

Specification sheet

Essentials

- Vertical Segment Desktop
- Processor Number i7-9700K
- Status Launched
- Launch Date Q4'18
- Lithography 14 nm
- Included Items Please note: The boxed product does not include a fan or heat sink
- Use Conditions PC/Client/Tablet
- Recommended Customer Price\$374.00 - \$385.00

Performance

- # of Cores 8
- # of Threads 8
- Processor Base Frequency 3.60 GHz
- Max Turbo Frequency 4.90 GHz
- Cache 12 MB SmartCache
- Bus Speed 8 GT/s DMI3
- TDP 95 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

Processor Graphics

- Processor Graphics ‡ Intel® UHD Graphics 630
- Graphics Base Frequency 350 MHz
- Graphics Max Dynamic Frequency 1.20 GHz
- Graphics Video Max Memory 64 GB
- 4K Support Yes, at 60Hz
- Max Resolution (HDMI 1.4)‡ 4096x2304@24Hz
- Max Resolution (DP)‡ 4096x2304@60Hz
- Max Resolution (eDP - Integrated Flat Panel)‡ 4096x2304@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

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 2015D
- 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 ‡ Yes
- 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® TSX-NI Yes
- 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) Yes

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 ‡ Yes
- Execute Disable Bit ‡ Yes
- Intel® Boot Guard Yes