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Intel® Xeon® Processor E3-1278L v4

6M Cache, 2.00 GHz

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Specifications

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Essentials

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Product Collection	Intel® Xeon® Processor E3 v4 Family
Code Name	Products formerly Broadwell
Vertical Segment	Embedded
Processor Number	E3-1278LV4
Status	Launched
Launch Date ?	Q2'15
Lithography ?	14 nm
Recommended Customer Price ?	

Performance

# of Cores ?	4
# of Threads ?	8
Processor Base Frequency ?	2.00 GHz
Max Turbo Frequency ?	3.30 GHz
Cache ?	6 MB SmartCache
Bus Speed ?	5 GT/s DMI
TDP ?	47 W

Supplemental Information

Embedded Options Available ?	Yes
Datasheet	View now
Product Brief	View now
Additional Information URL	View now

Memory Specifications

Max Memory Size (dependent on memory type) ?	32 GB
Memory Types ?	DDR3L 1600
Max # of Memory Channels ?	2
Max Memory Bandwidth ?	25.6 GB/s
ECC Memory Supported ‡ ?	Yes

Processor Graphics

Graphics Base Frequency	800 MHz
Graphics Max Dynamic Frequency	1.00 GHz
Graphics Video Max Memory	32 GB
Graphics Output	eDP/DP/HDMI/VGA
Max Resolution (HDMI 1.4)‡	2560x1600@60Hz
Max Resolution (DP)‡	4096x2304@60Hz
DirectX* Support	11.2
OpenGL* Support	4.3
Intel® Quick Sync Video	Yes
Intel® InTru™ 3D Technology	Yes
Intel® Flexible Display Interface (Intel® FDI)	Yes
Intel® Clear Video HD Technology	Yes
# of Displays Supported ‡	3

Expansion Options

Scalability	1S Only
PCI Express Revision	3.0
PCI Express Configurations ‡	Up to 1x16 2x8 1x8 2x4
Max # of PCI Express Lanes	16

Package Specifications

Sockets Supported	FCBGA1364
Max CPU Configuration	1
$T_{JUNCTION}$	105°C
Package Size	37.5mm x 32mm x 1.8mm

Advanced Technologies

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
Intel® Stable Image Platform Program (SIPP)	No

Security & Reliability

Intel® AES New Instructions ❓	Yes
Secure Key ❓	Yes
Intel® OS Guard	Yes
Intel® Trusted Execution Technology ‡ ❓	Yes
Execute Disable Bit ‡ ❓	Yes
Anti-Theft Technology ❓	Yes

More support options for Intel® Xeon® Processor E3-1278L v4 (6M Cache, 2.00 GHz)

Product Support

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Warranty and Replacement

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Refer to Datasheet for formal definitions of product properties and features.

"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.

‡ 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.

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.

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.

The Recommended Customer Price ("RCP") is pricing guidance for Intel products. Prices are for direct Intel customers, typically represent 1,000-unit purchase quantities, and are subject to change without notice. Taxes and shipping, etc. not included. Prices may vary for other package types and shipment quantities, and special promotional arrangements may apply. If sold in bulk, price represents individual unit. Listing of these RCP does not constitute a formal pricing offer from Intel. Please work with your appropriate Intel representative to obtain a formal price quotation.

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

For benchmarking data see http://www.intel.com/performance.

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.

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