

Product Collection 11th Generation Intel® Core™ i7 Processors

Code Name Products formerly Rocket Lake

Vertical Segment Desktop

Processor Number i7-11700KF

Status Launched

Launch Date Q1'21

Lithography 14 nm

Use Conditions PC/Client/Tablet

CPU Specifications

Total Cores 8

Total Threads 16

Max Turbo Frequency 5.00 GHz

Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 5.00 GHz

Intel® Turbo Boost Technology 2.0 Frequency † 4.90 GHz

Processor Base Frequency 3.60 GHz

Cache 16 MB Intel® Smart Cache

Bus Speed 8 GT/s

TDP 125 W

Configurable TDP-down Base Frequency	3.10 GHz
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Configurable TDP-down	95 W
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Supplemental Information

Embedded Options Available	No
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Datasheet	View now
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Memory Specifications

Max Memory Size (dependent on memory type)	128 GB
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Memory Types	DDR4-3200
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Max # of Memory Channels	2
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Max Memory Bandwidth	50 GB/s
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ECC Memory Supported †	No
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Expansion Options

Scalability	1S Only
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PCI Express Revision	4.0
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PCI Express Configurations †	Up to 1x16+1x4, 2x8+1x4, 1x8+3x4
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Max # of PCI Express Lanes	20
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Package Specifications

Sockets Supported	FCLGA1200
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Max CPU Configuration	1
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Thermal Solution Specification	PCG 2019A
T _{JUNCTION}	100°C
Package Size	37.5 mm x 37.5 mm

Advanced Technologies

Intel® Gaussian & Neural Accelerator	2.0
Intel® Deep Learning Boost (Intel® DL Boost)	Yes
Intel® Optane™ Memory Supported †	Yes
Intel® Thermal Velocity Boost	No
Intel® Turbo Boost Max Technology 3.0 †	Yes
Intel® Turbo Boost Technology †	2.0
Intel® Hyper-Threading Technology †	Yes
Intel® 64 †	Yes
Instruction Set	64-bit
Instruction Set Extensions	Intel® SSE4.1, Intel® SSE4.2, Intel® AVX2, Intel® AVX-512
Idle States	Yes
Enhanced Intel SpeedStep® Technology	Yes
Thermal Monitoring Technologies	Yes
Intel® Identity Protection Technology †	Yes

Security & Reliability

Intel® AES New Instructions	Yes
Secure Key	Yes
Intel® Software Guard Extensions (Intel® SGX)	No

Intel® OS Guard	Yes
Intel® Trusted Execution Technology †	No
Execute Disable Bit †	Yes
Intel® Boot Guard	Yes
Intel® Stable IT Platform Program (SIPP)	No
Intel® Virtualization Technology (VT-x) †	Yes
Intel® Virtualization Technology for Directed I/O (VT-d) †	Yes
Intel® VT-x with Extended Page Tables (EPT) †	Yes