

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-2028BT-HNR

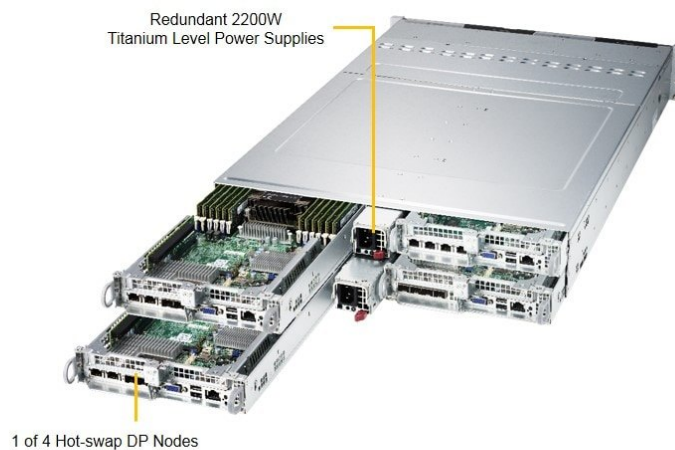
SKU SYS-2028BT-HNR

2U

Supermicro

BigTwin™ SYS-2028BT-HNR+

(Angled View – System)



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FORM FACTOR

2U

MAX POWER (BASE)

549 W

HEAT OUTPUT

1,873 BTU/h

PRICE

On request



REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-2028bt-hnr



01 Product overview

The Supermicro SYS-2028BT-HNR is a server built on dual Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD processors with up to 3 TB of memory in 4 DIMM slots).

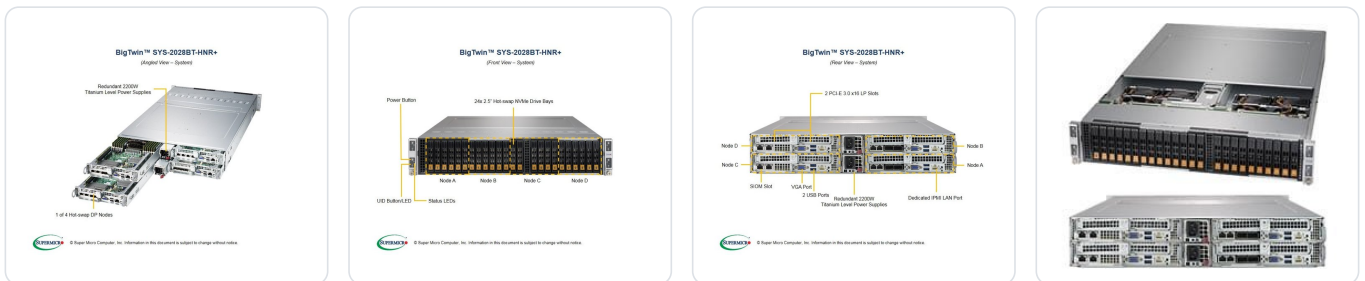
ServerInvest configures every SYS-2028BT-HNR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Dual Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD)
- Up to 3 TB memory · 4 DIMM slots
- 6 Hot-swap 2.5" NVMe drive bays
- Power: 1200W/1800W/1980W/2090/2200W
- Networking: Must bundle with at least one

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 3 TB
Drive bays	6 (6 NVMe)
Power supply	1× 1200 W
Typical power draw	750 W
Networking	Must bundle with at least one
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	46%

Typical 337 W · max 549 W · single PSU rating 1200 W

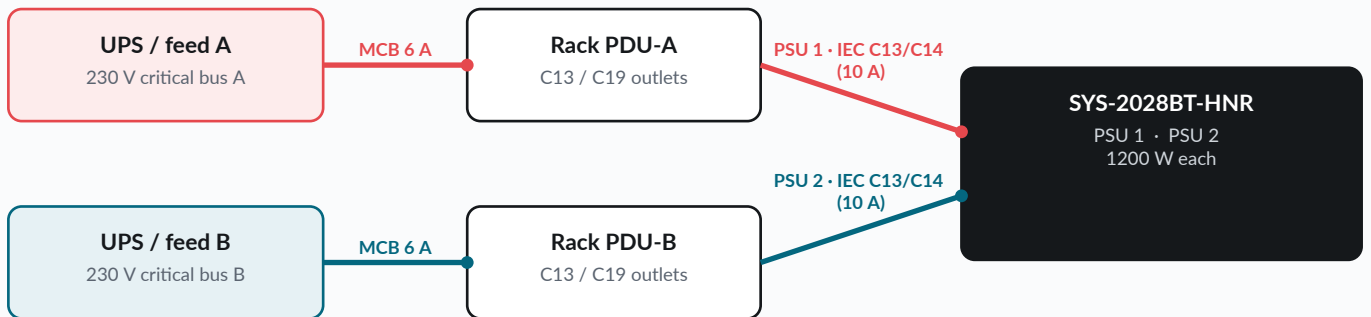
Annual IT energy (24/7)	2,379 kWh
Annual facility energy (PUE 1.5)	3,569 kWh
Annual energy cost	€476 IT · €714 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.93 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1200 W

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 (10 A) 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 (PER NODE)

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 (PER NODE)

Memory Capacity	24x 288-pin DDR4 DIMM slots Up to 3TB † ECC 3DS LRDIMM, 768GB 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 (PER NODE)

Chipset	Intel C612 chipset
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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	Must bundle with at least one SIOM network card
Video	ASPEED AST2400 BMC

INPUT / OUTPUT (PER NODE)

LAN	1 RJ45 Dedicated IPMI LAN port
USB	2 USB 3.0 ports (rear)
Video	1 VGA port
Others	M.2 and SATA DOM for boot drive only

CHASSIS

Form Factor	2U Rackmount
Model	CSE-217BHQ+-R2K22BP

DIMENSIONS AND WEIGHT

Width	17.6" (447mm)
Height	3.47" (88mm)
Depth	28.75" (730mm)
Package	9.76" (H) x 24.65" (W) x 45.28" (D)
Weight	Gross Weight: 85 lbs (38.6kg) Net Weight: 54.5 lbs (24.7 kg)
Available Colors	Black

FRONT PANEL

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

EXPANSION SLOTS (PER NODE)

PCI-Express	2 PCI-E 3.0 (x16) Low-profile slots 1 SIOM card (must bundle with network card)
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DRIVE BAYS (PER NODE)

Hot-swap	6 Hot-swap 2.5" NVMe drive bays
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SYSTEM COOLING

Fans	4 heavy duty 8cm PWM fans with air shroud
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POWER SUPPLY

Total Output Power 1200W/1800W/1980W/2090/2200W

Dimension (W x H x L) 45 x 40 x 480 mm

Input
1200W: 100-127Vac / 50-60Hz
1800W: 200-220Vac / 50-60Hz
1980W: 220-230Vac / 50-60Hz
2090W: 230-240Vac / 50-60Hz
2090W: 180-220Vac (for UL/cUL only)
2200W: 220-240Vac (for UL/cUL only)
2090W: 230-240Vdc (for CCC only)

+12V
Max: 100A / Min: 0A (100-127Vac)
Max: 150A / Min: 0A (200-220Vac)
Max: 165A / Min: 0A (220-230Vac)
Max: 174.17A / Min: 0A (230-240Vac)
Max: 174.17A / Min: 0A (180-220Vac, UL/cUL only)
Max: 183.33A / Min: 0A (220-240Vac, UL/cUL only)
Max: 174.17A / Min: 0A (230-240Vdc, CCC only)

12Vsb Max: 2.1A / Min: 0A

Output Type Gold Finger

Certification Titanium Level
[Test Report]

SYSTEM BIOS

BIOS Type 128Mb SPI Flash EEPROM with AMI BIOS

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.



Interested in this solution?

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

