

Intel Core i9-14900KF processor 36 MB Smart Cache

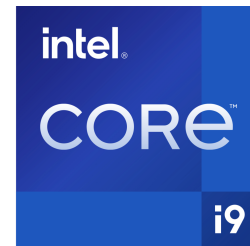
Brand : Intel

Product family: Core

Product code:
CM8071505094018

Product name : i9-14900KF

Intel® Core™ i9 processor 14900KF (36M Cache, up to 6.00 GHz) FC-LGA16A, Tray
Intel Core i9-14900KF. 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: 4.0, 5.0. Intel® Turbo Boost Max Technology 3.0 frequency: 5.8 GHz, Intel® Thermal Velocity Boost Frequency: 6 GHz. Processor package size: 45 x 37.5 mm



Processor		Features	
Processor manufacturer *	Intel	Direct Media Interface (DMI) Revision	4.0
Processor generation	Intel Core i9-14xxx	Export Control Classification Number (ECCN)	5A992C
Processor model *	i9-14900KF	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	6 GHz	Intel® Adaptive Boost Technology	✓
Performance-core boost frequency	5.6 GHz	Intel® Turbo Boost Max Technology 3.0 frequency	5.8 GHz
Performance-core base frequency	3.2 GHz	Intel® Gaussian & Neural Accelerator (Intel® GNA) 3.0	✓
Efficient-core boost frequency	4.4 GHz	Intel® Thermal Velocity Boost Frequency	6 GHz
Efficient-core base frequency	2.4 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	✓
Processor base power	125 W	Intel® OS Guard	✓
Maximum turbo power	253 W	Intel 64	✓
Stepping	B0	Intel Virtualization Technology (VT-x)	✓
Maximum number of DMI lanes	8	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Memory bandwidth supported by processor (max)	89.6 GB/s	Intel Turbo Boost Max Technology 3.0	✓
Processor codename	Raptor Lake	Intel® Boot Guard	✓
Processor ARK ID	236787	Intel® Deep Learning Boost (Intel® DL Boost)	✓
Memory		Intel® Volume Management Device (VMD)	✓
Maximum internal memory supported by processor	192 GB	Mode-based Execute Control (MBE)	✓
Memory types supported by processor	DDR4-SDRAM, DDR5-SDRAM	Intel® Standard Manageability (ISM)	✓
Memory channels *	Dual-channel	Graphics	
Memory bandwidth (max)	89.6 GB/s	On-board graphics card *	✗
Graphics		Discrete graphics card *	✗
On-board graphics card model *	Not available	On-board graphics card model *	Not available
Discrete graphics card model *	Not available	Features	
Execute Disable Bit	✓	Execute Disable Bit	✓
Idle States	✓	Idle States	✓
Thermal Monitoring Technologies	✓	Thermal Monitoring Technologies	✓

Features		Operational conditions	
Market segment	Desktop	Tjunction	100 °C
Use conditions	PC/Client/Tablet	Logistics data	
Maximum number of PCI Express lanes	20	Harmonized System (HS) code	8542310001
PCI Express slots version	4.0, 5.0	Technical details	
PCI Express configurations	1x16+1x4, 2x8+1x4	Launch date	Q4'23
Supported instruction sets	AVX 2.0, SSE4.1, SSE4.2	Status	Launched
Scalability	1S	Weight & dimensions	
CPU configuration (max)	1	Processor package size	45 x 37.5 mm
Embedded options available	✘	Other features	
Thermal solution specification	PCG 2020A	L2 cache	32768 KB
		Maximum internal memory	192 GB



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