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# Intel

# Intel Xeon Platinum 8460H Processor (PK8071305075001)

## Datasheet

## Product Overview

- The Intel Xeon Platinum 8460H is a 4th Gen Intel Xeon Scalable processor for high-performance enterprise, cloud, and data-center servers.
- It provides 40 cores and 80 threads, with a 2.20 GHz base frequency, up to 3.80 GHz Intel Turbo Boost frequency, 105 MB cache, and a 330 W TDP.
- The processor supports scalable multi-socket server designs, eight DDR5 memory channels, and high-bandwidth PCI Express 5.0 expansion.
- Up to DDR5-4800 MT/s at 1DPC and DDR5-4400 MT/s at 2DPC support high-capacity server memory, with ECC support for platform reliability.
- Eighty PCIe 5.0 lanes, 16 GT/s UPI, Intel AMX, and four default devices each for DSA and IAA support compute, accelerator, storage, and data-processing workloads.
- Intel SGX with a 512 GB default maximum EPC size, Total Memory Encryption, Boot Guard, Platform Firmware Resilience, and virtualization technologies strengthen protected deployments.

## Product Highlights

- **40-Core Platinum Compute:** 40 cores and 80 threads provide high parallel processing capacity for enterprise servers, cloud platforms, virtualization, and data-center workloads.
- **Scalable Server Interconnect:** Eighty PCIe 5.0 lanes and four UPI links at 16 GT/s support multi-socket platform connectivity for accelerators, storage, and high-speed networking.
- **DDR5 Memory Flexibility:** Eight memory channels support up to DDR5-4800 MT/s at 1DPC and DDR5-4400 MT/s at 2DPC, with ECC support for server-class systems.
- **DSA and IAA Acceleration:** Four default Intel DSA devices and four default Intel IAA devices support data movement and in-memory analytics offload, alongside Intel AMX and Intel DL Boost.

## Detailed Features




### Intel Xeon Platinum 8460H Processor (PK8071305075001)

Quote | Help

| Component | Specification |
|---|---|
| Processor | Intel Xeon Platinum 8460H, 40 cores / 80 threads |
| Ordering Information | PK8071305075001, FC-LGA16A Tray, Spec Code SRM7K |
| Frequency and Cache | 2.20 GHz base, up to 3.80 GHz turbo, 105 MB cache |
| Memory | Up to DDR5-4800 MT/s 1DPC or DDR5-4400 MT/s 2DPC, 8 channels, ECC supported |
| Power and Expansion | 330 W TDP, S8S scalability, PCIe 5.0 with 80 lanes, 16 GT/s UPI |

### High-Core-Count Platinum Performance

The 8460H combines 40 cores and 80 threads with a 2.20 GHz base frequency and up to 3.80 GHz Intel Turbo Boost frequency. This profile suits virtualization, databases, cloud services, analytics, and general-purpose data-center workloads.

### Scalable Multi-Socket Architecture

Intel specifies S8S scalability and four UPI links at 16 GT/s. The platform is built for systems that require coherent multi-socket processing and high inter-socket bandwidth for large server deployments.

### PCIe 5.0 Expansion Capacity

Eighty PCIe 5.0 lanes provide high-speed connectivity for Ethernet adapters, storage controllers, accelerators, and other I/O devices. The lane budget helps balance high-throughput expansion across a server platform.

### DDR5 Memory Bandwidth

Eight memory channels support up to DDR5-4800 MT/s with one DIMM per channel and up to DDR5-4400 MT/s with two DIMMs per channel. ECC support helps maintain data integrity in server environments.

### Intel AMX Acceleration

Intel Advanced Matrix Extensions are supported alongside Intel DL Boost and AVX-512. These capabilities can accelerate selected AI, inference, analytics, and vectorized workloads when enabled by the software stack.

### Integrated Accelerator Portfolio

Intel documents four default Intel DSA devices and four default Intel IAA devices. These engines can offload supported data-movement and in-memory analytics operations from general-purpose cores.

### Speed Select and Core Priorities

Intel Speed Select Technology supports core power, turbo frequency, and base frequency controls. The 8460H also lists 12 high-priority cores at 2.40 GHz and 28 low-priority cores at 2.00 GHz.

### Protected Server Execution

Intel SGX with a 512 GB default maximum EPC size, Total Memory Encryption, AES instructions, Boot Guard, and Control-Flow Enforcement Technology help protect data and workloads across the server lifecycle.

## Technical Specifications

### Product Specifications

| Feature | Value |
|---|---|
| User SKU | INTL-Platinum-8460H |
| Intel ordering code | PK8071305075001 |
| Intel Spec Code | SRM7K |
| Processor model | Intel Xeon Platinum 8460H Processor |
| Product collection | 4th Gen Intel Xeon Scalable Processors |
| Code name | Products formerly Sapphire Rapids |
| Vertical segment | Server |
| Processor number | 8460H |
| Lithography | Intel 7 |
| Marketing status | Launched |
| Launch date | Q1 2023 |
| Use conditions | Server / Enterprise |
| Total cores | 40 |
| Total threads | 80 |

| Feature | Value |
|---|---|
| Processor base frequency | 2.20 GHz |
| Max turbo frequency | 3.80 GHz |
| Cache | 105 MB |
| Intel UPI speed | 16 GT/s |
| Max UPI links | 4 |
| TDP | 330 W |
| Scalability | S8S |
| Sockets supported | FCLGA4677 |
| Package carrier | E1A |
| Package size | 77.5 mm x 56.5 mm |
| DTS max | 97 °C |
| TCASE | 76 °C |
| Max memory size | Up to 4 TB, depending on memory type and platform configuration |
| Memory types | Up to DDR5-4800 MT/s 1DPC; up to DDR5-4400 MT/s 2DPC |
| Max memory channels | 8 |
| ECC memory supported | Yes |
| PCI Express revision | 5.0 |
| Max PCI Express lanes | 80 |
| Intel On Demand Activation Model | No |
| Intel Data Streaming Accelerator | 4 default devices |
| Intel In-memory Analytics Accelerator | 4 default devices |
| Intel Advanced Matrix Extensions | Yes |
| Intel Speed Select Technology - Core Power | Yes |
| Intel Speed Select Technology - Turbo Frequency | Yes |
| Intel Speed Select Technology - Base Frequency | Yes |
| Intel DL Boost | Yes |
| High Priority Cores | 12 |
| High Priority Core Frequency | 2.40 GHz |
| Low Priority Cores | 28 |

| Feature | Value |
|---|---|
| Low Priority Core Frequency | 2.00 GHz |
| Intel Resource Director Technology | Yes |
| Intel Speed Shift Technology | Yes |
| Intel Turbo Boost Technology | 2.0 |
| Intel Hyper-Threading Technology | Yes |
| Intel Transactional Synchronization Extensions | Yes |
| Intel 64 | Yes |
| Instruction set extensions | Intel AMX, Intel SSE4.2, Intel AVX, Intel AVX2, Intel AVX-512 |
| AVX-512 FMA units | 2 |
| Intel Crypto Acceleration | Yes |
| Intel QuickAssist Software Acceleration | Yes |
| Intel Platform Firmware Resilience | Yes |
| Intel Control-Flow Enforcement Technology | Yes |
| Intel Total Memory Encryption | Yes |
| Intel AES New Instructions | Yes |
| Intel SGX | Yes with Intel SPS |
| Default maximum SGX EPC size | 512 GB |
| Intel OS Guard | Yes |
| Intel Trusted Execution Technology | Yes |
| Execute Disable Bit | Yes |
| Intel Boot Guard | Yes |
| Intel Run Sure Technology | Yes |
| Mode-based Execute Control | Yes |
| Intel Virtualization Technology | VT-x, VT-d, and VT-x with EPT |
| Shipping media | Tray |
| Stepping | E5 |

## Product Comparison

| Feature | Intel Xeon Platinum 8460H / PK8071305075001 | Intel Xeon Platinum 8458P | Intel Xeon Platinum 8454H |
|---|---|---|---|
| Processor family | 4th Gen Intel Xeon Scalable | 4th Gen Intel Xeon Scalable | 4th Gen Intel Xeon Scalable |
| Product positioning | 40-core high-performance Platinum server processor | 44-core high-frequency Platinum server processor | 32-core Platinum server processor |
| Total cores | 40 | 44 | 32 |
| Total threads | 80 | 88 | 64 |
| Processor base frequency | 2.20 GHz | 2.70 GHz | 2.10 GHz |
| Max turbo frequency | 3.80 GHz | 3.80 GHz | 3.40 GHz |
| Cache | 105 MB | 82.5 MB | 82.5 MB |
| TDP | 330 W | 350 W | 270 W |
| Max memory size | Up to 4 TB, depending on memory type | Up to 4 TB, depending on memory type | Up to 4 TB, depending on memory type |
| Memory channels | 8 | 8 | 8 |
| PCI Express lanes | 80 | 80 | 80 |
| Intel AMX | Yes | Yes | Yes |
| Best-fit role | High-core-count enterprise and data-center server | High-frequency, high-core-count enterprise and data-center server | 32-core balanced enterprise and data-center server |

## Accessories

| Category | Accessories |
|---|---|
| Included Accessories | - Intel Xeon Platinum 8460H processor (tray shipping media) |
| Optional Accessories | - FCLGA4677-compatible server board and CPU cooling solution<br>- DDR5 ECC memory and PCIe 5.0 network, storage, or accelerator adapters |

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## References

[1] Intel. (n.d.). Intel Xeon Platinum 8460H Processor Specifications. Accessed: 2026-09-28. https://www.intel.com/content/www/us/en/products/sku/231744/intel-xeon-platinum-8460h-processor-105m-cache-2-20-ghz/specifications.html

[2] Intel. (n.d.). Intel Xeon Platinum 8460H Processor Ordering and Spec Information. Accessed: 2026-09-28. https://www.intel.com/content/www/us/en/products/sku/231744/intel-xeon-platinum-8460h-processor-105m-cache-2-20-ghz/ordering.html