Intel Core i7-14700KF processor 33 MB Smart Cache

Brand : Intel

Product family: Core

Product code: CM8071504820722

Product name : i7-14700KF

Intel® Core™ i7 processor 14700KF (33M Cache, up to 5.60 GHz) FC-LGA16A, Tray
Intel Core i7-14700KF. 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: 5.6 GHz. Processor package size: 45 x 37.5 mm

Processor	
Processor manufacturer *	Intel
Processor generation	Intel Core i7-14xxx
Processor model *	i7-14700KF
Processor family *	Intel® Core™ i7
Processor cores *	20
Processor socket *	LGA 1700
Processor threads	28
Processor operating modes *	64-bit
Performance cores	8
Efficient cores	12
Processor boost frequency	5.6 GHz
Performance-core boost frequency	5.5 GHz
Performance-core base frequency	3.4 GHz
Efficient-core boost frequency	4.3 GHz
Efficient-core base frequency	2.5 GHz
Processor cache	33 MB
Processor cache type	Smart Cache
Box *	✗
Processor base power	125 W
Maximum turbo power	253 W
Stepping	B0
Maximum number of DMI lanes	8
Memory bandwidth supported by processor (max)	89.6 GB/s
Processor codename	Raptor Lake
Processor ARK ID	236789

Memory	
Maximum internal memory supported by processor	192 GB
Memory types supported by processor	DDR4-SDRAM, DDR5-SDRAM
Memory channels *	Dual-channel
Memory bandwidth (max)	89.6 GB/s

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	
Thermal solution specification	PCG 2020A
Direct Media Interface (DMI) Revision	4.0
Export Control Classification Number (ECCN)	5A992C
Commodity Classification Automated Tracking System (CCATS)	740.17B1

Processor special features	
Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Intel® Turbo Boost Technology	2.0
Intel® AES New Instructions (Intel® AES-NI)	✓
Enhanced Intel SpeedStep Technology	✓
Intel® Speed Shift Technology	✓
Intel® Turbo Boost Max Technology 3.0 frequency	5.6 GHz
Intel® Gaussian & Neural Accelerator (Intel® GNA) 3.0	✓
Intel® Control-flow Enforcement Technology (CET)	✓
Intel® Thread Director	✓
Intel VT-x with Extended Page Tables (EPT)	✓
Intel® Secure Key	✓
Intel® OS Guard	✓
Intel 64	✓
Intel Virtualization Technology (VT-x)	✓
Intel Virtualization Technology for Directed I/O (VT-d)	✓
Intel Turbo Boost Max Technology 3.0	✓
Intel® Boot Guard	✓
Intel® Deep Learning Boost (Intel® DL Boost)	✓
Intel® Volume Management Device (VMD)	✓
Mode-based Execute Control (MBE)	✓
Intel® Standard Manageability (ISM)	✓

Operational conditions	
Tjunction	100 °C

Logistics data	
Harmonized System (HS) code	8542310001

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Features	
Use conditions	PC/Client/Tablet
Maximum number of PCI Express lanes	20
PCI Express slots version	4.0, 5.0
PCI Express configurations	1x16+1x4, 2x8+1x4
Supported instruction sets	AVX 2.0, SSE4.1, SSE4.2
Scalability	1S
CPU configuration (max)	1
Embedded options available	✗

Technical details	
Launch date	Q4'23
Status	Launched
Weight & dimensions	
Processor package size	45 x 37.5 mm
Other features	
L2 cache	28672 KB
Maximum internal memory	192 GB

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