

Intel Core i5-13500 processor 24 MB Smart Cache

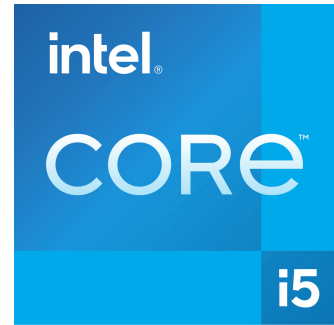
Brand : Intel

Product family: Core

Product code:
CM8071505093101

Product name : i5-13500

Intel® Core™ i5-13500 Processor (24M Cache, up to 4.80 GHz) FC-LGA16A, Tray
Intel Core i5-13500. Processor family: Intel® Core™ i5, 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. Package type: Retail box



Processor		Features	
Processor manufacturer *	Intel	Direct Media Interface (DMI) Revision	4.0
Processor generation	13th gen Intel® Core™ i5	Export Control Classification Number (ECCN)	5A992C
Processor model *	i5-13500	Commodity Classification Automated Tracking System (CCATS)	740.17B1
Processor family *	Intel® Core™ i5	Processor special features	
Processor cores *	14	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Processor socket *	LGA 1700	Intel® Turbo Boost Technology	2.0
Processor threads	20	Intel® Quick Sync Video Technology	✓
Processor operating modes *	64-bit	Intel® Clear Video HD Technology (Intel® CVT HD)	✓
Performance cores	6	Intel® AES New Instructions (Intel® AES-NI)	✓
Efficient cores	8	Enhanced Intel SpeedStep Technology	✓
Processor boost frequency	4.8 GHz	Intel Trusted Execution Technology	✓
Performance-core boost frequency	4.8 GHz	Intel® Speed Shift Technology	✓
Performance-core base frequency	2.5 GHz	Intel® Gaussian & Neural Accelerator (Intel® GNA) 3.0	✓
Efficient-core boost frequency	3.5 GHz	Intel® Control-flow Enforcement Technology (CET)	✓
Efficient-core base frequency	1.8 GHz	Intel® Thread Director	✓
Processor cache	24 MB	Intel VT-x with Extended Page Tables (EPT)	✓
Processor cache type	Smart Cache	Intel® Secure Key	✓
Box *	✗	Intel® Active Management Technology (Intel® AMT)	✓
Processor base power	65 W	Intel Stable Image Platform Program (SIPP)	✓
Maximum turbo power	154 W	Intel® OS Guard	✓
Bus type	DMI4	Intel 64	✓
Maximum number of DMI lanes	8	Intel Virtualization Technology (VT-x)	✓
Memory bandwidth supported by processor (max)	76.8 GB/s	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Processor codename	Raptor Lake	Intel Turbo Boost Max Technology 3.0	✗
Processor ARK ID	230580	Intel® Boot Guard	✓
Memory		Intel® Deep Learning Boost (Intel® DL Boost)	✓
Maximum internal memory supported by processor	128 GB		
Memory types supported by processor	DDR4-SDRAM, DDR5-SDRAM		
Memory channels *	Dual-channel		
ECC	✓		
Memory bandwidth (max)	76.8 GB/s		
Graphics			
On-board graphics card *	✓		
Discrete graphics card *	✗		
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		

Graphics		Processor special features	
On-board graphics card base frequency	300 MHz	Intel® Volume Management Device (VMD)	✓
On-board graphics card dynamic frequency (max)	1550 MHz	Mode-based Execute Control (MBE)	✓
Number of displays supported (on-board graphics)	4	Intel® vPro™ Platform Eligibility	✓
On-board graphics card DirectX version	12.0	Intel® Standard Manageability (ISM)	✓
On-board graphics card OpenGL version	4.5	Intel® One-Click Recovery	✓
On-board graphics card maximum resolution (DisplayPort)	7680 x 4320 pixels	Intel® Remote Platform Erase (RPE)	✓
On-board graphics card maximum 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)	✓
On-board graphics card refresh rate at maximum resolution (eDP - Integrated Flat Panel)	120 Hz	Intel® Hardware Shield Eligibility	✓
On-board graphics card refresh rate at maximum resolution (HDMI)	60 Hz	Intel® Total Memory Encryption - Multi Key	✓
On-board graphics card ID	0x4680	Intel vPro® Essentials Platform Eligibility	✓
Discrete graphics card model *	Not available	Operational conditions	
Number of execution units	32	Tjunction	100 °C
Multi-Format Codec Engines	2	Technical details	
Features		Target market	Gaming
Execute Disable Bit	✓	OpenCL version	3.0
Idle States	✓	Launch date	Q1'23
Thermal Monitoring Technologies	✓	Status	Launched
Market segment	Desktop	Logistics data	
Use conditions	PC/Client/Tablet, Workstation	Harmonized System (HS) code	8542310001
Maximum number of PCI Express lanes	20	Packaging data	
PCI Express slots version	5.0, 4.0	Package type	Retail box
PCI Express configurations	1x16+1x4, 2x8+1x4	Weight & dimensions	
Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0	Processor package size	45 x 37.5 mm
Scalability	1S	Other features	
CPU configuration (max)	1	L2 cache	11776 KB
Embedded options available	✓	Maximum internal memory	128 GB
		Graphics output	eDP 1.4b, DP 1.4a, HDMI 2.1

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