

Intel Core i9-13900 processor 36 MB Smart Cache

Brand : Intel

Product family: Core

Product code:
CM8071504820605

Product name : i9-13900



Intel® Core™ i9-13900 Processor (36M Cache, up to 5.6 GHz)
 Intel Core i9-13900. Processor family: Intel® Core™ i9, Processor socket: LGA 1700, Processor manufacturer: Intel. Memory channels: Dual-channel, Maximum internal memory supported by processor: 192 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: 5.5 GHz, Intel® Thermal Velocity Boost Frequency: 5.6 GHz



Processor		Features	
Processor manufacturer *	Intel	Commodity Classification Automated Tracking System (CCATS)	740.17B1
Processor generation	13th gen Intel® Core™ i9	Processor special features	
Processor model *	i9-13900	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Processor family *	Intel® Core™ i9	Intel® Turbo Boost Technology	2.0
Processor cores *	24	Intel® Quick Sync Video Technology	✓
Processor socket *	LGA 1700	Intel® Clear Video HD Technology (Intel® CVT HD)	✓
Processor threads	32	Intel® AES New Instructions (Intel® AES-NI)	✓
Processor operating modes *	64-bit	Enhanced Intel SpeedStep Technology	✓
Performance cores	8	Intel Trusted Execution Technology	✓
Efficient cores	16	Intel® Speed Shift Technology	✓
Processor boost frequency	5.6 GHz	Intel® Thermal Velocity Boost	✓
Performance-core boost frequency	5.2 GHz	Intel® Adaptive Boost Technology	✓
Performance-core base frequency	2 GHz	Intel® Turbo Boost Max Technology 3.0 frequency	5.5 GHz
Efficient-core boost frequency	4.2 GHz	Intel® Gaussian & Neural Accelerator (Intel® GNA) 3.0	✓
Efficient-core base frequency	1.5 GHz	Intel® Thermal Velocity Boost Frequency	5.6 GHz
Processor cache	36 MB	Intel® Control-flow Enforcement Technology (CET)	✓
Processor cache type	Smart Cache	Intel® Thread Director	✓
Box *	✗	Intel VT-x with Extended Page Tables (EPT)	✓
Processor base power	65 W	Intel® Secure Key	✓
Maximum turbo power	219 W	Intel® Active Management Technology (Intel® AMT)	✓
Bus type	DMI4	Intel Stable Image Platform Program (SIPP)	✓
Maximum number of DMI lanes	8	Intel® OS Guard	✓
Memory bandwidth supported by processor (max)	89.6 GB/s	Intel 64	✓
Processor codename	Raptor Lake	Intel Virtualization Technology (VT-x)	✓
Processor ARK ID	230499	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Memory		Intel Turbo Boost Max Technology 3.0	✓
Maximum internal memory supported by processor	192 GB	Intel® Boot Guard	✓
Memory types supported by processor	DDR4-SDRAM, DDR5-SDRAM		
Memory channels *	Dual-channel		
ECC	✓		
Memory bandwidth (max)	89.6 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® Deep Learning Boost (Intel® DL Boost)	✓
On-board graphics card dynamic frequency (max)	1650 MHz	Intel® Volume Management Device (VMD)	✓
Number of displays supported (on-board graphics)	4	Mode-based Execute Control (MBE)	✓
On-board graphics card DirectX version	12.0	Intel® vPro™ Platform Eligibility	✓
On-board graphics card OpenGL version	4.5	Intel® Standard Manageability (ISM)	✓
On-board graphics card maximum resolution (DisplayPort)	7680 x 4320 pixels	Intel® One-Click Recovery	✓
On-board graphics card maximum resolution (eDP - Integrated Flat Panel)	5120 x 3200 pixels	Intel® Remote Platform Erase (RPE)	✓
On-board graphics card maximum resolution (HDMI)	4096 x 2160 pixels	Intel® Virtualization Technology with Redirect Protection (VT-rp)	✓
On-board graphics card refresh rate at maximum resolution (DisplayPort)	60 Hz	Intel vPro® Enterprise Platform Eligibility	✓
On-board graphics card refresh rate at maximum resolution (eDP - Integrated Flat Panel)	120 Hz	Intel® Threat Detection Technology (TDT)	✓
On-board graphics card refresh rate at maximum resolution (HDMI)	60 Hz	Intel® Hardware Shield Eligibility	✓
On-board graphics card ID	0xA780	Intel® Total Memory Encryption - Multi Key	✓
Discrete graphics card model *	Not available	Intel vPro® Essentials Platform Eligibility	✓
Number of execution units	32		
Multi-Format Codec Engines	2		
Features		Operational conditions	
Execute Disable Bit	✓	Tjunction	100 °C
Idle States	✓	Technical details	
Thermal Monitoring Technologies	✓	Target market	Gaming, Content Creation
Market segment	Desktop	OpenCL version	3.0
Use conditions	PC/Client/Tablet, Workstation	Launch date	Q1'23
Maximum number of PCI Express lanes	20	Status	Launched
PCI Express slots version	5.0, 4.0	Logistics data	
PCI Express configurations	1x16+1x4, 2x8+1x4	Harmonized System (HS) code	8542310001
Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0	Packaging data	
Scalability	1S	Package type	Retail box
CPU configuration (max)	1	Weight & dimensions	
Embedded options available	✓	Processor package size	45 x 37.5 mm
Direct Media Interface (DMI) Revision	4.0	Other features	
Export Control Classification Number (ECCN)	5A992C	L2 cache	32768 KB
		Maximum internal memory	192 GB
		Graphics output	eDP 1.4b, DP 1.4a, HDMI 2.1



8592978422387

Disclaimer. The information published here (the "Information") is based on sources that can be considered reliable, typically the manufacturer, but this Information is provided "AS IS" and without guarantee of correctness or completeness. The Information is only indicative and can be changed at any time without notification. No rights can be based on the Information. Suppliers or aggregators of this Information do not accept any liability with regard to the content of (web)pages and other documents, including its Information. The publisher of the Information can not be held liable for the content of 3rd party websites that are linking this Information or are linked to from this Information. You as the User of the Information are solely responsible for the choice and usage of this Information. You are not entitled to transfer, copy or otherwise multiply or distribute the Information. You are obliged to follow the directions of the copyright owner(s) with regard to the use of the Information. Exclusively Dutch law is applicable. With regard to price and stock data on the site, the publisher followed a number of starting points, which are not necessarily relevant for your private or business circumstances. Therefore, the price and stock data are only indicative and are subject to changes. You are personally responsible for the way you use and apply this information. As a user of the Information or sites or documents in which this Information is included, you will adhere to standard fair use including avoidance of spamming, ripping, intellectual-property violations, privacy violations, and any other illegal activity.

Publication date: 04-APR-2024. Prints or copies of Information are only valid on the printed Publication date