

Intel Core i7-12700 processor 25 MB Smart Cache Box

Brand: Intel Product family: Core Product code: BX8071512700

Product name: i7-12700

Intel® Core™ i7-12700 Processor (25M Cache, up to 4.90 GHz)
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



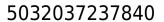




Processor		Features	
Processor manufacturer *	Intel	Direct Media Interface (DMI)	4.0
Processor generation	12th gen Intel® Core™ i7	Revision	
Processor model *	i7-12700	Export Control Classification Number (ECCN)	5A992CN3
Processor family *	Intel® Core™ i7	Commodity Classification	
Processor cores *	12	Automated Tracking System	G167599
Processor socket *	LGA 1700	(CCATS)	
Processor threads	20	Processor special features	
Processor operating modes *	64-bit	Intel® Hyper Threading Technology	/
Performance cores	8	(Intel® HT Technology)	•
Efficient cores	4	Intel® Turbo Boost Technology	2.0
Processor boost frequency	4.9 GHz	Intel® Quick Sync Video Technology	√
Performance-core boost frequency	4.8 GHz	Intel® Clear Video HD Technology	1
Performance-core base frequency	2.1 GHz	(Intel® CVT HD)	
Efficient-core boost frequency	3.6 GHz	Intel® AES New Instructions (Intel® AES-NI)	✓
Efficient-core base frequency	1.6 GHz	Enhanced Intel SpeedStep	
Processor cache	25 MB	Technology	✓
Processor cache type	Smart Cache	Intel Trusted Execution Technology	✓
Box *	✓ 65 W	Intel® Speed Shift Technology	✓
Processor base power Maximum turbo power	180 W	Intel® Turbo Boost Max Technology 3.0 frequency	4.9 GHz
Bus type	DMI4	Intel® Total Memory Encryption	✓
Maximum number of DMI lanes	8	Intel® Gaussian & Neural	1
Memory bandwidth supported by processor (max)	76.8 GB/s	Accelerator (Intel® GNA) 3.0 Intel® Control-flow Enforcement	•
Processor codename	Alder Lake	Technology (CET)	✓
Processor ARK ID	134591	Intel® Thread Director	✓
Memory		Intel VT-x with Extended Page Tables (EPT)	✓
Maximum internal memory	128 GB	Intel® Secure Key	✓
supported by processor Memory types supported by	DDR4-SDRAM, DDR5-SDRAM	Intel® Active Management Technology (Intel® AMT)	✓
processor Memory channels *	Dual-channel	Intel Stable Image Platform Program (SIPP)	✓
ECC	✓	Intel® OS Guard	✓
Memory bandwidth (max)	76.8 GB/s	Intel 64	✓
Graphics		Intel Virtualization Technology (VT-	✓
On-board graphics card *	✓	x)	
Discrete graphics card *	×	Intel Virtualization Technology for Directed I/O (VT-d)	✓
On-board graphics card model *	Intel UHD Graphics 770	Intel Turbo Boost Max Technology	
On-board graphics card outputs supported	Embedded DisplayPort (eDP) 1.4b, DisplayPort 1.4a, HDMI 2.1	3.0 Intel® Optane™ Memory Ready	<i>'</i>
On-board graphics card base	300 MHz	Intel® Boot Guard	,
frequency	אווויו 200 אוויו	Intel® Deep Learning Boost (Intel®	•
On-board graphics card dynamic frequency (max)	1500 MHz	DL Boost)	√

Graphics		Processor special features	
Number of displays supported (on- board graphics)	4	Intel® Volume Management Device (VMD)	✓
On-board graphics card DirectX	12.0	Mode-based Execute Control (MBE)	✓
version	12.0	Intel® vPro™ Platform Eligibility	✓
On-board graphics card OpenGL version	4.5	Intel® Standard Manageability (ISM)	✓
On-board graphics card maximum		Intel® One-Click Recovery	✓
resolution (DisplayPort)	7680 x 4320 pixels	Intel® Virtualization Technology with Redirect Protection (VT-rp)	✓
On-board graphics card maximum resolution (eDP - Integrated Flat Panel)	5120 x 3200 pixels	Intel vPro® Enterprise Platform Eligibility	1
On-board graphics card maximum resolution (HDMI)	4096 x 2160 pixels	Intel® Threat Detection Technology (TDT)	✓
On-board graphics card refresh rate		Intel® Hardware Shield Eligibility	✓
at maximum resolution (DisplayPort)	60 Hz	Intel® Total Memory Encryption - Multi Key	1
On-board graphics card refresh rate at maximum resolution (eDP - Integrated Flat Panel)	120 Hz	Intel vPro® Essentials Platform Eligibility	✓
On-board graphics card refresh rate		Operational conditions	
at maximum resolution (HDMI)	60 Hz	Tjunction	100 °C
On-board graphics card ID	0x4680	Technical details	
Discrete graphics card model *	Not available	Target market	Gaming, Content Creation
Number of execution units	32	OpenCL version	2.1
Multi-Format Codec Engines	2	Launch date	Q1'22
Features		Status	Launched
Execute Disable Bit	4	Logistics data	
Idle States	✓	Harmonized System (HS) code	85423119
Thermal Monitoring Technologies	✓	•	03.123113
Market segment	Desktop	Packaging data	
Use conditions	PC/Client/Tablet, Workstation	Package type	Retail box
Maximum number of PCI Express lanes	20	Weight & dimensions	
PCI Express slots version	5.0, 4.0	Processor package size	45 x 37.5 mm
PCI Express configurations	1x16+1x4, 2x8+1x4	Other features	
Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0	Maximum internal memory	128 GB
Scalability	15	Graphics output	eDP 1.4b, DP 1.4a, HDMI 2.1
CPU configuration (max)	1		
Embedded options available	×		







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