



Intel® Core™ i5-9400 Processor

9M Cache, up to 4.10 GHz

Specifications

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Essentials

Product Collection	9th Generation Intel® Core™ i5 Processors
Code Name	Products formerly Coffee Lake
Vertical Segment	Desktop
Processor Number	i5-9400
Status	Launched
Launch Date	Q1'19
Lithography	14 nm
Use Conditions	PC/Client/Tablet
Recommended Customer Price	\$182.00

CPU Specifications

# of Cores	6
# of Threads	6
Processor Base Frequency	2.90 GHz
Max Turbo Frequency	4.10 GHz
Cache	9 MB Intel® Smart Cache
Bus Speed	8 GT/s
Intel® Turbo Boost Technology 2.0 Frequency[†]	4.10 GHz
TDP	65 W

Supplemental Information

Embedded Options Available	No
Description	View now
Datasheet	View now

Memory Specifications

Max Memory Size (dependent on memory type)	128 GB
Memory Types	DDR4-2666
Max # of Memory Channels	2
Max Memory Bandwidth	41.6 GB/s

ECC Memory Supported ‡	No
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Processor Graphics

Processor Graphics ‡	Intel® UHD Graphics 630
Graphics Base Frequency	350 MHz
Graphics Max Dynamic Frequency	1.05 GHz
Graphics Video Max Memory	64 GB
4K Support	Yes, at 60Hz
Max Resolution (HDMI)†	4096 x 2304@24Hz
Max Resolution (DP)‡	4096 x 2304@60Hz
Max Resolution (eDP - Integrated Flat Panel)‡	4096 x 2304@60Hz
DirectX* Support	12
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	0X3E98/x92

Expansion Options

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

Sockets Supported	FCLGA1151
Max CPU Configuration	1
Thermal Solution Specification	PCG 2015C (65W)
T _{JUNCTION}	100°C
Package Size	37.5mm x 37.5mm

Advanced Technologies

Intel® Optane™ Memory Supported ‡	Yes
Intel® Turbo Boost Technology ‡	2.0
Intel vPro® Platform Eligibility ‡	No
Intel® Hyper-Threading Technology ‡	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
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
Intel® Stable Image Platform Program (SIPP)	No

Security & Reliability

Intel® AES New Instructions	Yes
Secure Key	Yes
Intel® Software Guard Extensions (Intel® SGX)	Yes with Intel® ME
Intel® Memory Protection Extensions (Intel® MPX)	Yes
Intel® OS Guard	Yes
Intel® Trusted Execution Technology ‡	No
Execute Disable Bit ‡	Yes
Intel® Boot Guard	Yes

Ordering and Compliance

Product Images

Compatible Products

Drivers and Software

Technical Documentation

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Refer to Datasheet for formal definitions of product properties and features.

‡ This feature may not be available on all computing systems. Please check with the system vendor to determine if your system delivers this feature, or reference the system specifications (motherboard, processor, chipset, power supply, HDD, graphics controller, memory, BIOS, drivers, virtual machine monitor-VMM, platform software, and/or operating system) for feature compatibility. Functionality, performance, and other benefits of this feature may vary depending on system configuration.

Some products can support AES New Instructions with a Processor Configuration update, in particular, i7-2630QM/i7-2635QM, i7-2670QM/i7-2675QM, i5-2430M/i5-2435M, i5-2410M/i5-2415M. Please contact OEM for the BIOS that includes the latest Processor configuration update.

"Announced" SKUs are not yet available. Please refer to the Launch Date for market availability.

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See <http://www.intel.com/content/www/us/en/processors/processor-numbers.html> for details.

See <http://www.intel.com/content/www/us/en/architecture-and-technology/hyper-threading/hyper-threading-technology.html?wapkw=hyper+threading>

for more information including details on which processors support Intel® HT Technology.

Max Turbo Frequency refers to the maximum single-core processor frequency that can be achieved with Intel® Turbo Boost Technology. See www.intel.com/technology/turboboost/ for more information and applicability of this technology.

Processors that support 64-bit computing on Intel® architecture require an Intel 64 architecture-enabled BIOS.

System and Maximum TDP is based on worst case scenarios. Actual TDP may be lower if not all I/Os for chipsets are used.

Intel® Iris® Xe Graphics only: to use the Intel® Iris® Xe brand, the system must be populated with 128-bit (dual channel) memory. Otherwise, use the Intel® UHD brand.

Check <http://ipt.intel.com/> for systems that support Intel® Identity Protection Technology (Intel® IPT).

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