TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-7048R-C1RT

SKU SYS-7048R-C1RT | 4U | Supermicro

FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
4U	602 W	2,054 BTU/h	On request

ISO 9001 · ISO 14001 · ISO 27001 · cisco · tp-link · Omada by tp-link

REQUEST A QUOTATION ONLINE
serverinvest.com/product/sys-7048r-c1rt

01 Product overview

The Supermicro SYS-7048R-C1RT is a server built on dual Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD processors with up to 2 TB of memory in 4 DIMM slots.

ServerInvest configures every SYS-7048R-C1RT to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Dual Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD
- Up to 2 TB memory · 4 DIMM slots
- 8x 3.5" Hot-swap SATA3 drive trays
- Power: 100-240 V, 50-60 Hz, 11-4.5 Amp
- Networking: Intel X540 10GBase-T

KEY SPECIFICATIONS

Form factor	**4U**
Processor	**2× Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD**
Memory	**4 DIMM slots, up to 2 TB**
Typical power draw	**750 W**
Networking	**Intel X540 10GBase-T**
Dimensions (W×H×D)	**437 × 178 mm**

02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
143 W	**374 W**	**602 W**	**2,054 BTU/h**	**0.6 kW**	**—**

Typical 374 W · max 602 W

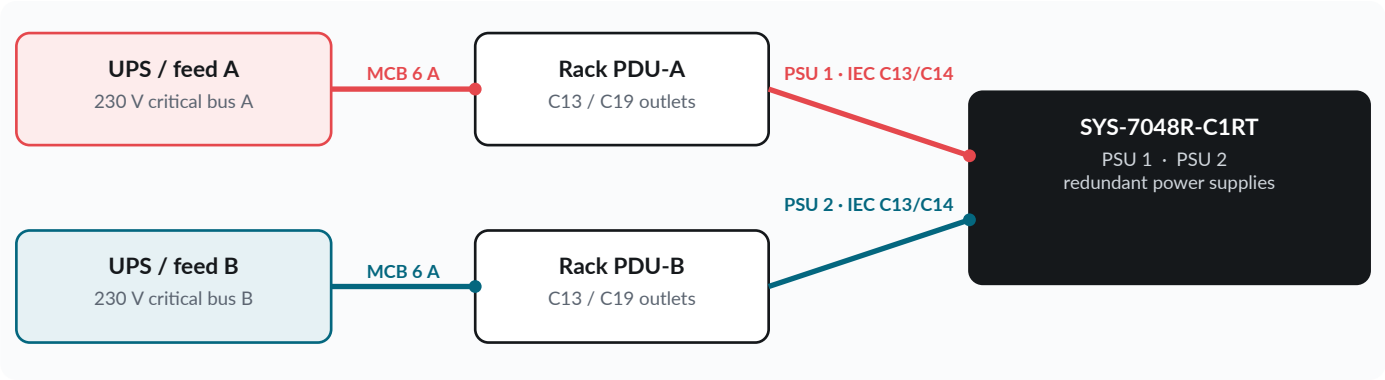
Annual IT energy (24/7)	2,669 kWh
Annual facility energy (PUE 1.5)	4,004 kWh
Annual energy cost	€534 IT · €801 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	1.04 t (grid factor 0.26 kg/kWh)
Power supplies	Redundant hot-swap PSUs — rating depends on the final configuration

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	**160 W**
2× CPU (base configuration)	50 W	220 W	**370 W**
4× Memory (base configuration)	12 W	20 W	**36 W**

DC loads converted to wall power at 94% PSU efficiency; typical load assumed 70% of the time. Engineering estimates — confirm with the manufacturer's power calculator for critical designs.

03 Power connection diagram

Dual-feed (A/B) connection for redundant power supplies



- Connect PSU 1 to PDU-A and PSU 2 to PDU-B (independent feeds) using IEC C13/C14 power cords.
- Maximum current per feed: 2.8 A at 230 V — each feed must be able to carry the full load if the other fails.
- Recommended protection per PDU circuit: MCB 6 A, curve C; RCD according to local regulations.
- Heat to remove at full load: 602 W = 2,054 BTU/h (0.6 kW).

04 Full specifications

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.

SYSTEM MEMORY	
Memory Capacity	16x 288-pin DDR4 DIMM slots Up to 2TB † ECC 3DS LRDIMM, 512 ECC RDIMM
Memory Type	2400 † /2133/1866/1600MHz ECC DDR4 SDRAM 72-bit
DIMM Sizes	RDIMM: 32GB, 16GB, 8GB, 4GB LRDIMM: 64GB, 32GB 3DS LRDIMM: 128GB
Memory Voltage	1.2 V
Error Detection	Corrects single-bit errors

ON-BOARD DEVICES	
Chipset	Intel C612 chipset
SATA	SATA3 (6Gbps); RAID 0, 1, 5, 10

SAS	Broadcom 3108 SAS3 (12Gbps) controller; HW RAID 0, 1, 5, 6, 10, 50, 60
IPMI	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	Intel X540 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)
Video	ASPEED AST2400 BMC

INPUT / OUTPUT

SATA	8x SATA3 (6Gbps) ports
SAS	8x SAS3 (12Gbps) ports
LAN	2x RJ45 10GBase-T ports 1x RJ45 Dedicated IPMI LAN port
USB	2x USB 3.0 ports (2 rear) 4x USB 2.0 ports (2 rear, 2 front) 1x USB Type A
Video	1x VGA port
Serial Port / Header	1x COM/Serial
DOM	2x Super DOM (Disk on Module) ports

EXPANSION SLOTS

PCI-Express	1x PCI-E 3.0 x16 (Full-height, Full-length) 6x PCI-E 3.0 x8 (Full-height, Full-length)

SYSTEM BIOS

BIOS Type	128Mb SPI Flash EEPROM with AMI BIOS
BIOS Features	Plug and Play (PnP) APM 1.2 DMI 2.2 ACPI 1.0 / 2.0 USB Keyboard support SMBIOS 2.3 UEFI

CHASSIS

Form Factor	4U Rackmountable / Tower Optional Rackmount Kit
Model	CSE-745TQ-R920B

DIMENSIONS AND WEIGHT

Height	17.2" (437mm)
Width	7.0" (178mm)
Depth	25.5" (648mm)
Package	24" (H) x 14" (W) x 26.5" (D)

Weight	Net Weight: 56.5 lbs (25.6 kg) Gross Weight: 74 lbs (33.57 kg)
Available Colors	Black

FRONT PANEL

Buttons	Power On/Off button System Reset button
LEDs	Power LED Hard drive activity LED 2x Network activity LEDs System Overheat LED Power Fail LED
Ports	2x USB Ports

DRIVE BAYS

Hot-swap	8x 3.5" Hot-swap SATA3 drive trays 8x 2.5" Hot-swap SAS3 drives in mobile rack
Peripheral Bay	1x 5.25" drive bay (optional devices)

SYSTEM COOLING

Fans	3x 8cm Hot-swap redundant PWM Cooling Fans 2x 8cm Hot-swap Rear Exhaust PWM Fans & air shroud

POWER SUPPLY WITH POWER DISTRIBUTOR

AC Input	100-240 V, 50-60 Hz, 11-4.5 Amp
DC Output	4 Amp @ +5V standby 75 Amp @ +12V
Certification	Platinum Certified [Test Report]

PC HEALTH MONITORING

CPU	Monitors for CPU Cores, +1.8V, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory, Chipset Voltages. 6-Phase-switching voltage regulator
FAN	Total of five fan headers supporting up to 5 fans 5x fans with tachometer status monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
Temperature	Monitoring for CPU and chassis environment CPU thermal trip support Thermal Control for 5x fan connectors Thermal Monitor 2 (TM2) support PECI
LED	System info. LED: UID indicator, fan fail/System Overheat Suspend static indicator LED UID/Remote LED
Other Features	Chassis intrusion detection Chassis intrusion header

OPERATING ENVIRONMENT / COMPLIANCE

RoHS	RoHS Compliant
Environmental Spec.	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)

05 Built, tested & supported by ServerInvest

Engineered configuration
Every option validated for socket, memory channels, PCIe lanes, power and cooling.

48-hour burn-in
Assembled, firmware-updated and stress-tested before it leaves our workshop.

3-year warranty
Standard on every system, with on-site next-business-day upgrades available.

Rack-ready delivery
Rails, cable management and labelling included — delivered across Europe.

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Interested in this solution?

Request a quotation online or talk to a solutions engineer — we reply within one business day.
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