

Intel Core i7-14700F processor 33 MB Smart Cache

Brand : Intel

Product family: Core

Product code:
CM8071504820816

Product name : i7-14700F



Intel® Core™ i7 processor 14700F (33M Cache, up to 5.40 GHz) FC-LGA16A, Tray
 Intel Core i7-14700F. Processor family: Intel® Core™ i7, 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. Market segment: Desktop, Use conditions: PC/Client/Tablet, PCI Express slots version: 4.0, 5.0. Intel® Turbo Boost Max Technology 3.0 frequency: 5.4 GHz. Processor package size: 45 x 37.5 mm



Processor		Features	
Processor manufacturer *	Intel	Embedded options available	✗
Processor generation	Intel Core i7-14xxx	Direct Media Interface (DMI) Revision	4.0
Processor model *	i7-14700F	Export Control Classification Number (ECCN)	5A992C
Processor family *	Intel® Core™ i7	Commodity Classification Automated Tracking System (CCATS)	740.17B1
Processor cores *	20	Processor special features	
Processor socket *	LGA 1700	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Processor threads	28	Intel® Turbo Boost Technology	2.0
Processor operating modes *	64-bit	Intel® AES New Instructions (Intel® AES-NI)	✓
Performance cores	8	Enhanced Intel SpeedStep Technology	✓
Efficient cores	12	Intel® Speed Shift Technology	✓
Processor boost frequency	5.4 GHz	Intel® Turbo Boost Max Technology 3.0 frequency	5.4 GHz
Performance-core boost frequency	5.3 GHz	Intel® Gaussian & Neural Accelerator (Intel® GNA) 3.0	✓
Performance-core base frequency	2.1 GHz	Intel® Control-flow Enforcement Technology (CET)	✓
Efficient-core boost frequency	4.2 GHz	Intel® Thread Director	✓
Efficient-core base frequency	1.5 GHz	Intel VT-x with Extended Page Tables (EPT)	✓
Processor cache	33 MB	Intel® Secure Key	✓
Processor cache type	Smart Cache	Intel® OS Guard	✓
Box *	✗	Intel 64	✓
Processor base power	65 W	Intel Virtualization Technology (VT-x)	✓
Maximum turbo power	219 W	Intel Virtualization Technology for Directed I/O (VT-d)	✓
Stepping	B0	Intel Turbo Boost Max Technology 3.0	✓
Maximum number of DMI lanes	8	Intel® Boot Guard	✓
Memory bandwidth supported by processor (max)	89.6 GB/s	Intel® Deep Learning Boost (Intel® DL Boost)	✓
Processor codename	Raptor Lake	Intel® Volume Management Device (VMD)	✓
Processor ARK ID	236854	Mode-based Execute Control (MBE)	✓
Memory		Intel® Standard Manageability (ISM)	✓
Maximum internal memory supported by processor	192 GB	Operational conditions	
Memory types supported by processor	DDR4-SDRAM, DDR5-SDRAM	Tjunction	100 °C
Memory channels *	Dual-channel	Logistics data	
Memory bandwidth (max)	89.6 GB/s	Harmonized System (HS) code	8542310001
Graphics			
On-board graphics card *	✗		
Discrete graphics card *	✗		
On-board graphics card model *	Not available		
Discrete graphics card model *	Not available		
Features			
Execute Disable Bit	✓		
Idle States	✓		
Thermal Monitoring Technologies	✓		
Market segment	Desktop		

Features		Technical details	
Use conditions	PC/Client/Tablet	Launch date	Q1'24
Maximum number of PCI Express lanes	20	Status	Launched
PCI Express slots version	4.0, 5.0	Weight & dimensions	
PCI Express configurations	1x16+1x4, 2x8+1x4	Processor package size	45 x 37.5 mm
Supported instruction sets	AVX 2.0, SSE4.1, SSE4.2	Other features	
Scalability	1S	L2 cache	28672 KB
CPU configuration (max)	1	Maximum internal memory	192 GB

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