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Intel® Core™ i7-4800MQ Processor

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6M Cache, up to 3.70 GHz

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Essentials	Export specification
Product Collection	4th Generation Intel® Core™ i7 Processors
Code Name	Products formerly Haswell
Vertical Segment	Mobile
Processor Number	i7-4800MQ
Status	Launched
Launch Date 😨	Q2'13
Lithography ?	22 nm
Recommended Customer Price ?	
Performance	
# of Cores 🔞	4
# of Threads 🔞	8
Processor Base Frequency ?	2.70 GHz
Max Turbo Frequency ?	3.70 GHz
Cache ?	6 MB SmartCache
Bus Speed 🕐	5 GT/s DMI2
TDP ?	47 W
Supplemental Information	
Embedded Options Available ?	No
Datasheet	View now
Memory Specifications	
Max Memory Size (dependent on memory type) 💿	32 GB
Memory Types ?	DDR3L 1333/1600
Max # of Memory Channels ?	2
Max Memory Bandwidth 🔞	25.6 GB/s
ECC Memory Supported ‡ ?	No
Processor Graphics	
Processor Graphics ‡ ?	Intel® HD Graphics 4600
Graphics Base Frequency 🔞	400 MHz

Graphics Max Dynamic Frequency ?	1.30 GHz
Graphics Video Max Memory ?	2 GB
Graphics Output ?	eDP/DP/HDMI/VGA
Max Resolution (HDMI 1.4)‡ 👔	2560x1600@60Hz
Max Resolution (DP)‡ 👔	3840x2160@60Hz
Max Resolution (VGA)‡ 🕐	1920x1200@60Hz
DirectX* Support 👔	11.2/12
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
Device ID	0x416
Expansion Options	
PCI Express Revision ?	3
PCI Express Configurations ‡ 👔	1x16, 2x8, 1x8 2x4
Max # of PCI Express Lanes ?	16
Package Specifications	
Sockets Supported (?)	FCPGA946
Sockets Supported ?	FCPGA946
Max CPU Configuration	1
Max CPU Configuration TJUNCTION TJUNCTION	1 100°C
Max CPU Configuration	1
Max CPU Configuration TJUNCTION ?	1 100°C
Max CPU Configuration TJUNCTION Package Size	1 100°C
Max CPU Configuration TJUNCTION Package Size Advanced Technologies	1 100°C 37.5mm x 37.5mm x 4.7mm
Max CPU Configuration TJUNCTION ? Package Size Advanced Technologies Intel® Turbo Boost Technology ‡ ?	1 100°C 37.5mm x 37.5mm x 4.7mm 2.0
Max CPU Configuration TJUNCTION ? Package Size Advanced Technologies Intel® Turbo Boost Technology ‡ ? Intel® vPro™ Platform Eligibility ‡ ?	1 100°C 37.5mm x 37.5mm x 4.7mm 2.0 Yes
Max CPU Configuration TJUNCTION Package Size Advanced Technologies Intel® Turbo Boost Technology Intel® vPro™ Platform Eligibility Intel® Hyper-Threading Technology Intel® Hyper-Threading Technology	1 100°C 37.5mm x 37.5mm x 4.7mm 2.0 Yes Yes Yes
Max CPU Configuration TJUNCTION ② Package Size Advanced Technologies Intel® Turbo Boost Technology ‡ ② Intel® vPro™ Platform Eligibility ‡ ② Intel® Hyper-Threading Technology ‡ ③ Intel® Virtualization Technology (VT-x) ‡ ②	1 100°C 37.5mm x 37.5mm x 4.7mm 2.0 Yes Yes Yes
Max CPU Configuration TJUNCTION ? Package Size Advanced Technologies Intel® Turbo Boost Technology † ? Intel® vPro™ Platform Eligibility † ? Intel® Hyper-Threading Technology † ? Intel® Virtualization Technology (VT-x) † ? Intel® Virtualization Technology for Directed I/O (VT-	1 100°C 37.5mm x 37.5mm x 4.7mm 2.0 Yes Yes Yes Yes Yes
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Max CPU Configuration TJUNCTION ? Package Size Advanced Technologies Intel® Turbo Boost Technology † ? Intel® vPro™ Platform Eligibility † ? Intel® Hyper-Threading Technology † ? Intel® Virtualization Technology (VT-x) † ? Intel® Virtualization Technology for Directed I/O (VT-Intel® VT-x with Extended Page Tables (EPT) † ? Intel® TSX-NI ? Intel® 64 † ?	1 100°C 37.5mm x 37.5mm x 4.7mm 2.0 Yes Yes Yes Yes No Yes
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Max CPU Configuration TJUNCTION ? Package Size Advanced Technologies Intel® Turbo Boost Technology † ? Intel® vPro™ Platform Eligibility † ? Intel® Hyper-Threading Technology † ? Intel® Virtualization Technology (VT-x) † ? Intel® Virtualization Technology for Directed I/O (VT-Intel® VT-x with Extended Page Tables (EPT) † ? Intel® TSX-NI ? Intel® 64 † ? Instruction Set ? Instruction Set Extensions ?	1 100°C 37.5mm x 37.5mm x 4.7mm 2.0 Yes Yes Yes Yes Aves Aves Aves Aves Aves Aves Aves Av
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More support options for Intel® Core™ i7-4800MQ Processor (6M Cache, up to 3.70 GHz)





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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.

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

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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