

## TECHNICAL DATASHEET

SUPERMICRO · MULTI-NODE &amp; TWIN

# Supermicro 2U BigTwin Server SYS-220BT-HNC8R-US

2U BigTwin with 6 2.5" NVMe/SAS/SATA drives per node (Made in USA)

SKU SYS-220BT-HNC8R-US

2U

LGA4189

Supermicro



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-220bt-hnc8r-us](https://serverinvest.com/product/sys-220bt-hnc8r-us)

01 Product overview

The Supermicro SYS-220BT-HNC8R-US is a 2U BigTwin Server built on dual Intel Xeon Scalable 3rd Gen processors with up to 4 TB of memory in 16 DIMM slots.

2U BigTwin with 6 2.5" NVMe/SAS/SATA drives per node (Made in USA).

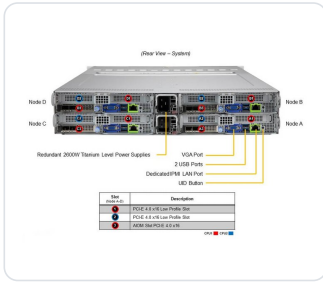
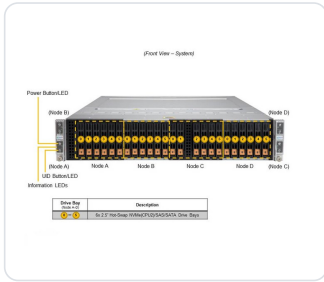
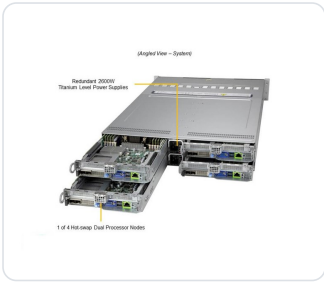
ServerInvest configures every SYS-220BT-HNC8R-US to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Dual Intel Xeon Scalable 3rd Gen
- Up to 4 TB memory · 16 DIMM slots
- Total 6 bays 6 front hot-swap 2.5" PCIe 4.0 NVMe/SAS/SATA drive bays
- Power: 2x 2600W
- Networking: Via AIOM

KEY SPECIFICATIONS

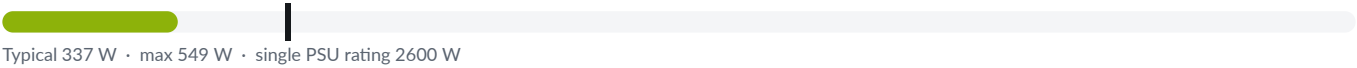
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|--------------------|--------------------------------|
| Form factor        | 2U                             |
| Processor          | 2× Intel Xeon Scalable 3rd Gen |
| Socket             | LGA4189                        |
| Memory             | 16 DIMM slots, up to 4 TB      |
| Drive bays         | 6 (6 NVMe)                     |
| Power supply       | 2× 2600 W                      |
| Typical power draw | 750 W                          |
| Networking         | Via AIOM                       |
| 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  | 21%      |



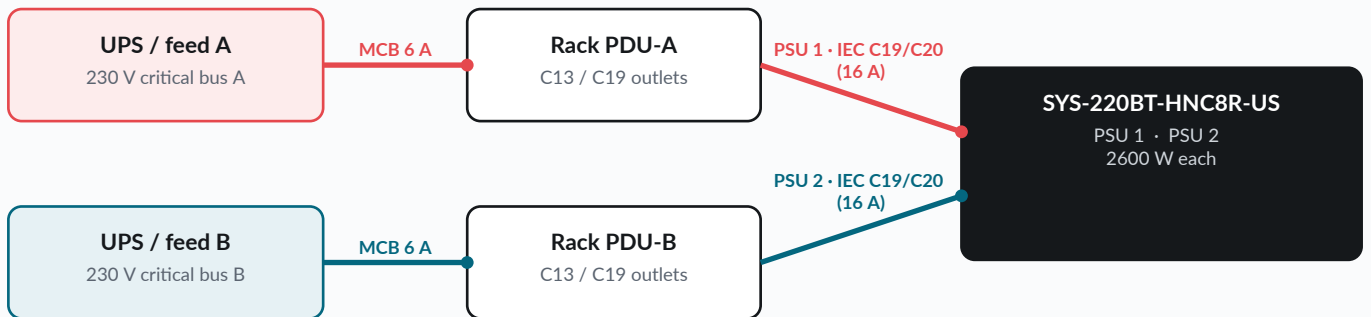
|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Annual IT energy (24/7)          | 2,379 kWh                                    |
| Annual facility energy (PUE 1.5) | 3,569 kWh                                    |
| Annual energy cost               | €476 IT · €714 incl. cooling (at 0.20 €/kWh) |
| CO <sub>2</sub> emissions / year | 0.93 t (grid factor 0.26 kg/kWh)             |
| Power supplies                   | 2× 2600 W redundant (N+1)                    |

| 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 C19/C20 (16 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

#### MOTHERBOARD

Super X12DPT-B6

#### PROCESSOR (PER NODE)

|            |                                                                     |
|------------|---------------------------------------------------------------------|
| CPU        | Dual Socket P+ (LGA-4189)<br>3rd Gen Intel Xeon Scalable processors |
| Core Count | Up to 36C/72T; Up to 54MB Cache per CPU                             |
| Note       | Supports up to 205W TDP CPUs (Air Cooled)                           |

#### SYSTEM MEMORY (PER NODE)

|                |                                                                                                                                                                |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Memory         | Slot Count: 16 DIMM slots<br>Max Memory (2DPC): Up to 4TB 3200MT/s ECC DDR4 RDIMM<br>Supports Intel Optane persistent memory 200 series<br>View Memory Options |
| Memory Voltage | 1.2V                                                                                                                                                           |

#### ON-BOARD DEVICES (PER NODE)

|                      |                                                   |
|----------------------|---------------------------------------------------|
| Network Connectivity | Via AIOM<br>View AIOM Options<br>View AOC Options |
|----------------------|---------------------------------------------------|

#### INPUT / OUTPUT (PER NODE)

|       |                                     |
|-------|-------------------------------------|
| LAN   | 1 RJ45 1 GbE Dedicated BMC LAN port |
| USB   | 2 USB 3.0 Type-A ports (Rear)       |
| Video | 1 VGA port                          |

## SYSTEM BIOS

|           |                    |
|-----------|--------------------|
| BIOS Type | AMI 32MB Flash ROM |
|-----------|--------------------|

## MANAGEMENT

|          |                                                                                                                                                                                                                                                            |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Software | SuperCloud Composer (SCC)<br>Supermicro Server Manager (SSM)<br>Supermicro Update Manager (SUM)<br>Supermicro SuperDoctor 5 (SD5)<br>Super Diagnostics Offline (SDO)<br>Supermicro Thin-Agent Service (TAS)<br>SuperServer Automation Assistant (SAA) New! |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                      |                           |
|----------------------|---------------------------|
| Power configurations | ACPI/APM Power Management |
|----------------------|---------------------------|

## SECURITY

|          |                                                                                           |
|----------|-------------------------------------------------------------------------------------------|
| Hardware | Trusted Platform Module (TPM) 2.0<br>Silicon Root of Trust (RoT) – NIST 800-193 Compliant |
|----------|-------------------------------------------------------------------------------------------|

|          |                                                                                                                               |
|----------|-------------------------------------------------------------------------------------------------------------------------------|
| Features | Cryptographically Signed Firmware<br>Secure Boot<br>Secure Firmware Updates<br>Automatic Firmware Recovery<br>System Lockdown |
|----------|-------------------------------------------------------------------------------------------------------------------------------|

## PC HEALTH MONITORING

|     |                                                                                            |
|-----|--------------------------------------------------------------------------------------------|
| CPU | 7+1 Phase-switching voltage regulator<br>Monitors for CPU Cores, Chipset Voltages, Memory. |
|-----|--------------------------------------------------------------------------------------------|

|     |                                                                                                                   |
|-----|-------------------------------------------------------------------------------------------------------------------|
| Fan | Fans with tachometer monitoring<br>Pulse Width Modulated (PWM) fan connectors<br>Status monitor for speed control |
|-----|-------------------------------------------------------------------------------------------------------------------|

|             |                                            |
|-------------|--------------------------------------------|
| Temperature | Monitoring for CPU and chassis environment |
|-------------|--------------------------------------------|

## CHASSIS

|             |              |
|-------------|--------------|
| Form Factor | 2U Rackmount |
|-------------|--------------|

|       |                 |
|-------|-----------------|
| Model | CSE-217BQ-000NP |
|-------|-----------------|

## DIMENSIONS AND WEIGHT

|                 |                                                                  |
|-----------------|------------------------------------------------------------------|
| Height          | 3.47" (88 mm)                                                    |
| Width           | 17.68" (449 mm)                                                  |
| Depth           | 28.75" (730 mm)                                                  |
| Package         | 9.76" (H) x 24.65" (W) x 45.28" (D)                              |
| Weight          | Gross Weight: 96.6 lbs (43.8 kg)<br>Net Weight: 66.1 lbs (30 kg) |
| Available Color | Black front & silver body                                        |

## FRONT PANEL

|         |                                   |
|---------|-----------------------------------|
| Buttons | Power On/Off button<br>UID button |
|---------|-----------------------------------|

|     |                                                                                                  |
|-----|--------------------------------------------------------------------------------------------------|
| LED | HDD activity LED<br>Network activity LEDs<br>Power status LED<br>Universal Information (UID) LED |
|-----|--------------------------------------------------------------------------------------------------|

#### EXPANSION SLOTS (PER NODE)

|                                  |                                                                        |
|----------------------------------|------------------------------------------------------------------------|
| PCI-Express (PCIe) Configuration | Default<br>2 PCIe 4.0 x16 LP slots<br><a href="#">View AOC Options</a> |
|----------------------------------|------------------------------------------------------------------------|

#### DRIVE BAYS / STORAGE (PER NODE)

|                          |                                                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------------------------|
| Drive Bays Configuration | Default: Total 6 bays 6 front hot-swap 2.5" PCIe 4.0 NVMe/SAS/SATA drive bays<br><a href="#">View Drive Options</a> |
| M.2                      | 2 M.2 PCIe 3.0 x4 NVMe/SATA slots (M-key 2280(default); VROC required for RAID)<br><a href="#">View M.2 Options</a> |

#### SYSTEM COOLING

|            |                                          |
|------------|------------------------------------------|
| Fans       | Up to 4x 16.5K RPM Heavy Duty 8cm Fan(s) |
| Air Shroud | 4 Air Shrouds                            |

#### POWER SUPPLY

2x 2600W  
2x 2600W Redundant (1 + 1) Titanium Level (96%) power supplies  
Dimension (WxHxL)  
45 x 40 x 480 mm

#### OPERATING ENVIRONMENT

|                     |                                                                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RoHS                | RoHS Compliant                                                                                                                                                                                                                            |
| Environmental Spec. | Operating Temperature: 10°C to 35°C (50°F to 95°F)<br>Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)<br>Operating Relative Humidity: 8% to 90% (Non-Condensing)<br>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](mailto:office@serverinvest.com)

Official manufacturer datasheet: [serverinvest.com/product/sys-220bt-hnc8r-us/datasheet/manufacture](https://serverinvest.com/product/sys-220bt-hnc8r-us/datasheet/manufacture)

