



Intel® Xeon® E-2278GEL Processor

16M Cache, 2.00 GHz

Spec Code

SRGE2

Ordering Code

CM8068404311303

Intel® Xeon® E-2278GEL Processor (16M Cache, 2.00 GHz)

Essentials

Product Collection	Intel® Xeon® E Processor
Code Name	Products formerly Coffee Lake
Vertical Segment	Embedded
Processor Number	E-2278GEL
Status	Launched
Launch Date	Q2'19
Lithography	14 nm
Use Conditions	Embedded Broad Market Commercial Temp
Recommended Customer Price	\$494.00

Performance

# of Cores	8
# of Threads	16
Processor Base Frequency	2.00 GHz
Max Turbo Frequency	3.90 GHz
Cache	16 MB
Bus Speed	8 GT/s DMI3
TDP	35 W

Supplemental Information

Embedded Options Available	Yes
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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 †	Yes

Processor Graphics

Processor Graphics ‡	Intel® UHD Graphics 630
Graphics Base Frequency	350 MHz
Graphics Max Dynamic Frequency	1.20 GHz
Graphics Video Max Memory	128 GB
Graphics Output	eDP/DP/HDMI/DVI

4K Support	Yes, at 60Hz
Max Resolution (HDMI 1.4)‡	4096x2160@30Hz
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	0x3E9A
<u>Expansion Options</u>	
Scalability	1S Only
PCI Express Revision	3.0
PCI Express Configurations ‡	Up to 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
<u>Advanced Technologies</u>	
Intel® Optane™ Memory Supported ‡	Yes
Intel® Turbo Boost Technology ‡	2.0
Intel® vPro™ Platform Eligibility ‡	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 with both Intel® SPS and 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