TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-1028R-WTNRT

SKU SYS-1028R-WTNRT | 1U | Supermicro

FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
1U	522 W	1,781 BTU/h	On request

REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-1028r-wtnrt

01 Product overview

The Supermicro SYS-1028R-WTNRT 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.

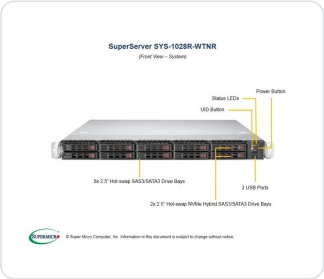
ServerInvest configures every SYS-1028R-WTNRT to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

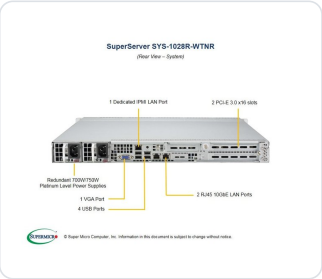
HIGHLIGHTS

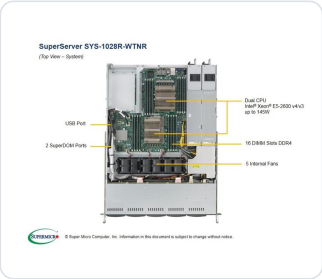
- Dual Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD
- Up to 2 TB memory · 4 DIMM slots
- 8x SATA3 (6Gbps) ports and 2x NVMe/SATA3 hybrid ports (connected to onboard storage controller)
- Power: 700W/750W
- Networking: Intel X540 Dual Port 10GBase-T

KEY SPECIFICATIONS

Form factor	**1U**
Processor	**2× Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD**
Memory	**4 DIMM slots, up to 2 TB**
Power supply	**1× 700 W**
Typical power draw	**750 W**
Networking	**Intel X540 Dual Port 10GBase-T**
Dimensions (W×H×D)	**437 × 44 mm**







02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
106 W	**318 W**	**522 W**	**1,781 BTU/h**	**0.5 kW**	**75%**

Typical 318 W · max 522 W · single PSU rating 700 W

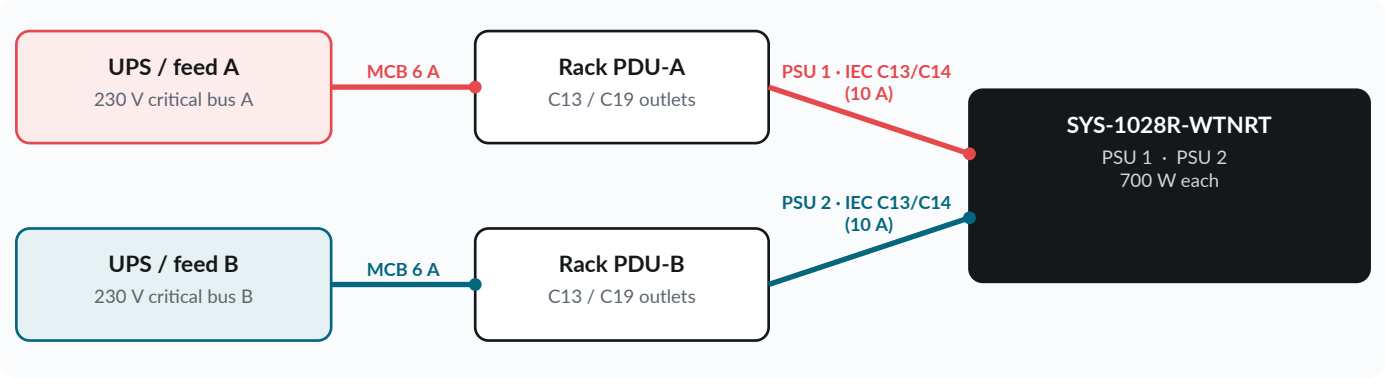
Annual IT energy (24/7)	2,229 kWh
Annual facility energy (PUE 1.5)	3,344 kWh
Annual energy cost	€446 IT · €669 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.87 t (grid factor 0.26 kg/kWh)
Power supplies	1× 700 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	38 W	59 W	**85 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 (10 A) power cords.
- Maximum current per feed: 2.4 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: 522 W = 1,781 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

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 Dual Port 10GBase-T Virtual Machine Device Queues reduce I/O overhead Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output 1x Realtek RTL8211E PHY (dedicated IPMI)
Video	ASPEED AST2400 BMC

INPUT / OUTPUT

Serial ATA	8 SATA3 (6 Gbps) ports and 2 NVMe/SATA3 hybrid ports
LAN	2x RJ45 10GBase-T ports 1x RJ45 Dedicated IPMI LAN port
USB	2x USB 3.0 ports (front via header) 4x USB 2.0 ports (rear)
Video	1x VGA port
Serial Port / Header	1x Fast UART 16550 header
DOM	2x Super DOM (Disk on Module) ports

PC HEALTH MONITORING

Voltage	Monitors for CPU Cores, +1.8V, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory Voltages. 5+1 Phase-switching voltage regulator
FAN	6x 4-pin fan headers (up to 6 fans) 6x fans with tachometer 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 8x Fan Connectors Thermal Monitor 2 (TM2) support PECI
LED	System Information LED Suspend static indicator LED UID/Remote UID
Other Features	Chassis intrusion detection Chassis intrusion header SDDC Support RoHS

CHASSIS

Form Factor	1U Rackmount
Model	CSE-116AC2-R706WB

DIMENSIONS AND WEIGHT

Width	17.2" (437mm)
Height	1.7" (43mm)
Depth	23.5" (597mm)
Gross Weight	46 lbs (20.9kg)

Available Colors	Black

FRONT PANEL

Buttons	Power On/Off button UID button
LEDs	Power status LED HDD activity LED 2x Network activity LEDs Universal Information (UID) LED

EXPANSION SLOTS

PCI-Express	2x PCI-E 3.0 x16 full-height, half-length slots

DRIVE BAYS

Hot-swap	8x SATA3 (6Gbps) ports and 2x NVMe/SATA3 hybrid ports (connected to onboard storage controller)

SYSTEM COOLING

Fans	5x 4cm heavy-duty counter-rotating fans w/ air shroud and optimal fan speed control

AC/DC240V INPUT REDUNDANT POWER SUPPLY

Total Output Power	700W/750W
Dimension (W x H x L)	54.5 x 40.25 x 320 mm
Input	100 - 140Vac / 8 - 6A / 50-60Hz 200 - 240Vac / 4.5 - 3.8A / 50-60Hz 200 - 240Vdc / 4.5 - 3.8A (CCC Only)
+12V	Max: 58A / Min: 0.5A (100 - 140Vac) Max: 62A / Min: 0.5A (200 - 240Vac) Max: 62A / Min: 0.5A (200 - 240Vdc) (CB/CCC Only)
+5V sb	Max: 3A / Min: 0A
Output Type	Gold Finger Connector Mating with Molex 45984-4343
Certification	Platinum Certified [Test Report]

SYSTEM BIOS

BIOS Type	128Mb SPI Flash EEPROM with AMI BIOS
BIOS Features	Plug and Play (PnP) APM 1.2 PCI 2.3 ACPI 1.0 / 2.0 / 3.0 / 4.0 USB Keyboard support SMBIOS 2.7.1 UEFI 2.3.1

MANAGEMENT

Software	SuperDoctor 5 Watch Dog NMI IPMI 2.0 Intel Node Manager
Power Configurations	ACPI / APM Power Management Power-on mode for AC power recovery

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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