



Intel® Xeon® E-2254ML Processor

8M Cache, 1.70 GHz

☐

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Product Collection	Intel® Xeon® E Processor
Code Name	Products formerly Coffee Lake
Vertical Segment	Embedded
Processor Number	E-2254ML
Status	Launched
Launch Date	Q2'19
Lithography	14 nm
Use Conditions	Embedded Broad Market Commercial Temp
Recommended Customer Price	





CPU Specifications

# of Cores	4
# of Threads	8
Processor Base Frequency	1.70 GHz
Max Turbo Frequency	3.50 GHz
Cache	8 MB
Bus Speed	8 GT/s
Intel® Turbo Boost Technology 2.0 Frequency [‡]	3.50 GHz
TDP	25 W

















Supplemental Information

Embedded Options Available	Yes
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Memory Specifications

Max Memory Size (dependent on memory type) 	64 GB
Memory Types 	DDR4-2666
Max # of Memory Channels 	2
ECC Memory Supported ‡ 	Yes



Processor Graphics

Processor Graphics ‡ 	Intel® UHD Graphics P630
Graphics Base Frequency 	350 MHz
Graphics Max Dynamic Frequency 	1.10 GHz
Graphics Video Max Memory 	64 GB
Graphics Output 	eDP/DP/HDMI/DVI
4K Support 	Yes, at 60Hz
Max Resolution (HDMI)‡ 	4096x2160@30Hz
Max Resolution (DP)‡ 	4096x2304@30Hz
Max Resolution (eDP - Integrated Flat Panel)‡ 	4096x2304@30Hz
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	0x3E94

Expansion Options

















PCI Express Revision 	3.0
PCI Express Configurations ‡ 	Up to 1x16, 2x8, 1x8+2x4
Max # of PCI Express Lanes 	16

Package Specifications








Sockets Supported 	FCBGA1440
Max CPU Configuration	1
T _{JUNCTION} 	100
Package Size	42mm x 28mm

Advanced Technologies

Intel® Optane™ Memory Supported ‡ 	Yes
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Intel® Speed Shift Technology 	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® Transactional Synchronization Extensions 	Yes
Intel® 64 ‡ 	Yes
Instruction Set 	64-bit
Instruction Set Extensions 	Intel® SSE4.1, Intel® SSE4.2, Intel® AVX2
Intel® My WiFi Technology 	Yes
Idle States 	Yes
Enhanced Intel SpeedStep® Technology 	Yes
Thermal Monitoring Technologies 	Yes
Intel® Flex Memory Access 	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

More support options for Intel® Xeon® E-2254ML Processor (8M Cache, 1.70 GHz)



Product Support



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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/ 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.

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.

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.

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

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.

Check <http://ipt.intel.com/> for systems that support Intel® Identity Protection Technology (Intel® IPT).

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