	Intel® Core™ i9-11900 Processor (16M Cache, up to 5.20 GHz)
Essentials	
Product Collection	11th Generation Intel® Core™ i9 Processors
Code Name	Products formerly Rocket Lake
Vertical Segment	Desktop
Processor Number	i9-11900
Status	Launched
Launch Date	Q1'21
Lithography	14 nm
Use Conditions	PC/Client/Tablet
Recommended Customer Price	$439.00 - $449.00
CPU Specifications	
# of Cores	8
# of Threads	16
Processor Base Frequency	2.50 GHz
Max Turbo Frequency	5.20 GHz
Intel® Thermal Velocity Boost Frequency	5.20 GHz
Cache	16 MB Intel® Smart Cache
Bus Speed	8 GT/s
Intel® Turbo Boost Max Technology 3.0 Frequency ‡	5.10 GHz
Intel® Turbo Boost Technology 2.0 Frequency‡	5.00 GHz
TDP	65 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. Jan
OpenGL* Support	04. Mai
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 2019C
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 ‡	Yes
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)	Yes
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 ‡	Yes
Execute Disable Bit ‡	Yes
Intel® Boot Guard	Yes