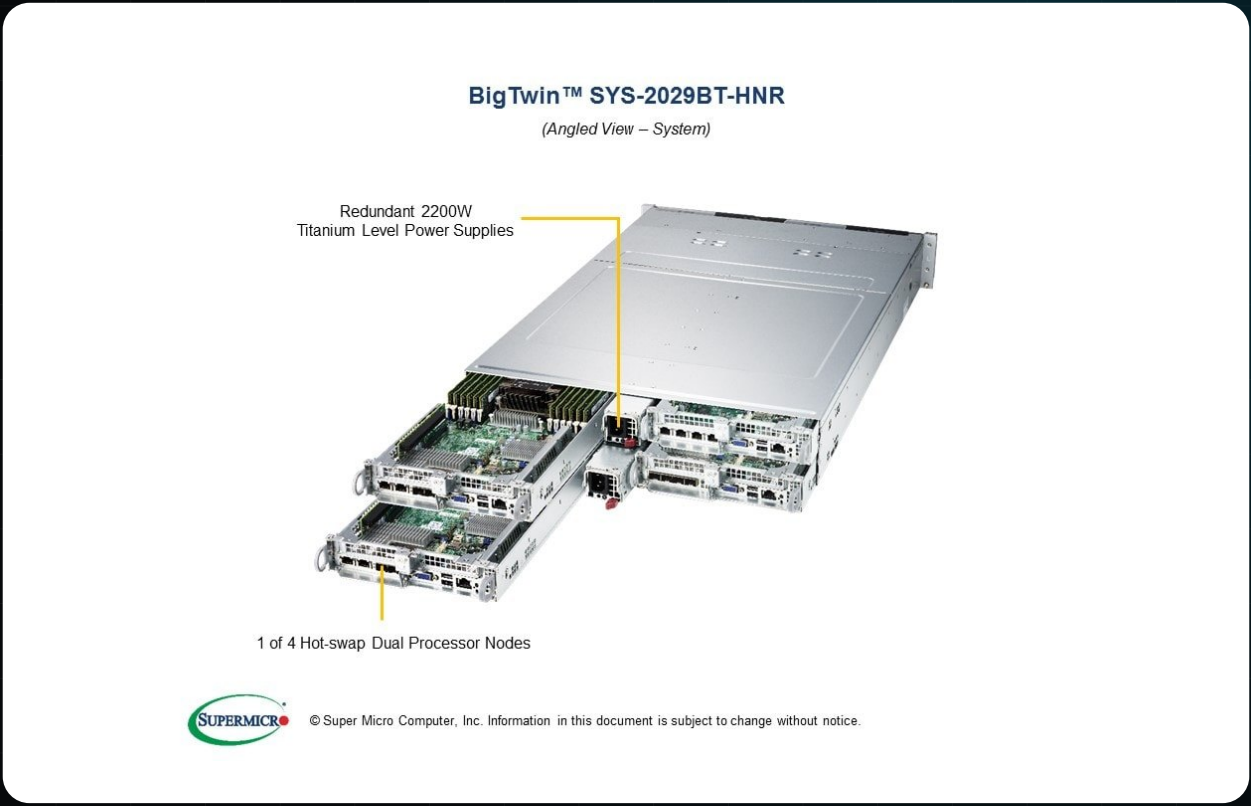
TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-2029BT-HNR

SKU SYS-2029BT-HNR | 2U | Supermicro



FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
2U	549 W	1,873 BTU/h	On request

REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-2029bt-hnr

01 Product overview

The Supermicro SYS-2029BT-HNR is a server built on dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process processors with up to 6 TB of memory in 24 DIMM slots.

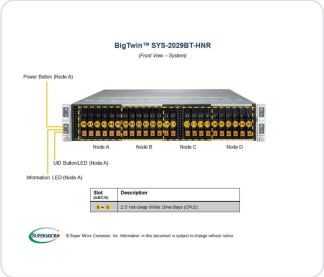
ServerInvest configures every SYS-2029BT-HNR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

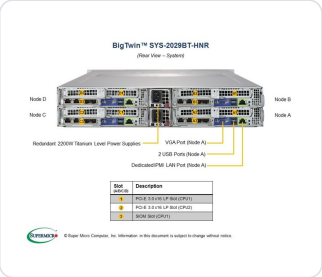
HIGHLIGHTS

- Dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
- Up to 6 TB memory · 24 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× Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
Memory	24 DIMM slots, up to 6 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

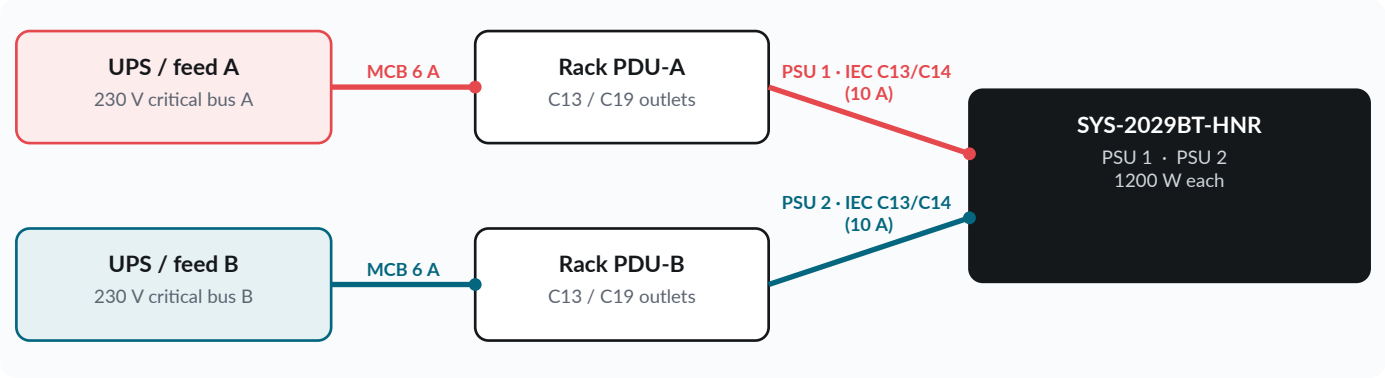
Annual IT energy (24/7)	2,379 kWh
Annual facility energy (PUE 1.5)	3,569 kWh
Annual energy cost	€476 IT · €714 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.93 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1200 W

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 (PER NODE)	
CPU	Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Processors and Intel Xeon Scalable Processors ‡ , Dual UPI up to 10.4GT/s Support CPU TDP 70-205W *
Cores	Up to 28 Cores
Note	* 200W/205W CPUs are supported under certain configurations. Please contact Supermicro Technical Support for additional information about specialized system optimization
Note	‡ BIOS version 3.2 or above is required to support 2nd Gen Intel Xeon Scalable processors (codenamed Cascade Lake-R). Extended thermal solutions may be required to support CPUs higher than 165W TDP, please contact Supermicro Technical Support for additional information.

SYSTEM MEMORY (PER NODE)	
Memory Capacity	24 DIMM slots Up to 6TB 3DS ECC DDR4-2933MHz † RDIMM/LRDIMM Supports Intel Optane DCPMM ††
Memory Type	2933 † /2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM
Note	† 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro †† Cascade Lake only. Contact your Supermicro sales rep for more info.

ON-BOARD DEVICES	
Chipset	Intel C621 chipset
Network	Must bundle with at least one SIOM network card

IPMI	Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
Video	ASPEED AST2500 BMC

INPUT / OUTPUT (PER NODE)

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

SYSTEM BIOS

BIOS Type	AMI 32Mb SPI Flash ROM

MANAGEMENT

Software	Intel Node Manager IPMI 2.0 KVM with dedicated LAN SSM , SPM , SUM SuperDoctor 5 Watch Dog
Power Configurations	ACPI / APM Power Management

PC HEALTH MONITORING

CPU	Monitors for CPU Cores, Chipset Voltages, Memory. 4+1 Phase-switching voltage regulator
FAN	Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
Temperature	Monitoring for CPU and chassis environment Thermal Control for fan connectors

CHASSIS

Form Factor	2U Rackmount
Model	CSE-217BHQ+-R2K22BP2

DIMENSIONS AND WEIGHT

Width	17.6" (447mm)
Height	3.47" (88mm)
Depth	28.75" (730mm)
Package	24.65" (H) x 9.76" (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 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 support (must bundle with network card)

DRIVE BAYS / STORAGE (PER NODE)

Hot-swap	6 Hot-swap 2.5" NVMe drive bays
M.2	2 M.2 NVMe or SATA (2240/2260/2280) via optional AOC-SMG3-2H8M2-B

SYSTEM COOLING

Fans	4 Heavy duty 8cm PWM fans with air shroud

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]

OPERATING ENVIRONMENT

RoHS	RoHS Compliant

Environmental Spec.	Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F) Non-operating Temperature: -40°C to 60°C (-40°F to 140°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