Intel Core i7-14700F processor 33 MB Smart Cache Box

Brand : Intel   **Product family:** Core   **Product code:** BX8071514700F

Product name : i7-14700F

Boxed Intel® Core™ i7 processor 14700F (33M Cache, up to 5.40 GHz) FC-LGA16A
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

Processor manufacturer *	Intel
Processor generation	Intel Core i7-14xxx
Processor model *	i7-14700F
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	5.4 GHz
Performance-core boost frequency	5.3 GHz
Performance-core base frequency	2.1 GHz
Efficient-core boost frequency	4.2 GHz
Efficient-core base frequency	1.5 GHz
Processor cache	33 MB
Processor cache type	Smart Cache
Box *	✓
Cooler included *	✓
Processor base power	65 W
Maximum turbo power	219 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	236854

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	✓

Features

Embedded options available	✗
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	5.4 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

Features

Thermal Monitoring Technologies	✓
Market segment	Desktop
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

Logistics data

Harmonized System (HS) code	8542310001

Technical details

Launch date	Q1'24
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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