



Intel Atom® x5-E3930 Processor

2M Cache, up to 1.80 GHz

Add to Compare

Specifications

Essentials

Performance

Supplemental Information

Memory Specifications

Processor Graphics

Expansion Options

I/O Specifications

Package Specifications

Advanced Technologies

Security & Reliability

Product Images

Downloads and Software

Essentials

 Export specifications

Product Collection	Intel® Atom™ Processor X Series
Code Name	Products formerly Apollo Lake
Vertical Segment	Embedded
Processor Number	E3930
Status	Announced
Launch Date 	Q4'16
Lithography 	14 nm
Recommended Customer Price 	N/A
Use Conditions 	Industrial Extended Temp, Embedded Broad Market Extended Temp

Performance

# of Cores 	2
# of Threads 	2
Processor Base Frequency 	1.30 GHz
Burst Frequency 	1.80 GHz
Cache 	2 MB L2
TDP 	6.5 W

Supplemental Information

Embedded Options Available 	Yes
Additional Information URL	View now

Memory Specifications

Max Memory Size (dependent on memory type) 	8 GB
Memory Types 	DDR3L (ECC and Non ECC) up to 1866 MT/s; LPDDR4 up to 2133 MT/s
Max # of Memory Channels 	4
Max Memory Bandwidth 	34.1 GB/s
Physical Address Extensions 	40-bit
ECC Memory Supported ‡ 	Yes

Processor Graphics

Processor Graphics † ?	Intel® HD Graphics 500
Graphics Base Frequency ?	400 MHz
Graphics Burst Frequency	550 MHz
Graphics Video Max Memory ?	2 GB
Graphics Output ?	eDP/DP/HDMI/MIPI-DSI
Execution Units ?	12
4K Support ?	Yes, at 60Hz
Max Resolution (HDMI 1.4)‡ ?	3840x2160 @30Hz
Max Resolution (DP)‡ ?	4096x2160 @60Hz
Max Resolution (eDP - Integrated Flat Panel)‡ ?	3840x2160 @ 60Hz
DirectX* Support ?	Yes
OpenGL* Support ?	Yes
Intel® Quick Sync Video ?	Yes
Intel® InTru™ 3D Technology ?	No
Intel® Clear Video HD Technology ?	Yes
Intel® Clear Video Technology ?	Yes
# of Displays Supported ‡	3
Device ID	0x5A85

Expansion Options

PCI Express Revision ?	2.0
PCI Express Configurations ‡ ?	x4,x2,x1
Max # of PCI Express Lanes ?	6

I/O Specifications

# of USB Ports	8
USB Revision ?	2.0/3.0
Total # of SATA Ports ?	2
Integrated LAN ?	No
General Purpose IO	Yes
UART	Yes
Max # of SATA 6.0 Gb/s Ports	2

Package Specifications

Max CPU Configuration	1
T _{CASE} ?	103°C
T _{JUNCTION} ?	110°C
Operating Temperature Range	-40°C to 85°C
Package Size	24mm x 31mm

Advanced Technologies

Intel® Turbo Boost Technology ‡ ?	No
Intel® vPro™ Platform Eligibility ‡ ?	No
Secure Boot ?	Yes
Intel® Hyper-Threading Technology ‡ ?	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® 64 ‡ ?	Yes
Instruction Set ?	64-bit
Idle States ?	Yes
Enhanced Intel SpeedStep® Technology ?	Yes
Thermal Monitoring Technologies ?	Yes
Intel® HD Audio Technology ?	Yes
Intel® Identity Protection Technology ‡ ?	Yes
Intel® Rapid Storage Technology ?	No
Intel® Smart Connect Technology ?	No
Intel® Stable Image Platform Program (SIPP) ?	No
Intel® Smart Response Technology ?	No
Intel® Virtualization Technology for Itanium (VT-i) ?	No

Security & Reliability

Intel® AES New Instructions ?	Yes
Secure Key ?	Yes
Intel® Trusted Execution Technology ‡ ?	No
Execute Disable Bit ‡ ?	Yes
Anti-Theft Technology ?	No
Intel® OS Guard	No

More support options for Intel Atom® x5-E3930 Processor (2M Cache, up to 1.80 GHz)



Product Support



Downloads and Software



Support Community



Warranty and Replacement



Need more help?

Contact support



Give Feedback

All information provided is subject to change at any time, without notice. Intel may make changes to manufacturing life cycle, specifications, and product descriptions at any time, without notice. The information herein is provided "as-is" and Intel does not make any representations or warranties whatsoever regarding accuracy of the information, nor on the product features, availability, functionality, or compatibility of the products listed. Please contact system vendor for more information on specific products or systems.

Intel classifications are for informational purposes only and consist of Export Control Classification Numbers (ECCN) and Harmonized Tariff Schedule (HTS) numbers. Any use made of Intel classifications are without recourse to Intel and shall not be construed as a representation or warranty regarding the proper ECCN or HTS. Your company as an importer and/or exporter is responsible for determining the correct classification of your transaction.

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.



[Company Information](#) | [Our Commitment](#) | [Communities](#) | [Investor Relations](#) | [Contact Us](#)

[Newsroom](#) | [Jobs](#)



[© Intel Corporation](#) | [Terms of Use](#) | [*Trademarks](#) | [Privacy](#) | [Cookies](#) | [Supply Chain Transparency](#) | [Site Map](#)