

ARK | Compare Intel® Products

Intel® Core™ i7-8700K Processor (12M Cache, up to 4.70 GHz)

Code Name	Coffee Lake
Essentials	
Vertical Segment	Desktop
Processor Number	i7-8700K
Status	Launched
Launch Date	Q4'17
Lithography	14 nm
Performance	
# of Cores	6
# of Threads	12
Processor Base Frequency	3.70 GHz
Max Turbo Frequency	4.70 GHz
Cache	12 MB
Bus Speed	8 GT/s DMI3
TDP	95 W
Supplemental Information	
Embedded Options Available	No
Conflict Free	Yes
Memory Specifications	
Max Memory Size (dependent on memory type)	64 GB
Memory Types	DDR4-2666
Max # of Memory Channels	2
ECC Memory Supported ‡	No
Graphics Specifications	
Processor Graphics ‡	Intel® UHD Graphics 630
Graphics Base Frequency	350 MHz
Graphics Max Dynamic Frequency	1.20 GHz
Graphics Video Max Memory	64 GB
Execution Units	24
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	0x3E92
Expansion Options	
Scalability	1S Only
PCI Express Revision	3.0
PCI Express Configurations ‡	Up to 1x16 or 2x8 or 1x8+2x4
Max # of PCI Express Lanes	16
Package Specifications	
Sockets Supported	FCLGA1151
Max CPU Configuration	1
Thermal Solution Specification	PCG 2015C (130W)
T_{JUNCTION}	100°C
Package Size	37.5mm x 37.5mm
Low Halogen Options Available	See MDDS
Advanced Technologies	
Intel® Optane™ Memory Supported ‡	Yes
Intel® Turbo Boost Technology	2.0
Intel® vPro™ Technology ‡	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® TSX-NI	Yes
Intel® 64 ‡	Yes
Instruction Set	64-bit
Instruction Set Extensions	SSE4.1/4.2, 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
Intel® Memory Protection Extensions (Intel® MPX)	Yes
Intel® OS Guard	Yes
Intel® Trusted Execution Technology ‡	Yes
Execute Disable Bit ‡	Yes
Intel® Boot Guard	Yes