

Intel Core i7-12700 processor 25 MB Smart Cache Box

Brand : Intel

Product family: Core

Product code: BX8071512700

Product name : i7-12700

Boxed Intel® Core™ i7-12700 Processor (25M Cache, up to 4.90 GHz) FC-LGA16A Intel Core i7-12700. 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. On-board graphics card model: Intel UHD Graphics 770, On-board graphics card outputs supported: Embedded DisplayPort (eDP) 1.4b, DisplayPort 1.4a, HDMI 2.1, On-board graphics card base frequency: 300 MHz. Market segment: Desktop, Use conditions: PC/Client/Tablet, Workstation, PCI Express slots version: 5.0, 4.0. Intel® Turbo Boost Max Technology 3.0 frequency: 4.9 GHz





Processor		Features	
Processor manufacturer *	Intel	Direct Media Interface (DMI)	4.0
Processor generation	12th gen Intel® Core™ i7	Revision	
Processor model *	i7-12700	Harmonized System (HS) code	85423119
Processor family *	Intel® Core™ i7	Export Control Classification Number (ECCN)	5A992CN3
Processor cores *	12	Commodity Classification	
Processor socket *	LGA 1700	Automated Tracking System	G167599
Processor threads	20	(CCATS)	
Processor operating modes *	64-bit	Processor special features	
Performance cores	8	Intel® Hyper Threading Technology	1
Efficient cores	4	(Intel® HT Technology)	v .
Processor boost frequency	4.9 GHz	Intel [®] Turbo Boost Technology	2.0
Performance-core boost frequency	4.8 GHz	Intel [®] Quick Sync Video Technology	1
Performance-core base frequency	2.1 GHz	Intel® Clear Video HD Technology	1
Efficient-core boost frequency	3.6 GHz	(Intel® CVT HD)	
Efficient-core base frequency	1.6 GHz	Intel® AES New Instructions (Intel® AES-NI)	1
Processor cache	25 MB	Enhanced Intel SpeedStep	
Processor cache type	Smart Cache	Technology	✓
Box * Processor base power	65 W	Intel Trusted Execution Technology	1
Maximum turbo power	180 W	Intel [®] Speed Shift Technology	1
Bus type	DMI4	Intel® Turbo Boost Max Technology	4.9 GHz
Maximum number of DMI lanes	8	3.0 frequency	
Memory bandwidth supported by		Intel® Total Memory Encryption	v
processor (max)	76.8 GB/s	Intel [®] Gaussian & Neural Accelerator (Intel [®] GNA) 3.0	1
Processor codename	Alder Lake	Intel [®] Control-flow Enforcement	,
Memory		Technology (CET)	V
Maximum internal memory	130 CD	Intel® Thread Director	4
supported by processor	128 GB	Intel VT-x with Extended Page Tables (EPT)	✓
Memory types supported by processor	DDR4-SDRAM, DDR5-SDRAM	Intel [®] Secure Key	1
Memory channels *	Dual-channel	Intel® Active Management	1
ECC	1	Technology (Intel® AMT)	
Memory bandwidth (max)	76.8 GB/s	Intel Stable Image Platform Program (SIPP)	✓
Graphics		Intel [®] OS Guard	✓
On-board graphics card *	1	Intel 64	1
Discrete graphics card *	×	Intel Virtualization Technology (VT-	1
On-board graphics card model *	Intel UHD Graphics 770	x)	
On-board graphics card outputs supported	Embedded DisplayPort (eDP) 1.4b, DisplayPort 1.4a, HDMI 2.1	Intel Virtualization Technology for Directed I/O (VT-d)	4
On-board graphics card base	300 MHz	Intel Turbo Boost Max Technology 3.0	<
frequency On-board graphics card dynamic		Intel [®] Optane [™] Memory Ready	✓
frequency (max)	1500 MHz	Intel® Boot Guard	✓

Graphics		Processor special features	
Number of displays supported (on- board graphics)	4	Intel® Deep Learning Boost (Intel® DL Boost)	∢
On-board graphics card DirectX version	12.0	Intel® Volume Management Device (VMD)	✓
On-board graphics card OpenGL	4.5	Mode-based Execute Control (MBE)	✓
version		Intel® vPro [™] Platform Eligibility	1
On-board graphics card maximum resolution (DisplayPort)	7680 x 4320 pixels	Intel® Standard Manageability (ISM)	1
On-board graphics card maximum		Intel [®] One-Click Recovery	1
resolution (eDP - Integrated Flat Panel)	5120 x 3200 pixels	Intel® Virtualization Technology with Redirect Protection (VT-rp)	<
On-board graphics card maximum resolution (HDMI)	4096 x 2160 pixels	Intel vPro® Enterprise Platform Eligibility	<
On-board graphics card refresh rate at maximum resolution (DisplayPort)	60 Hz	Intel® Threat Detection Technology (TDT)	<
		Intel [®] Hardware Shield Eligibility	1
On-board graphics card refresh rate at maximum resolution (eDP -	120 Hz	Intel® Total Memory Encryption - Multi Key	✓
Integrated Flat Panel)		Intel vPro® Essentials Platform	1
On-board graphics card refresh rate at maximum resolution (HDMI)	60 Hz	Eligibility	-
On-board graphics card ID	0x4680	Operational conditions	
Discrete graphics card model *	Not available	Tjunction	100 °C
Number of execution units	32	Technical details	
Multi-Format Codec Engines	2	Target market	Gaming, Content Creation
Features		OpenCL version	2.1
	,	Launch date	01'22
Execute Disable Bit	1	Status	Launched
Idle States			
Thermal Monitoring Technologies	•	Packaging data	
Market segment Use conditions	Desktop PC/Client/Tablet, Workstation	Package type	Retail box
Maximum number of PCI Express		Weight & dimensions	
lanes	20	Processor package size	45 x 37.5 mm
PCI Express slots version	5.0, 4.0	Other features	
	1 10 1 4 2 0 1 4		

Maximum internal memory

Graphics output

128 GB

eDP 1.4b, DP 1.4a, HDMI 2.1

5.0, 4.0 1x16+1x4, 2x8+1x4 SSE4.1, SSE4.2, AVX 2.0 1S 1

×

PCI Express configurations

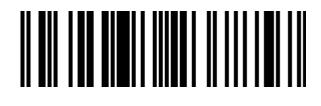
Supported instruction sets

CPU configuration (max)

Embedded options available

Scalability









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