

	Intel® Core™ i9-11900KF Processor (16M Cache, up to 5.30 GHz)
Essentials	
Product Collection	11th Generation Intel® Core™ i9 Processors
Code Name	Products formerly Rocket Lake
Vertical Segment	Desktop
Processor Number	i9-11900KF
Status	Launched
Launch Date	Q1'21
Lithography	14 nm
Use Conditions	PC/Client/Tablet
CPU Specifications	
# of Cores	8
# of Threads	16
Processor Base Frequency	3.50 GHz
Max Turbo Frequency	5.30 GHz
Intel® Thermal Velocity Boost Frequency	5.30 GHz
Cache	16 MB Intel® Smart Cache
Bus Speed	8 GT/s
Intel® Turbo Boost Max Technology 3.0 Frequency ‡	5.20 GHz
Intel® Turbo Boost Technology 2.0 Frequency‡	5.10 GHz
TDP	125 W
Configurable TDP-down Frequency	3.00 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
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
Intel® Thermal Velocity Boost Temperature	70 °C
TJUNCTION	100°C
Package Size	37.5 mm x 37.5 mm
Advanced Technologies	
Intel® Deep Learning Boost (Intel® DL Boost)	Yes
Intel® Optane™ Memory Supported ‡	Yes
Intel® Thermal Velocity Boost	Yes
Intel® Turbo Boost Max Technology 3.0 ‡	Yes
Intel® Turbo Boost Technology ‡	2.0

Intel vPro® Platform Eligibility ‡	No
Intel® Hyper-Threading Technology ‡	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
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
Intel® Stable Image Platform Program (SIPP)	No
Intel® Gaussian and Neural Accelerator 2.0	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