

Intel Xeon Gold 6438M processor 2.2 GHz 60 MB

Brand : Intel

Product family: Xeon

Product code:
PK8071305122301

Product name : Gold 6438M

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Intel Xeon Gold 6438M. Processor family: Intel® Xeon® Gold, Processor socket: LGA 4677 (Socket E), Processor manufacturer: Intel. Memory channels: Octa-channel, Maximum internal memory supported by processor: 6 TB, Memory types supported by processor: DDR4-SDRAM. Market segment: Server, Use conditions: Server/Enterprise, Supported instruction sets: AMX, SSE4.2, AVX, AVX 2.0, AVX-512.

Maximum Enclave Size Support for Intel® SGX: 128 GB, Intel® Data Streaming Accelerator (DSA): 1 default devices, Intel® In-memory Analytics Accelerator (IAA): 1 default devices. Processor package size: 77.5 x 56.5 mm



Processor		Processor special features	
Processor manufacturer *	Intel	Intel® Total Memory Encryption	✓
Processor generation	Intel Xeon Scalable 4th Gen	Intel® Control-flow Enforcement Technology (CET)	✓
Processor model *	6438M	Intel® Crypto Acceleration	✓
Processor base frequency *	2.2 GHz	Intel® Platform Firmware Resilience Support	✓
Processor family *	Intel® Xeon® Gold	Maximum Enclave Size Support for Intel® SGX	128 GB
Processor cores *	32	Intel VT-x with Extended Page Tables (EPT)	✓
Processor socket *	LGA 4677 (Socket E)	Intel® OS Guard	✓
Processor threads	64	Intel Software Guard Extensions (Intel SGX)	✓
System bus rate	16 GT/s	Intel 64	✓
Processor operating modes *	64-bit	Intel Virtualization Technology (VT-x)	✓
Processor boost frequency	3.9 GHz	Intel Virtualization Technology for Directed I/O (VT-d)	✓
High priority cores	12	AVX-512 Fused Multiply-Add (FMA) units	2
High priority core frequency	2.3 GHz	Intel® Boot Guard	✓
Low priority cores	20	Intel® Deep Learning Boost (Intel® DL Boost)	✓
Low priority core frequency	1.8 GHz	Intel® Speed Select technology - Performance Profile (Intel® SST-PP)	✓
Processor cache	60 MB	Intel® Resource Director Technology (Intel® RDT)	✓
Thermal Design Power (TDP)	205 W	Intel® Run Sure Technology	✓
Box *	✗	Mode-based Execute Control (MBE)	✓
Stepping	S3	Intel® Optane™ DC Persistent Memory Supported	✓
Processor codename	Sapphire Rapids	Intel® Speed Select Technology - Base Frequency (Intel® SST-BF)	✓
Processor ARK ID	232398	Intel® QuickAssist Software Acceleration	✓
Memory		Intel® On Demand Feature Activation	✓
Maximum internal memory supported by processor	6 TB	Intel® Data Streaming Accelerator (DSA)	1 default devices
Memory types supported by processor	DDR4-SDRAM	Intel® In-memory Analytics Accelerator (IAA)	1 default devices
Memory channels *	Octa-channel	Intel® Advanced Matrix Extensions (AMX)	✓
ECC	✓		
Graphics			
On-board graphics card *	✗		
Discrete graphics card *	✗		
On-board graphics card model *	Not available		
Discrete graphics card model *	Not available		
Features			
Execute Disable Bit	✓		
Market segment	Server		
Use conditions	Server/Enterprise		
Maximum number of PCI Express lanes	80		

Features		Operational conditions	
PCI Express slots version	5.0	Tcase	85 °C
Supported instruction sets	AMX, SSE4.2, AVX, AVX 2.0, AVX-512	DTS Max	97 °C
Scalability	2S	Technical details	
Embedded options available	✘	Launch date	Q1'23
Export Control Classification Number (ECCN)	5A992C	Status	Launched
Commodity Classification		Memory speed (max)	4800 MHz
Automated Tracking System (CCATS)	G180729	Number of UPI links	3
Processor special features		Package carrier	E1B
Intel® Hyper Threading Technology (Intel® HT Technology)	✓	Logistics data	
Intel® Turbo Boost Technology	2.0	Harmonized System (HS) code	8542310001
Intel® AES New Instructions (Intel® AES-NI)	✓	Weight & dimensions	
Intel Trusted Execution Technology	✓	Processor package size	77.5 x 56.5 mm
Intel® Speed Shift Technology	✓	Other features	
Intel® Transactional Synchronization Extensions	✓	Maximum internal memory	4 TB



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