



Intel® Xeon® E-2176G Processor

12M Cache, up to 4.70 GHz

Spec Code

SR3WS

Ordering Code

CM8068403380018

Intel® Xeon® E-2176G Processor (12M Cache, up to 4.70 GHz)

Code Name	Coffee Lake
Essentials	
Vertical Segment	Server
Processor Number	E-2176G
Status	Launched
Launch Date	Q3'18
Lithography	14 nm
Recommended Customer Price	\$362.00
Use Conditions	PC/Client/Tablet
Performance	
# of Cores	6
# of Threads	12
Processor Base Frequency	3.70 GHz
Max Turbo Frequency	4.70 GHz
Cache	12 MB SmartCache
Bus Speed	8 GT/s DMI3
TDP	80 W
Supplemental Information	
Embedded Options Available	Yes
Datasheet	Link
Memory Specifications	
Max Memory Size (dependent on memory type)	64 GB
Memory Types	DDR4-2666
Max # of Memory Channels	2
Max Memory Bandwidth	41.6 GB/s
ECC Memory Supported ‡	Yes
Processor Graphics	
Processor Graphics ^{<small>‡</small>}	Intel® UHD Graphics P630

Graphics Base Frequency	350 MHz
Graphics Max Dynamic Frequency	1.20 GHz
Graphics Video Max Memory	64 GB
Graphics Output	eDP/DP/HDMI/DVI
4K Support	Yes, at 60Hz
Max Resolution (HDMI 1.4)‡	4096x2160@24Hz
Max Resolution (DP)‡	4096x2304@60Hz
Max Resolution (eDP - Integrated Flat Panel)‡	4096x2304@60Hz
Max Resolution (VGA)‡	N/A
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	0x3E96
<u>Expansion Options</u>	
Scalability	1S Only
PCI Express Revision	3
PCI Express Configurations ‡	1x16,2x8,1x8+2x4
Max # of PCI Express Lanes	16
<u>Package Specifications</u>	
Sockets Supported	FCLGA1151
Max CPU Configuration	1
Package Size	37.5mm x 37.5mm
Low Halogen Options Available	See MDDS
<u>Advanced Technologies</u>	
Intel® Optane™ Memory Supported ‡	Yes
Intel® Turbo Boost Technology	2
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	Intel® SSE4.1, Intel® SSE4.2, Intel® AVX2
Idle States	Yes
Enhanced Intel SpeedStep® Technology	Yes

Thermal Monitoring Technologies	Yes
<u>Security & Reliability</u>	
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