

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-2028BT-HTR

SKU SYS-2028BT-HTR

2U

Supermicro

BigTwin™ SYS-2028BT-HTR+*(Angled View – System)*Redundant 2200W
Titanium Level Power Supplies

1 of 4 Hot-swap DP Nodes



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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-htr

01 Product overview

The Supermicro SYS-2028BT-HTR 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.

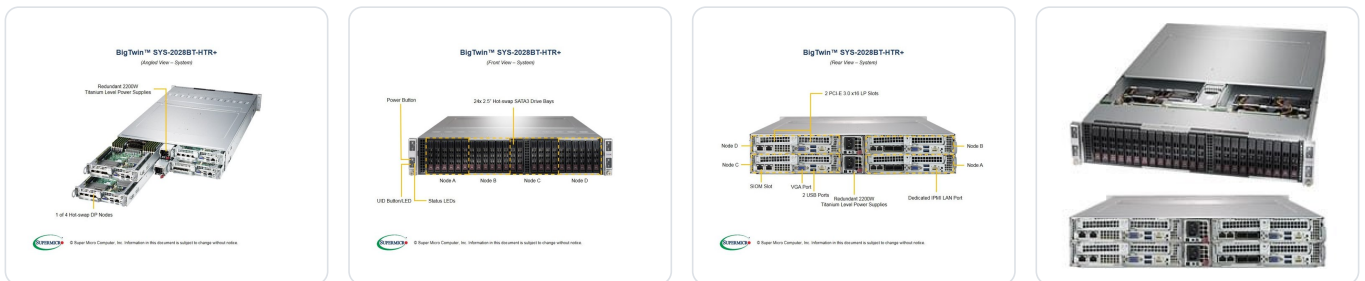
ServerInvest configures every SYS-2028BT-HTR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

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" SATA3 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
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

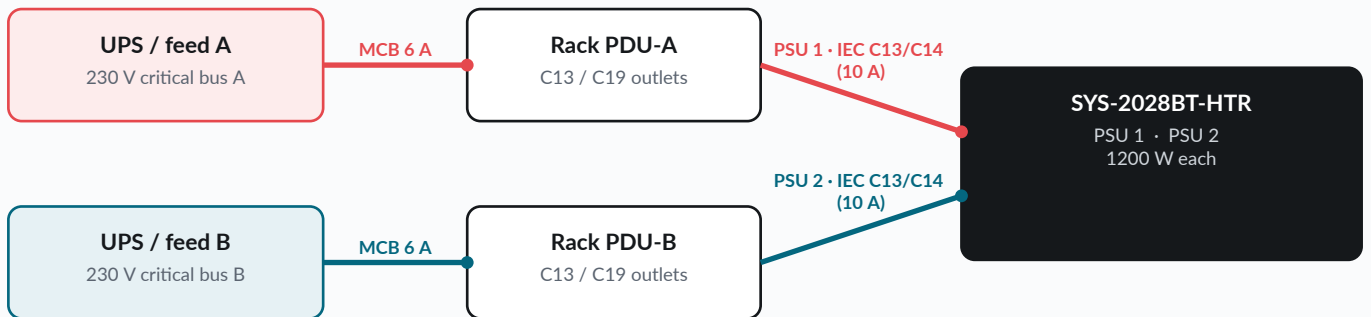
Annual IT energy (24/7)	2,379 kWh
Annual facility energy (PUE 1.5)	3,569 kWh
Annual energy cost	€476 IT · €714 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.93 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1200 W

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
SATA	SATA3 (6Gbps) with 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	Must bundle with at least one SIOM network card
Video	ASPEED AST2400 BMC

INPUT / OUTPUT (PER NODE)

SATA	6 SATA3 (6Gbps) ports
LAN	1 RJ45 Dedicated IPMI LAN port
USB	2 USB 3.0 ports (rear)
Video	1 VGA port
Others	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" SATA3 drive bays Please contact Supermicro Technical Support for additional information about HDD and SSD if mixed. Some restrictions and configuration rules that apply to SSD are different from HDD.
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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
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Dimension (W x H x L)	45 x 40 x 480 mm
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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)
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+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)
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12Vsb	Max: 2.1A / Min: 0A
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Output Type	Gold Finger
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Certification	Titanium Level [Test Report]
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SYSTEM BIOS

BIOS Type	128Mb SPI Flash EEPROM with AMI BIOS
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OPERATING ENVIRONMENT / COMPLIANCE

RoHS	RoHS Compliant
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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)
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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

