Cores / Cache

- Up to 22 Cores[†] / Up to 55MB[†] Cache

System Bus

- QPI up to 9.6 GT/s

Note [†] BIOS version 2.0 or above is required

Note * Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.

Chassis

Form Factor

- 4U Rackmount

 Model

- CSE-F424AS-R1K28BP

Dimensions and Weight

Width

- 17.63" (448mm)

 Height

- 6.96" (177mm)

 Depth

- 29" (737mm)

 Package

- 28.3" (W) x 15.0" (H) x 42.4" (D)

 Weight

- Net Weight: 105 lbs (47.63 kg)
- Gross Weight: 150 lbs (68.04 kg)

 Available Colors

- Black

Front Panel

Buttons

- Power On/Off button
- UID button

 LEDs

- Power status LED
- Hard drive activity LED
- 2 Network activity LEDs
- Information LED (UID, Fan failure,

System Memory	
Memory Capacity	<ul style="list-style-type: none"> 16x 288-pin DDR4 DIMM slots Up to 2TB[†] ECC 3DS LRDIMM, 1TB ECC RDIMM
Memory Type	<ul style="list-style-type: none"> 2400[†]/2133/1866/1600MHz ECC DDR4 SDRAM 72-bit
DIMM Sizes	<ul style="list-style-type: none"> RDIMM: 64GB, 32GB, 16GB, 8GB, 4GB LRDIMM: 64GB, 32GB 3DS LRDIMM: 128GB
Memory Voltage	<ul style="list-style-type: none"> 1.2 V
Error Detection	<ul style="list-style-type: none"> Corrects single-bit errors

On-Board Devices	
Chipset	<ul style="list-style-type: none"> Intel® C612 chipset
SAS	<ul style="list-style-type: none"> SAS 3.0 (12Gbps) via LSI 3008 HBA/SW RAID 0, 1, 10 support
SATA	<ul style="list-style-type: none"> SATA 3.0 (6Gbps) w/ RAID 0, 1, 5, 10
IPMI	<ul style="list-style-type: none"> Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support ASPEED AST2400 BMC
Network Controllers	<ul style="list-style-type: none"> Intel® X540 Dual Port 10GBase-T Virtual Machine Device Queues reduce I/O overhead Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output 1x Realtek RTL8201N PHY (dedicated IPMI)
Graphics	<ul style="list-style-type: none"> ASPEED AST2400



Input / Output (per node)	
SAS	<ul style="list-style-type: none"> 8 SAS3 (12Gbps) ports
LAN	<ul style="list-style-type: none"> 2 RJ45 10GBase-T LAN ports 1 RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none"> 2 USB 3.0 ports
VGA	<ul style="list-style-type: none"> 1 VGA port

Management	
Software	<ul style="list-style-type: none"> SuperDoctor® 5 Watch Dog NMI IPMI 2.0 SUM and SSM
Power Configurations	<ul style="list-style-type: none"> ACPI / APM Power Management Power-on mode for AC power recovery

Expansion Slots (per node)	
PCI-Express	<ul style="list-style-type: none"> 1 PCI-E 3.0 x16 (LP) + 1 Micro LP MicroLP Adapter Matrix (Networking options)
Drive Bays (per node)	
Hot-swap	<ul style="list-style-type: none"> (6+2) 3.5" Hot-swap SAS3 HDD trays 8 SAS3 or 6x SAS3 + 2 NVMe (optional) Note: NVMe support requires 2 CPUs installed

Backplane	
<ul style="list-style-type: none"> 1 SAS/SATA backplane 1 SAS/SATA/NVMe hybrid (2 slots) 	

System Cooling (per node)	
Fans	<ul style="list-style-type: none"> 2x 8cm 11k RPM middle fans

Power Supply	
1280W Redundant High-efficiency Digital Power Supplies w/ PMBus 1.2	
AC Input	<ul style="list-style-type: none"> 1000W Output @ 100-140V, 8-12A, 50-60Hz 1280W Output @ 180-240V, 6-8A, 50-60Hz
DC Output	<ul style="list-style-type: none"> 1000W: +12V/83A; +5Vsb/4A 1280W: +12V/106.7A, +5Vsb/4A
Certification	  Platinum Certified [Test Report]

System BIOS	
BIOS Type	<ul style="list-style-type: none"> 128Mb SPI Flash EEPROM with AMI BIOS
BIOS Features	<ul style="list-style-type: none"> Plug and Play (PnP) APM 1.2 PCI 2.2 ACPI 1.0 / 2.0 USB Keyboard support SMBIOS 2.3 UEFI

Operating Environment / Compliance	
RoHS	<ul style="list-style-type: none"> RoHS Compliant
Environmental Spec.	<ul style="list-style-type: none"> Operating Temperature: 10°C to 35°C (50°F to 95°F) Non-operating Temperature: -40°C to 70°C (-40°F to 158°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)

Parts List

[See Parts List](#)

Parts List - (Items Included)			
	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DRFR-NT	4	Super X10DRFR-NT Motherboard
	CSE-F424AS-R1K28BP	1	4U Chassis
Backplane	BPN-ADP-F418LS	4	Power Distribution Board for X10DRFR,RoHS/REACH,PBF
Backplane	BPN-SAS3-F424-A2N2	4	2x-port Fat Twin SAS3 12Gbps hybrid backplane, support up to 2x

			3.5-inch SAS3/SATA3/NVMe storage devices
Backplane	BPN-ADP-8S3008-1UF	4	BPN-ADP-8S3008-1UF
Backplane	BPN-SAS3-F424-A6	4	6-port Fat Twin SAS3 12Gbps backplane, support up to 6x 3.5-inch SAS3/SATA3 HDD/SSD
Cable 1	CBL-SAST-0550	4	Internal Mini-SAS HD to Mini-SAS HD 25cm,30AWG,12Gb/s,HF,RoHS/REACH,PBF
Cable 2	CBL-SAST-0691	4	Internal RA reverse Mini-SAS HD to 2x Mini-SAS HD Y splitter 15/59cm, 30AWG [Amphenol],RoHS/REACH
Cable 3	CBL-OTHR-0022L	4	20 to 20 pin cable for BPN-ADP-F418LS,7.5cm, 28AWG,RoHS/REACH,PBF
Cable 4	CBL-0486L	8	2x2 to 2x2 15cm power cable HF. 18AWG
Cable 5	CBL-0480L	4	4 pins to 4 pins 40cm PDB to MB power cable HF. 18AWG
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	MNL-1763-QRG	1	Quick Reference Guide for F628R3-RC0B+/RC0BPT+
Heatsink / Retention	SNK-P0048P	4	2U Passive CPU Heat Sink for X9, X10 Generation Systems Equipped w/ a Square ILM MB
Heatsink / Retention	SNK-P0048PS	4	2U Passive CPU Heat Sink for X9, X10 Generation Systems Equipped w/ a Narrow ILM MB
Power Supply	PWS-1K28P-SQ	4	1U 1280W, redundant single output power supply

Optional Parts List

	Part Number	Qty	Description
Software	SFT-OOB-LIC	4	OOB Management Package (per node license)
Software	SFT-DCMS-Single	4	DataCenter Management Package (per node license)
Mounting Bracket	MCP-120-42405-0N	1/node	2nd power adapter mounting bracket
Power adapter Board	BPN-ADP-2UPWR-O-P	1/node	Power adapter board
Drive Carrier	MCP-220-93801-0B	2/node	Drive carrier 3.5" to 2.5" with adapter tray
NVMe Cable	CBL-SAST-0623	2/node	45cm NVMe cable