

Intel Core i7-12700F processor 25 MB Smart Cache Box

Brand: Intel Product family: Core Product code: BX8071512700F

Product name: i7-12700F

Boxed Intel® Core™ i7-12700F Processor (25M Cache, up to 4.90 GHz) FC-LGA16A Intel Core i7-12700F. Processor family: Intel® Core™ i7, 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: 4.9 GHz. Package type: Retail box







Processor		Features	
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Processor manufacturer * Processor generation	Intel 12th gen Intel® Core™ i7	Direct Media Interface (DMI) Revision	4.0
Processor model *	i7-12700F	Harmonized System (HS) code	85423119
Processor family *	Intel® Core™ i7	Export Control Classification	E A O O O C N O
Processor cores *	12	Number (ECCN)	5A992CN3
Processor socket *	LGA 1700	Commodity Classification	C1 C7 F 0 0
Processor threads	20	Automated Tracking System (CCATS)	G167599
Processor operating modes *	64-bit		
Performance cores	8	Processor special features	
Efficient cores	4	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Processor boost frequency	4.9 GHz	Intel® Turbo Boost Technology	2.0
Performance-core boost frequency	4.8 GHz	Intel® AES New Instructions (Intel®	
Performance-core base frequency	2.1 GHz	AES-NI)	✓
Efficient-core boost frequency	3.6 GHz	Enhanced Intel SpeedStep	√
Efficient-core base frequency	1.6 GHz	Technology	
Processor cache	25 MB	Intel® Speed Shift Technology	✓
Processor cache type Box *	Smart Cache ✓	Intel® Turbo Boost Max Technology 3.0 frequency	4.9 GHz
Processor base power	65 W	Intel® Gaussian & Neural Accelerator (Intel® GNA) 3.0	✓
Maximum turbo power	180 W	Intel® Control-flow Enforcement	
Bus type	DMI4	Technology (CET)	✓
Maximum number of DMI lanes	8	Intel® Thread Director	✓
Memory bandwidth supported by processor (max)	76.8 GB/s	Intel VT-x with Extended Page Tables (EPT)	✓
Processor codename	Alder Lake	Intel® Secure Key	✓
Memory		Intel® OS Guard	✓
Maximum internal memory		Intel 64	✓
supported by processor	128 GB	Intel Virtualization Technology (VT-x)	✓
Memory types supported by processor	DDR4-SDRAM, DDR5-SDRAM	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Memory channels * Memory bandwidth (max)	Dual-channel 76.8 GB/s	Intel Turbo Boost Max Technology 3.0	✓
Graphics		Intel® Optane™ Memory Ready	✓
On-board graphics card *	×	Intel® Boot Guard	✓
Discrete graphics card *	×	Intel® Deep Learning Boost (Intel® DL Boost)	✓
On-board graphics card model * Discrete graphics card model *	Not available Not available	Intel® Volume Management Device (VMD)	✓
Features		Mode-based Execute Control (MBE)	✓
Execute Disable Bit	1	Intel® Standard Manageability (ISM)	✓
Idle States	√	Operational conditions	
Thermal Monitoring Technologies	√	Tjunction	100 °C
Market segment Use conditions	Desktop PC/Client/Tablet	Packaging data	
		Package type	Retail box
		-	

Features		Technical details	
Maximum number of PCI Express lanes	ress 20 5.0, 4.0 1x16+1x4, 2x8+1x4 SSE4.1, SSE4.2, AVX 2.0 1S 1	Target market Launch date	Gaming, Content Creation Q1'22
PCI Express slots version		Status	Launched
PCI Express configurations Supported instruction sets		Weight & dimensions	
Scalability		Processor package size	45 x 37.5 mm
CPU configuration (max)		Other features	
mbedded options available	Maximum internal memory	128 GB	







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