

ARK | Compare Intel® Products

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,Intel® Core™ i7-11700K Processor (16M Cache- up to 5.00 GHz)

Essentials

Product Collection,11th Generation Intel® Core™ i7 Processors

Code Name,Products formerly Rocket Lake

Vertical Segment,Desktop

Processor Number,i7-11700K

Status,Launched

Launch Date,Q1'21

Lithography,14 nm

Use Conditions,PC/Client/Tablet

Recommended Customer Price,\$399.00

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

Configurable TDP-down,95 W

Supplemental Information

Embedded Options Available,No

Datasheet,View now

Memory Specifications

Max Memory Size (dependent on memory type),128 GB

Memory Types,DDR4-3200

Max # of Memory Channels,2

Max Memory Bandwidth,50 GB/s

ECC Memory Supported ‡,No

Processor Graphics

Processor Graphics ‡,Intel® UHD Graphics 750

Graphics Base Frequency,350 MHz

Graphics Max Dynamic Frequency,1.30 GHz

Graphics Video Max Memory,64 GB

Execution Units,32

4K Support,Yes | at 60Hz

Max Resolution (HDMI)‡,4096x2160@60Hz

Max Resolution (DP)‡,5120 x 3200 @60Hz

Max Resolution (eDP - Integrated Flat Panel)‡,5120 x 3200 @60Hz

DirectX* Support,12.1

OpenGL* Support,4.5
Intel® Quick Sync Video,Yes
Intel® InTru™ 3D Technology,Yes
Intel® Clear Video HD Technology,Yes
Intel® Clear Video Technology,Yes
of Displays Supported ‡,3
Device ID,0x4C8A
OpenCL* Support,3.0

Expansion Options
Scalability,1S Only
PCI Express Revision,4.0
PCI Express Configurations ‡,Up to 1x16+1x4 | 2x8+1x4 | 1x8+3x4
Max # of PCI Express Lanes,20

Package Specifications
Sockets Supported,FCLGA1200
Max CPU Configuration,1
Thermal Solution Specification,PCG 2019A
TJUNCTION,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 vPro® Platform Eligibility ‡,Yes
Intel® AES New Instructions,Yes
Secure Key,Yes
Intel® Software Guard Extensions (Intel® SGX),No
Intel® OS Guard,Yes
Intel® Trusted Execution Technology ‡,Yes
Execute Disable Bit ‡,Yes
Intel® Boot Guard,Yes
Intel® Stable IT Platform Program (SIPP),Yes
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