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Understanding [Embedded - Microprocessors](#)

Embedded microprocessors are specialized computing chips designed to perform specific tasks within an embedded system. Unlike general-purpose microprocessors found in personal computers, embedded microprocessors are tailored for dedicated functions within larger systems, offering optimized performance, efficiency, and reliability. These microprocessors are integral to the operation of countless electronic devices, providing the computational power necessary for controlling processes, handling data, and managing communications.

Applications of [Embedded - Microprocessors](#)

Embedded microprocessors are utilized across a broad spectrum of applications, making them indispensable in

Details

Product Status	Active
Core Processor	Xeon E5-2428L
Number of Cores/Bus Width	6 Core, 64-Bit
Speed	1.8GHz
Co-Processors/DSP	-
RAM Controllers	-
Graphics Acceleration	-
Display & Interface Controllers	-
Ethernet	-
SATA	-
USB	-
Voltage - I/O	-
Operating Temperature	-
Security Features	-
Package / Case	1356-LGA Module
Supplier Device Package	1356-LGA
Purchase URL	https://www.e-xfl.com/product-detail/advantech/96mpxe-1-8-15m13t



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Intel® Xeon® Processor E5-2428L (15M, 1.8 GHz, 7.2 GT/s Intel® QPI)

SPECIFICATIONS

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COMPATIBLE PRODUCTS

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Specifications

Essentials

Status	Launched
Launch Date	Q2'12
Expected Discontinuance	Q2'19
Processor Number	E5-2428L
# of Cores	6
# of Threads	12
Clock Speed	1.8 GHz
Max Turbo Frequency	2 GHz
Intel® QPI Speed	7.2 GT/s
# of QPI Links	1
Instruction Set	64-bit
Instruction Set Extensions	Yes
Embedded Options Available	Yes
Max TDP	60 W
Recommended Customer Price	TRAY: \$628

Memory Specifications

Memory Types	DDR3-1333
# of Memory Channels	3
ECC Memory Supported	Yes

Graphics Specifications

Integrated Graphics	
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Expansion Options

PCI Express Revision	Gen3
# of PCI Express Ports	24

Package Specifications

Max CPU Configuration	2
Package Size	LGA1356
Sockets Supported	FCLGA1356
Low Halogen Options Available	See MDDS

Advanced Technologies

Intel® Turbo Boost Technology	Yes
Intel® Hyper-Threading Technology	Yes
Intel® Virtualization Technology (VT-x)	Yes
Intel® Trusted Execution Technology	Yes
AES New Instructions	Yes

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ADDITIONAL INFORMATION

PCN/MDDS INFORMATION

SR0M3
919364: [PCN](#) | [MDDS](#)



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Intel® Xeon® Processor E5-2428L (15M, 1.8 GHz, 7.2 GT/s Intel® QPI)

SPECIFICATIONS

COMPATIBLE PRODUCTS

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All

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Retired and Discontinued



ORDERING AND SPEC INFORMATION

Ordering and Spec Information

Intel® Xeon® Processor E5-2428L (15M, 1.8 GHz, 7.2 GT/s Intel® QPI) FC-LGA10, Tray

Socket	Step	Step TDP	Ordering Code	Spec Code	VT-x	ECCN	CCATS	US HTS	RCP
FCLGA1356	C2	60 W	CM8062007187509	SR0M3	Yes	5A992C	G077159	8542310000-HYBRD	\$628

*Approximate CPU size subject to change. Please refer to the Intel® Processor Family Data Sheet for more information.

Intel® 64 *Trademarks	 Yes
Enhanced Intel SpeedStep® Technology	 Yes

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

The Recommended Customer Price ("RCP") is pricing guidance for Intel products. Prices are for direct Intel customers 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. 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.

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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/products/processor_number for details.

Hyper-Threading Technology (HT Technology) requires a computer system with an Intel® processor supporting HT Technology and an HT Technology enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. See www.intel.com/products/ht/hyperthreading_more.htm for more information including details on which processors support HT Technology.

64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Consult with your system vendor for more information.

Max Turbo Frequency refers to the maximum single-core frequency that can be achieved with Intel® Turbo Boost Technology, which requires a PC with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See www.intel.com/technology/turboboost/ for more information.

Enabling Execute Disable Bit functionality requires a PC with a processor with Execute Disable Bit capability and a supporting operating system. Check with your PC manufacturer on whether your system delivers Execute Disable Bit functionality.

Intel® Virtualization Technology requires a computer system with a processor, chipset, BIOS, virtual machine monitor (VMM) and for some uses, certain platform software, enabled for it. Functionality, performance or other benefit will vary depending on hardware and software configurations. Intel Virtualization Technology-enabled VMM applications are currently in development.

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

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Low Halogen: Applies only to brominated and chlorinated flame retardants (BFRs/CFRs) and PVC in the final product. Intel components as well as purchased components on the finished assembly meet JS-709 requirements, and the PCB / substrate meet IEC 61249-2-21 requirements. The replacement of halogenated flame retardants and/or PVC may not be better for the environment.

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.

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