

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

Brand: Intel Product family: Core Product code: BX8071512900F

Product name: i9-12900F

Boxed Intel® Core™ i9-12900F Processor (30M Cache, up to 5.10 GHz) FC-LGA16A Intel Core i9-12900F. 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: 4.0, 5.0. Intel® Turbo Boost Max Technology 3.0 frequency: 5.1 GHz. Package type: Retail box







Processor manufacturer* Intel Processor generation 12th gen Intel® Core® i9 Revision Revi
Processor generation Processor model * 9-12900F Harmonized System (HS) code 85423119 Processor family * Intel® Core™ i9 Export Control Classification SA992CN3 Number (ECCN) Number (ECCN) Processor cores * 16 Commodity Classification Automated Tracking System G167599 CCCATS) CCCATS CCCATS CCCATS CCCATS CCCATS Processor operating modes * 64-bit Processor operating modes * 8 Intel® Hyper Threading Technology Processor operating modes * 8 Intel® Hyper Threading Technology Processor operating modes * 8 Intel® Hyper Threading Technology Processor operating modes * 8 Intel® Hyper Threading Technology Processor operating modes * 8 Intel® Ats New Instructions (Intel® + Trackinology) Processor operating modes * 9 Processor operating modes *
Processor family * Intel® Core * i9 Number (ECCN) Number (ECCN) Processor cores * 16 Processor socket * LGA 1700 Automated Tracking System (CCATS) Processor threads 24 (CCATS) Processor special features Performance cores 8 Efficient cores 8 Intel® Hyper Threading Technology (Intel® Hyper Turbo Boost Technology) Processor boost frequency 5 GHz Intel® Turbo Boost Technology 2.0 Performance-core boost frequency 5 GHz Intel® AES New Instructions (Intel® Performance-core boost frequency 2.4 GHz AES-NI) Efficient-core boost frequency 3.8 GHz Intel® AES New Instructions (Intel® Performance-core boost frequency 1.8 GHz Intel® AES New Instructions (Intel® Performance-core boost frequency 1.8 GHz Intel® Speed Shift Technology 7 Processor cache 30 MB Intel® Speed Shift Technology 7 Processor cache type Smart Cache 3.0 frequency 3.0 frequency 3.0 frequency 3.0 frequency 3.0 frequency 3.0 frequency 4 Box *
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Processor codename Alder Lake Intel® OS Guard Intel 64 Intel Virtualization Technology (VT- x) Supported by processor 128 GB
Memory Intel 64 Intel Virtualization Technology (VT- x) Supported by processor 128 GB Intel 64 Intel Virtualization Technology (VT- x)
Maximum internal memory Supported by processor 128 GB 128 GB x)
Maximum internal memory 128 GB x)
supported by processor
Memory types supported by DDR4-SDRAM DDR5-SDRAM Directed I/O (VT-d)
Memory channels * Dual-channel Intel Turbo Boost Max Technology 3.0
Memory bandwidth (max) 76.8 GB/s Intel® Optane™ Memory Ready ✓
Graphics Intel® Boot Guard ✓
On-board graphics card * Intel® Deep Learning Boost (Intel®
Discrete graphics card *
On-board graphics card model * Not available Intel® Volume Management Device (VMD)
Discrete graphics card model * Not available Mode-based Execute Control (MBE) ✓
Features Intel® Standard Manageability (ISM) ✓
Execute Disable Bit ✓ Operational conditions
Idle States Tjunction 100 °C
Thermal Monitoring Technologies

Features		Packaging data	
Market segment	Desktop	Package type	Retail box
Use conditions	,	Technical details	
Maximum number of PCI Express lanes		Target market Launch date Status	Gaming, Content Creation Q1'22
PCI Express slots version	4.0, 5.0		
PCI Express configurations	1x16+1x4, 2x8+1x4		Launched
Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0 1S 1	Weight & dimensions	
Scalability		Processor package size	45 x 37.5 mm
CPU configuration (max)		Other features	
Embedded options available	×	Other leatures	
		Maximum internal memory	128 GB









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