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Intel® Core™ i7-3930K Processor (12M Cache, up to 3.80 GHz)

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SPECIFICATIONS

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SPECIFICATIONS

Essentials	
Status	Launched
Launch Date	Q4'11
Processor Number	i7-3930K
# of Cores	6
# of Threads	12
Clock Speed	3.2 GHz
Max Turbo Frequency	3.8 GHz
Intel® Smart Cache	12 MB
DMI2	5 GT/s
Instruction Set	64-bit
Instruction Set Extensions	SSE4.2, AVX, AES
Embedded Options Available	No
Lithography	32 nm
Max TDP	130 W
VID Voltage Range	0.600-1.350V
Recommended Customer Price	
Description	This product includes VT-d support only on the C2 stepping. Stepping information can be viewed via the menu on the left.

Memory Specifications

Max Memory Size (dependent on memory type)	64 GB
Memory Types	DDR3-1066/1333/1600
# of Memory Channels	4
Max Memory Bandwidth	51.2 GB/s
ECC Memory Supported ‡	No

Expansion Options

PCI Express Revision	2.0
Max # of PCI Express Lanes	40

Package Specifications

Max CPU Configuration	1
T _{case}	66.8°C
Package Size	52.5mm x 45.0mm
Sockets Supported	FCLGA2011, FCLGA2011, FCLGA2011, FCLGA2011
Low Halogen Options Available	See MDDS

Advanced Technologies

QUICK LINKS

- Products formerly Sandy Bridge E
- Download Datasheet
- Find Compatible Boards
- Search Distributors
- Support Overview
- Search all of intel.com

PCN/MDDS Information

SR0KY
919202: [PCN](#) | [MDDS](#)
919887: [PCN](#) | [MDDS](#)
SR0H9
917899: [PCN](#) | [MDDS](#)
918750: [PCN](#) | [MDDS](#)

Intel® Turbo Boost Technology‡	2.0
Intel® vPro Technology‡	No
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® 64 ‡	Yes
Idle States	Yes
Enhanced Intel SpeedStep® Technology	Yes
Thermal Monitoring Technologies	Yes
Intel® Identity Protection Technology‡	Yes
Intel® Smart Response Technology	Yes

Intel® Platform Protection Technology	
Trusted Execution Technology‡	No
Execute Disable Bit ‡	Yes

Intel® Data Protection Technology	
AES New Instructions	Yes

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

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.

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

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

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.

‡ 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.

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.

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.

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.

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

Intel® Smart Response Technology requires a select Intel® Core™ processor, an enabled chipset, Intel® Rapid Storage Technology software, and a properly configured hybrid drive (HDD + small SSD). Depending on system configuration, your results may vary. Contact your system manufacturer for more information.

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.

 Send us your feedback!

