

Intel Xeon Gold 6421N processor 1.8 GHz 60 MB

Brand : Intel

Product family: Xeon

Product code:
PK8071305122001

Product name : Gold 6421N

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Intel Xeon Gold 6421N. 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: DDR5-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. Processor package size: 77.5 x 56.5 mm



Processor		Processor special features	
Processor manufacturer *	Intel	Intel® Transactional Synchronization Extensions	✓
Processor generation	Intel Xeon Scalable 4th Gen	Intel® Total Memory Encryption	✓
Processor model *	6421N	Intel® Control-flow Enforcement Technology (CET)	✓
Processor base frequency *	1.8 GHz	Intel® Crypto Acceleration	✓
Processor family *	Intel® Xeon® Gold	Intel® Platform Firmware Resilience Support	✓
Processor cores *	32	Maximum Enclave Size Support for Intel® SGX	128 GB
Processor socket *	LGA 4677 (Socket E)	Intel VT-x with Extended Page Tables (EPT)	✓
Processor threads	64	Intel® OS Guard	✓
Processor operating modes *	64-bit	Intel Software Guard Extensions (Intel SGX)	✓
Processor boost frequency	3.6 GHz	Intel 64	✓
Processor cache	60 MB	Intel Virtualization Technology (VT-x)	✓
Thermal Design Power (TDP)	185 W	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Box *	✗	AVX-512 Fused Multiply-Add (FMA) units	2
Stepping	S3	Intel® Boot Guard	✓
Processor codename	Sapphire Rapids	Intel® Deep Learning Boost (Intel® DL Boost)	✓
Processor ARK ID	232395	Intel® Speed Select technology - Performance Profile (Intel® SST-PP)	✓
Memory		Intel® Resource Director Technology (Intel® RDT)	✓
Maximum internal memory supported by processor	6 TB	Intel® Run Sure Technology	✓
Memory types supported by processor	DDR5-SDRAM	Mode-based Execute Control (MBE)	✓
Memory channels *	Octa-channel	Intel® Optane™ DC Persistent Memory Supported	✓
ECC	✓	Intel® QuickAssist Software Acceleration	✓
Graphics		Intel® On Demand Feature Activation	✓
On-board graphics card *	✗	Intel® Data Streaming Accelerator (DSA)	1 default devices
Discrete graphics card *	✗	Operational conditions	
On-board graphics card model *	Not available	Tcase	85 °C
Discrete graphics card model *	Not available	DTS Max	95 °C
Features			
Execute Disable Bit	✓		
Market segment	Server		
Use conditions	Server/Enterprise		
Maximum number of PCI Express lanes	80		
PCI Express slots version	5.0		
Supported instruction sets	AMX, SSE4.2, AVX, AVX 2.0, AVX-512		
Scalability	1S		
Embedded options available	✓		

Features		Technical details	
Export Control Classification Number (ECCN)	5A992C	Launch date	Q1'23
Commodity Classification Automated Tracking System (CCATS)	G180729	Status	Launched
		Memory speed (max)	4400 MHz
		Package carrier	E1B
Processor special features		Logistics data	
Intel® Hyper Threading Technology (Intel® HT Technology)	✓	Harmonized System (HS) code	8542310001
Intel® Turbo Boost Technology	2.0	Weight & dimensions	
Intel® AES New Instructions (Intel® AES-NI)	✓	Processor package size	77.5 x 56.5 mm
Intel Trusted Execution Technology	✓	Other features	
Intel® Speed Shift Technology	✓	Maximum internal memory	4 TB

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