

Intel Core i9-12900KF processor 30 MB Smart Cache Box

Brand : Intel

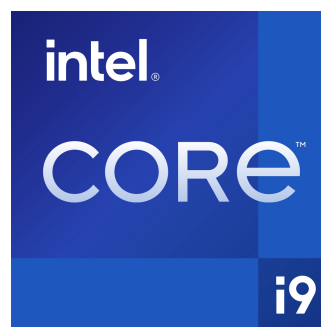
Product family: Core

Product code:
BX8071512900KF

Product name : Intel® Core™
i9-12900KF Processor (30M
Cache, up to 5.20 GHz)

Intel® Core™ i9-12900KF Processor (30M Cache, up to 5.20 GHz)

Intel Core i9-12900KF. Processor family: Intel® Core™ i9, Processor socket: LGA 1700, Processor manufacturer: Intel. Memory channels: Dual-channel, Maximum internal memory supported by processor: 128 GB, Memory types supported by processor: DDR4-SDRAM, DDR5-SDRAM. Market segment: Desktop, Use conditions: PC/Client/Tablet, PCI Express slots version: 5.0, 4.0. Intel® Turbo Boost Max Technology 3.0 frequency: 5.2 GHz. Package type: Retail box



Processor		Features	
Processor manufacturer *	Intel	CPU configuration (max)	1
Processor generation	12th gen Intel® Core™ i9	Embedded options available	✗
Processor model *	i9-12900KF	Thermal solution specification	PCG 2020A
Processor family *	Intel® Core™ i9	Harmonized System (HS) code	8542310001
Processor cores *	16	Export Control Classification Number (ECCN)	5A992CN3
Processor socket *	LGA 1700	Commodity Classification Automated Tracking System (CCATS)	G167599
Component for	PC	Processor special features	
Processor threads	24	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Processor operating modes *	64-bit	Intel® Turbo Boost Technology	2.0
Performance cores	8	Intel® AES New Instructions (Intel® AES-NI)	✓
Efficient cores	8	Enhanced Intel SpeedStep Technology	✓
Processor boost frequency	5.2 GHz	Intel® Speed Shift Technology	✓
Performance-core boost frequency	5.1 GHz	Intel® Turbo Boost Max Technology 3.0 frequency	5.2 GHz
Performance-core base frequency	3.2 GHz	Intel® Control-flow Enforcement Technology (CET)	✓
Efficient-core boost frequency	3.9 GHz	Intel® Thread Director	✓
Efficient-core base frequency	2.4 GHz	Intel VT-x with Extended Page Tables (EPT)	✓
Processor cache	30 MB	Intel® Secure Key	✓
Processor cache type	Smart Cache	Intel® OS Guard	✓
Box *	✓	Intel 64	✓
Processor base power	125 W	Intel Virtualization Technology (VT-x)	✓
Maximum turbo power	241 W	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Bus type	DMI4	Intel Turbo Boost Max Technology 3.0	✓
Maximum number of DMI lanes	8	Intel® Optane™ Memory Ready	✓
Memory bandwidth supported by processor (max)	76.8 GB/s	Intel® Boot Guard	✓
Processor codename	Alder Lake	Intel® Deep Learning Boost (Intel® DL Boost)	✓
Memory		Intel® Volume Management Device (VMD)	✓
Maximum internal memory supported by processor	128 GB	Mode-based Execute Control (MBE)	✓
Memory types supported by processor	DDR4-SDRAM, DDR5-SDRAM		
Memory channels *	Dual-channel		
Memory bandwidth (max)	76.8 GB/s		
Graphics			
On-board graphics card *	✗		
Discrete graphics card *	✗		
On-board graphics card model *	Not available		
Discrete graphics card model *	Not available		

Features		Operational conditions	
Execute Disable Bit	✓	Tjunction	100 °C
Idle States	✓	Packaging data	
Thermal Monitoring Technologies	✓	Package type	Retail box
Market segment	Desktop	Technical details	
Use conditions	PC/Client/Tablet	Target market	Gaming, Content Creation
Maximum number of PCI Express lanes	20	Launch date	Q4'21
PCI Express slots version	5.0, 4.0	Status	Launched
PCI Express configurations	1x16+1x4, 2x8+1x4	Weight & dimensions	
Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0	Processor package size	45 x 37.5 mm
Scalability	1S	Other features	
		Maximum internal memory	128 GB



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