

SuperServer F628R3-RTBN+



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 GbE 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 SATA3 OR
6x 3.5" Hot-swap SATA3 +
2x SATA/NVMe hybrid
7. NVMe Support
8. 2x 80mm 11k RPM middle fans
9. 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-RTBN+	■ SuperServer F628R3-RTBN+ (Black)
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Motherboard

[Super X10DRFR-N](#)

Processor/Cache

CPU	<ul style="list-style-type: none"> ■ Intel® Xeon® processor E5-2600 v4†/ v3 family (up to 145W TDP) * ■ Dual Socket R3 (LGA 2011)
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Cores / Cache	■ Up to 22 Cores† / Up to 55MB† Cache
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System Bus	■ QPI up to 9.6 GT/s
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Note	† BIOS version 2.0 or above is required
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Note	* Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.
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Chassis

Form Factor	■ 4U Rackmount
Model	■ CSE-F424AS-R1K28B

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	<ul style="list-style-type: none"> ■ Net Weight: 105 lbs (47.63 kg) ■ Gross Weight: 150 lbs (68.04 kg)
Available Colors	■ Black

Front Panel

Buttons	<ul style="list-style-type: none"> ■ Power On/Off button ■ UID button
LEDs	<ul style="list-style-type: none"> ■ Power status LED ■ Hard drive activity LED ■ 2x Network activity LEDs

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
SATA	<ul style="list-style-type: none"> SATA3 (6Gbps) with 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® i350-AM2 Dual Port Gigabit Ethernet Virtual Machine Device Queues reduce I/O overhead Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output 1x Realtek RTL8201N PHY (dedicated IPMI)
Graphics	<ul style="list-style-type: none"> ASPEED AST2400 BMC

Input / Output (per node)

Serial ATA	<ul style="list-style-type: none"> 8x SATA3 (6Gbps) ports 2x SATA3 powered ports that support SATA DOM
LAN	<ul style="list-style-type: none"> 2x RJ45 Gigabit Ethernet LAN ports 1x RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none"> 2x USB 3.0 ports
VGA	<ul style="list-style-type: none"> 1x 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

- Information LED (UID, Fan failure, Overheat)

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)
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Drive Bays (per node)

Hot-swap	<ul style="list-style-type: none"> 8x 3.5" Hot-swap HDD trays
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Backplane

<ul style="list-style-type: none"> 1x SAS/SATA backplane 1x SAS/SATA/NVMe hybrid (2 slots)
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System Cooling (per node)

Fans	<ul style="list-style-type: none"> 2x 8cm 11k RPM middle fans
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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]
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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

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DRFR-N	4	Super X10DRFR-N Motherboard
	CSE-F424AS-R1K28B	1	4U Chassis
Backplane	BPN-SAS-F424-A6	4	6x 3.5
Backplane	BPN-SAS3-F424-A2N2	4	12Gbps Hybrid Backplane for 2 x 3.5
Backplane	BPN-ADP-F418LS	4	Power Distribution Board for X10DRFR,RoHS/REACH,PBF
Cable 1	CBL-0157L-02	8	8 pin to 8 pin ribbon SGPIO cable, 27cm, PBF
Cable 2	CBL-0484L	12	55cm 30AWG SATA S-S cable
Cable 3	CBL-0486L	8	2x2 to 2x2 15cm power cable HF. 18AWG
Cable 4	CBL-0489L	8	70cm SATA cable S-RA 30AWG
Cable 5	CBL-0480L	4	4 pins to 4 pins 40cm PDB to MB power cable HF. 18AWG
Cable 6	CBL-0481L	4	81CM 30AWG SATA S-S cable
Cable 7	CBL-SAST-0623	8	Internal Mini-SAS HD cable for PCIe SSD NVMe, 12Gb/s, 45cm,30AWG,RoHS/REACH
Cable 8	CBL-SAST-0692	4	Internal cross-over mini SAS HD to 2 SATA, S. 23cm. 30AWG [Amphenol],RoHS/REACH
Cable 9	CBL-OTHR-0022L	4	20 to 20 pin cable for BPN-ADP-F418LS,7.5cm, 28AWG,RoHS/REACH,PBF
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	MNL-1759-QRG	1	Quick Reference Guide for F628R3-RTBN+/RTBPTN+
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)
Drive Carrier	MCP-220-93801-0B	2/node	Drive carrier 3.5" to 2.5" with adapter tray
Additional Power Kit:			
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 *

* Required for certain configurations. Please contact Supermicro for additional details.