

Essentials

Product Collection	4th Gen Intel® Xeon® Scalable Processors
Code Name	Products formerly Sapphire Rapids
Vertical Segment	Server
Processor Number [?]	6448H
Lithography [?]	Intel 7
Recommended Customer Price [?]	\$3658.00

CPU Specifications

Total Cores [?]	32
Total Threads [?]	64
Max Turbo Frequency [?]	4.10 GHz
Processor Base Frequency [?]	2.40 GHz
Cache [?]	60 MB
Intel® UPI Speed	16 GT/s
Max # of UPI Links [?]	3
TDP [?]	250 W

Intel® Speed Select Technology - Performance Profile
(Intel® SST-PP)

Config	Active Cores	Base Frequency	TDP	Description
6448H(0)	32	2.4	250	
6448H(1)	32	2.1	225	
6448H(2)	32	1.9	205	

Supplemental Information

Marketing Status	Launched
Launch Date [?]	Q1'23
Servicing Status [?]	Baseline Servicing
Embedded Options Available [?]	No
Use Conditions [?]	Server/Enterprise

Memory Specifications

Max Memory Size (dependent on memory type) [?]	4 TB
Memory Types [?]	Up to DDR5 4800 MT/s 1DPC Up to DDR5 4400 MT/s 2DPC
Max # of Memory Channels [?]	8
ECC Memory Supported [†] [?]	Yes

Expansion Options

Scalability	S4S
PCI Express Revision [?]	5
Max # of PCI Express Lanes [?]	80

Package Specifications

Sockets Supported [?]	FCLGA4677
Package Carrier	E1B
DTS Max	98 °C
T _{CASE} [?]	83
Package Size	77.5mm x 56.5mm

Advanced Technologies

Intel® On Demand Activation Model [?]	Yes
Intel® QuickAssist Technology (QAT)	2 default devices
Intel® Dynamic Load Balancer (DLB)	2 default devices
Intel® Data Streaming Accelerator (DSA)	1 default devices
Intel® In-memory Analytics Accelerator (IAA)	1 default devices
Intel® Advanced Matrix Extensions (AMX)	Yes
Intel® Speed Select Technology – Core Power [?]	Yes
Intel® Speed Select Technology – Turbo Frequency [?]	Yes
Intel® Deep Learning Boost (Intel® DL Boost) on CPU [?]	Yes
Intel® Speed Select Technology - Performance Profile [?]	Yes
Intel® Speed Select Technology - Base Frequency [?]	Yes
High Priority Cores	12
High Priority Core Frequency	2.60 GHz
Intel® Resource Director Technology (Intel® RDT) [?]	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
# of AVX-512 FMA Units [?]	2

Security & Reliability

Intel® Software Guard Extensions (Intel® SGX) [?]	Yes with Intel® SPS
Default Maximum Enclave Page Cache (EPC) Size for Intel® SGX	512 GB
Intel® Crypto Acceleration [?]	Yes
Intel® QuickAssist Software Acceleration	Yes
Intel® Platform Firmware Resilience Support	Yes
Intel® Control-Flow Enforcement Technology [?]	Yes
Intel® Total Memory Encryption [?]	Yes
Intel® AES New Instructions [?]	Yes
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 (MBEC) [?]	Yes
Intel® Virtualization Technology (VT-x) [†] [?]	Yes
Intel® Virtualization Technology for Directed I/O (VT-d) [†] [?]	Yes
Intel® VT-x with Extended Page Tables (EPT) [†] [?]	Yes