

Product Collection	10th Generation Intel® Core™ i9 Processors
Code Name	Products formerly Comet Lake
Vertical Segment	Desktop
Processor Number	i9-10900
Status	Launched
Launch Date	Q2'20
Lithography	14 nm
Recommended Customer Price	\$483.00 - \$493.00
Use Conditions	PC/Client/Tablet

#### CPU Specifications

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Total Cores	10
Total Threads	20
Max Turbo Frequency	5.20 GHz
Intel® Thermal Velocity Boost Frequency	5.20 GHz
Intel® Turbo Boost Max Technology 3.0 Frequency <sup>†</sup>	5.10 GHz
Intel® Turbo Boost Technology 2.0 Frequency <sup>†</sup>	5.00 GHz
Processor Base Frequency	2.80 GHz
Cache	20 MB Intel® Smart Cache
Bus Speed	8 GT/s

TDP	65 W
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## Supplemental Information

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Embedded Options Available	No
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Datasheet	<a href="#">View now</a>
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## Memory Specifications

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Max Memory Size (dependent on memory type)	128 GB
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Memory Types	DDR4-2933
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Max # of Memory Channels	2
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Max Memory Bandwidth	45.8 GB/s
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ECC Memory Supported <sup>†</sup>	No
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## Processor Graphics

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Processor Graphics <sup>‡</sup>	Intel® UHD Graphics 630
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Graphics Base Frequency	350 MHz
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Graphics Max Dynamic Frequency	1.20 GHz
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Graphics Video Max Memory	64 GB
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4K Support	Yes, at 60Hz
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Max Resolution (HDMI) <sup>†</sup>	4096 x 2160@30Hz
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Max Resolution (DP) <sup>‡</sup>	4096 x 2304@60Hz
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Max Resolution (eDP - Integrated Flat Panel) <sup>‡</sup>	4096 x 2304@60Hz
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DirectX* Support	12
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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	0x9BC5

## Expansion Options

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Scalability	1S Only
PCI Express Revision	3.0
PCI Express Configurations †	Up to 1x16, 2x8, 1x8+2x4
Max # of PCI Express Lanes	16

## Package Specifications

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Sockets Supported	FCLGA1200
Max CPU Configuration	1
Thermal Solution Specification	PCG 2015C
Intel® Thermal Velocity Boost Temperature	70 °C
T <sub>JUNCTION</sub>	100°C
Package Size	37.5mm x 37.5mm

## Advanced Technologies

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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® Hyper-Threading Technology †	Yes
Intel® Transactional Synchronization Extensions	No
Intel® 64 †	Yes
Instruction Set	64-bit
Instruction Set Extensions	Intel® SSE4.1, Intel® SSE4.2, Intel® AVX2
Idle States	Yes
Enhanced Intel SpeedStep® Technology	Yes
Thermal Monitoring Technologies	Yes
Intel® Identity Protection Technology †	Yes

## Security & Reliability

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Intel vPro® Eligibility †	Intel vPro® Platform
Intel® AES New Instructions	Yes
Secure Key	Yes
Intel® Software Guard Extensions (Intel® SGX)	Yes with Intel® ME
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
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Intel® VT-x with Extended Page Tables (EPT) †	Yes
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