TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-2028R-C1RT

SKU SYS-2028R-C1RT | 2U | Supermicro

FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
2U	549 W	1,873 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-2028r-c1rt

01 Product overview

The Supermicro SYS-2028R-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-2028R-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 2.5" SAS3 and 8x 2.5" SATA3 Hot-swap drive bays
- Power: 100-240 V, 50-60 Hz, 11-4.5 Amp
- Networking: Intel X540 10GBase-T

KEY SPECIFICATIONS

Form factor	**2U**
Processor	**2× Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD**
Memory	**4 DIMM slots, up to 2 TB**
Drive bays	**8**
Typical power draw	**750 W**
Networking	**Intel X540 10GBase-T**
Dimensions (W×H×D)	**437 × 89 mm**

02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
119 W	**337 W**	**549 W**	**1,873 BTU/h**	**0.5 kW**	**—**

Typical 337 W · max 549 W

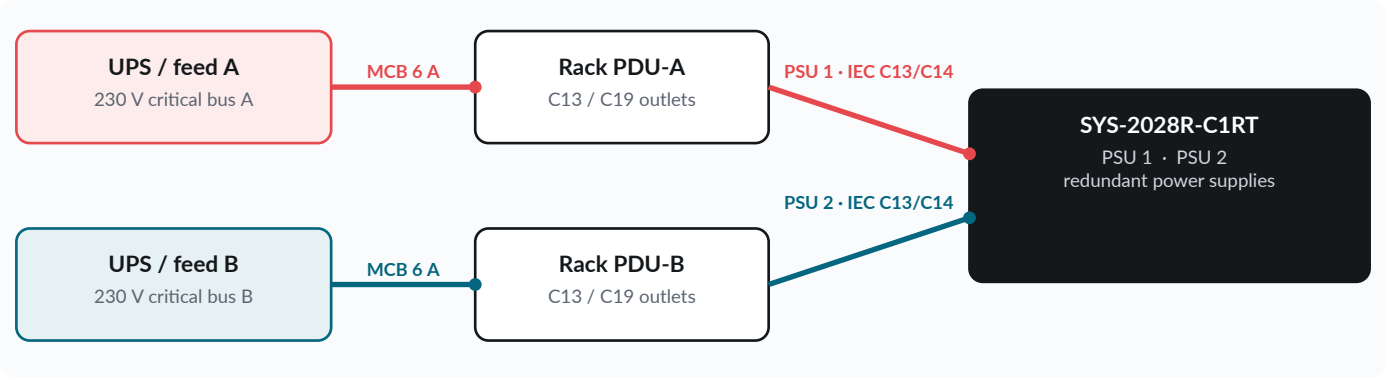
Annual IT energy (24/7)	2,379 kWh
Annual facility energy (PUE 1.5)	3,569 kWh
Annual energy cost	€476 IT · €714 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.93 t (grid factor 0.26 kg/kWh)
Power supplies	Redundant hot-swap PSUs — rating depends on the final configuration

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	50 W	77 W	**110 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: 2.5 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: 549 W = 1,873 BTU/h (0.5 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, 512GB 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
Graphics	ASPEED AST2400 BMC

INPUT / OUTPUT

SATA	8 SATA3 (6Gbps) ports
SAS	8 SAS3 (12Gbps) ports
LAN	2 RJ45 10GBase-T ports 1 RJ45 Dedicated IPMI LAN port
USB	2 USB 3.0 ports (2 rear) 4 USB 2.0 ports (2 rear, 2 front) 1 USB Type A
Video	1 VGA Connector
Serial Port / Header	2 Fast UART 16550 serial 2 COM Ports (1 rear, 1 front)

SYSTEM BIOS

BIOS Type	128Mb SPI Flash EEPROM with AMI BIOS
BIOS Features	Plug and Play (PnP) APM 1.2 DMI 2.3 PCI 2.2 ACPI 1.0 / 2.0 USB Keyboard support Hardware BIOS Virus protection SMBIOS 2.3 UEFI RTC (Real Time Clock) Wakeup

CHASSIS

Form Factor	2U Rackmount
Model	CSE-213AC-R920LPB

DIMENSIONS AND WEIGHT

Height	3.5" (89mm)
Width	17.2" (437mm)
Depth	24.8" (630mm)
Package	10.5" (H) x 26.5" (W) x 38" (D)
Weight	Net Weight: 38 lbs (17.4 kg) Gross Weight: 63 lbs (28.8 kg)
Available Color	Black

FRONT PANEL

Buttons	Power On/Off button System Reset button
LEDs	Power LED Hard drive activity LED 2 Network activity LEDs System Overheat LED / Fan fail LED / UID LED

EXPANSION SLOTS

PCI-Express	1 PCI-E 3.0 x16 6 PCI-E 3.0 x8 (Low-profile AOC)

DRIVE BAYS

Hot-swap	8x 2.5" SAS3 and 8x 2.5" SATA3 Hot-swap drive bays
Peripheral	Optional DVD-ROM drive supports 1x slim or 1x 5.25" DVD drive

SYSTEM COOLING

Fans	3 heavy duty 8cm fans with optimal fan speed control

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,+1.5V, +3.3V, +5V, +12V, +5 Stdby, +3.3 Stdby, VBAT, Memory Voltages. CPU Core 6-Phase-switching voltage regulator
FAN	Total of five 4-pin PWM fans 5 fans with tachometer monitoring Status monitor for speed control Status monitor for on/off control Low noise fan speed control
Temperature	Monitoring for CPU and chassis environment CPU thermal trip support Thermal Control for 10x Fan Connectors PSU I 2 C temperature sensing logic Thermal Monitor 2 (TM2) support PECI
LED	Power Fail / Overheat LED Suspend-state Indicator LED UID LED
Other Features	SDDC Support

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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