

## Intel Xeon Gold 6438N processor 2 GHz 60 MB

Brand : Intel

Product family: Xeon

Product code:  
PK8071305122101

Product name : Gold 6438N

PK8071305122101

Intel Xeon Gold 6438N. 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® QuickAssist Technology (QAT): 2 default devices, Intel® Dynamic Load Balancer (DLB): 2 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 *	6438N	Intel® Crypto Acceleration	✓
Processor base frequency *	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	3.6 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	2.2 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	232397	Intel® QuickAssist Software Acceleration	✓
<b>Memory</b>		Intel® On Demand Feature Activation	✓
Maximum internal memory supported by processor	6 TB	Intel® QuickAssist Technology (QAT)	2 default devices
Memory types supported by processor	DDR4-SDRAM	Intel® Dynamic Load Balancer (DLB)	2 default devices
Memory channels *	Octa-channel	Intel® Data Streaming Accelerator (DSA)	1 default devices
ECC	✓	Intel® Advanced Matrix Extensions (AMX)	✓
<b>Graphics</b>			
On-board graphics card *	✗		
Discrete graphics card *	✗		
On-board graphics card model *	Not available		
Discrete graphics card model *	Not available		
<b>Features</b>			
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	96 °C
Scalability	2S	Technical details	
Embedded options available	✓	Launch date	Q1'23
Export Control Classification Number (ECCN)	5A992C	Status	Launched
Commodity Classification		Supported memory types	DDR4-SDRAM
Automated Tracking System (CCATS)	G180729	Memory speed (max)	4800 MHz
Processor special features		Number of UPI links	3
Intel® Hyper Threading Technology (Intel® HT Technology)	✓	Package carrier	E1B
Intel® Turbo Boost Technology	2.0	Logistics data	
Intel® AES New Instructions (Intel® AES-NI)	✓	Harmonized System (HS) code	8542310001
Intel Trusted Execution Technology	✓	Weight & dimensions	
Intel® Speed Shift Technology	✓	Processor package size	77.5 x 56.5 mm
Intel® Transactional Synchronization Extensions	✓	Other features	
		Maximum internal memory	4 TB

Disclaimer. The information published here (the "Information") is based on sources that can be considered reliable, typically the manufacturer, but this Information is provided "AS IS" and without guarantee of correctness or completeness. The Information is only indicative and can be changed at any time without notification. No rights can be based on the Information. Suppliers or aggregators of this Information do not accept any liability with regard to the content of (web)pages and other documents, including its Information. The publisher of the Information can not be held liable for the content of 3rd party websites that are linking this Information or are linked to from this Information. You as the User of the Information are solely responsible for the choice and usage of this Information. You are not entitled to transfer, copy or otherwise multiply or distribute the Information. You are obliged to follow the directions of the copyright owner(s) with regard to the use of the Information. Exclusively Dutch law is applicable. With regard to price and stock data on the site, the publisher followed a number of starting points, which are not necessarily relevant for your private or business circumstances. Therefore, the price and stock data are only indicative and are subject to changes. You are personally responsible for the way you use and apply this information. As a user of the Information or sites or documents in which this Information is included, you will adhere to standard fair use including avoidance of spamming, ripping, intellectual-property violations, privacy violations, and any other illegal activity.

Publication date: 24-JAN-2024. Prints or copies of Information are only valid on the printed Publication date