



# Intel® Xeon® E-2124G Processor

8M Cache, up to 4.50 GHz

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## Essentials

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Product Collection	Intel® Xeon® E Processor
Code Name	Products formerly Coffee Lake
Vertical Segment	Server
Processor Number	E-2124G
Status	Launched
Launch Date <a href="#">?</a>	Q3'18
Lithography <a href="#">?</a>	14 nm
Use Conditions <a href="#">?</a>	Embedded Broad Market Commercial Temp
Recommended Customer Price <a href="#">?</a>	-

## Performance

# of Cores <a href="#">?</a>	4
# of Threads <a href="#">?</a>	4
Processor Base Frequency <a href="#">?</a>	3.40 GHz
Max Turbo Frequency <a href="#">?</a>	4.50 GHz
Cache <a href="#">?</a>	8 MB SmartCache
Bus Speed <a href="#">?</a>	8 GT/s DMI3
TDP <a href="#">?</a>	71 W

## Supplemental Information

Embedded Options Available <a href="#">?</a>	Yes
<p>Support for up to 128GB system memory capacity will be available in 2019 and requires Description both a BIOS update and hardware platform support. Please contact your hardware provider regarding availability for your system.</p>	
Datasheet	<a href="#">View now</a>

## Memory Specifications

Max Memory Size (dependent on memory type) <a href="#">?</a>	128 GB
Memory Types <a href="#">?</a>	DDR4-2666
Max # of Memory Channels <a href="#">?</a>	2

Max Memory Bandwidth <a href="#">?</a>	41.6 GB/s
ECC Memory Supported ‡ <a href="#">?</a>	Yes

## Processor Graphics

Processor Graphics ‡ <a href="#">?</a>	Intel® UHD Graphics 630
Graphics Base Frequency <a href="#">?</a>	350 MHz
Graphics Max Dynamic Frequency <a href="#">?</a>	1.15 GHz
Graphics Video Max Memory <a href="#">?</a>	128 GB
Graphics Output <a href="#">?</a>	eDP/DP/HDMI/DVI
4K Support <a href="#">?</a>	Yes, at 60Hz
Max Resolution (HDMI 1.4)‡ <a href="#">?</a>	4096x2160@24Hz
Max Resolution (DP)‡ <a href="#">?</a>	4096x2304@60Hz
Max Resolution (eDP - Integrated Flat Panel)‡ <a href="#">?</a>	4096x2304@60Hz
Max Resolution (VGA)‡ <a href="#">?</a>	N/A
DirectX* Support <a href="#">?</a>	12
OpenGL* Support <a href="#">?</a>	4.5
Intel® Quick Sync Video <a href="#">?</a>	Yes
Intel® InTru™ 3D Technology <a href="#">?</a>	Yes
Intel® Clear Video HD Technology <a href="#">?</a>	Yes
Intel® Clear Video Technology <a href="#">?</a>	Yes
# of Displays Supported ‡	3
Device ID	0x3E96

## Expansion Options

Scalability	1S Only
PCI Express Revision <a href="#">?</a>	3.0
PCI Express Configurations ‡ <a href="#">?</a>	Up to 1x16, 2x8, 1x8+2x4
Max # of PCI Express Lanes <a href="#">?</a>	16

## Package Specifications

Sockets Supported <a href="#">?</a>	FCLGA1151
Max CPU Configuration	1
Package Size	37.5mm x 37.5mm
Low Halogen Options Available	No

## Advanced Technologies

Intel® Optane™ Memory Supported ‡ <a href="#">?</a>	Yes
Intel® Turbo Boost Technology ‡ <a href="#">?</a>	2.0
Intel® vPro™ Platform Eligibility ‡ <a href="#">?</a>	Yes
Intel® Hyper-Threading Technology ‡ <a href="#">?</a>	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

### 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

More support options for Intel® Xeon® E-2124G Processor (8M Cache, up to 4.50 GHz)



Product Support



Downloads and Software



Support Community



Warranty and Replacement



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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.

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/](http://www.intel.com/technology/turboboost/) for more information.

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

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

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.

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.

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

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.



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