

Intel Core i9-13900KF processor 36 MB Smart Cache Box

Brand : Intel

Product family: Core

Product code:
BX8071513900KF

Product name : i9-13900KF



Boxed Intel® Core™ i9-13900KF Processor (36M Cache, up to 5.80 GHz) FC-LGA16A
 Intel Core i9-13900KF. Processor family: Intel® Core™ i9, Processor socket: LGA 1700, Processor manufacturer: Intel. Memory channels: Dual-channel, Maximum internal memory supported by processor: 192 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: 5.7 GHz, Intel® Thermal Velocity Boost Frequency: 5.8 GHz. Package type: Retail box

Processor		Features	
Processor manufacturer *	Intel	Direct Media Interface (DMI) Revision	4.0
Processor generation	13th gen Intel® Core™ i9	Export Control Classification Number (ECCN)	5A992C
Processor model *	i9-13900KF	Commodity Classification Automated Tracking System (CCATS)	740.17B1
Processor family *	Intel® Core™ i9	Processor special features	
Processor cores *	24	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Processor socket *	LGA 1700	Intel® Turbo Boost Technology	2.0
Processor threads	32	Intel® AES New Instructions (Intel® AES-NI)	✓
Processor operating modes *	64-bit	Enhanced Intel SpeedStep Technology	✓
Performance cores	8	Intel® Speed Shift Technology	✓
Efficient cores	16	Intel® Thermal Velocity Boost	✓
Processor boost frequency	5.8 GHz	Intel® Adaptive Boost Technology	✓
Performance-core boost frequency	5.4 GHz	Intel® Turbo Boost Max Technology 3.0 frequency	5.7 GHz
Performance-core base frequency	3 GHz	Intel® Gaussian & Neural Accelerator (Intel® GNA) 3.0	✓
Efficient-core boost frequency	4.3 GHz	Intel® Thermal Velocity Boost Frequency	5.8 GHz
Efficient-core base frequency	2.2 GHz	Intel® Control-flow Enforcement Technology (CET)	✓
Processor cache	36 MB	Intel® Thread Director	✓
Processor cache type	Smart Cache	Intel VT-x with Extended Page Tables (EPT)	✓
Box *	✓	Intel® Secure Key	✓
Cooler included *	✗	Intel® OS Guard	✓
Processor base power	125 W	Intel 64	✓
Maximum turbo power	253 W	Intel Virtualization Technology (VT-x)	✓
Stepping	B0	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® Boot Guard	✓
Memory bandwidth supported by processor (max)	89.6 GB/s	Intel® Deep Learning Boost (Intel® DL Boost)	✓
Processor codename	Raptor Lake	Intel® Volume Management Device (VMD)	✓
Processor ARK ID	230497	Mode-based Execute Control (MBE)	✓
Memory		Intel® Standard Manageability (ISM)	✓
Maximum internal memory supported by processor	192 GB		
Memory types supported by processor	DDR4-SDRAM, DDR5-SDRAM		
Memory channels *	Dual-channel		
Non-ECC	✓		
Memory bandwidth (max)	89.6 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	✓	Logistics data	
Thermal Monitoring Technologies	✓	Harmonized System (HS) code	8542310001
Market segment	Desktop	Packaging data	
Use conditions	PC/Client/Tablet	Package type	Retail box
Maximum number of PCI Express lanes	20	Technical details	
PCI Express slots version	5.0, 4.0	Target market	Gaming, Content Creation
PCI Express configurations	1x16+1x4, 2x8+1x4	Launch date	Q4'22
Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0	Status	Launched
Scalability	1S	Other features	
CPU configuration (max)	1	L2 cache	32768 KB
Embedded options available	✗	Maximum internal memory	192 GB



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