



Intel® Core™ i7-4558U Processor

4M Cache, up to 3.30 GHz

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Essentials

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Product Collection	4th Generation Intel® Core™ i7 Processors
Code Name	Products formerly Haswell
Vertical Segment	Mobile
Processor Number	i7-4558U
Off Roadmap	No
Status	Launched
Launch Date ?	Q3'13
Lithography ?	22 nm

Performance

# of Cores ?	2
# of Threads ?	4
Processor Base Frequency ?	2.80 GHz
Max Turbo Frequency ?	3.30 GHz
Cache ?	4 MB Intel® Smart Cache
Bus Speed ?	5 GT/s
TDP ?	28 W

Supplemental Information

Embedded Options Available ?	No
Datasheet	View now

Memory Specifications

Max Memory Size (dependent on memory type) ?	16 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® Iris® Graphics 5100
Graphics Base Frequency ?	200 MHz
Graphics Max Dynamic Frequency ?	1.20 GHz
Graphics Video Max Memory ?	2 GB
Graphics Output ?	eDP/DP/HDMI/VGA
Max Resolution (HDMI 1.4)‡ ?	3200x2000@60Hz
Max Resolution (DP)‡ ?	3200x2000@60Hz
Max Resolution (VGA)‡ ?	N/A
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	0xA2E

Expansion Options

PCI Support ?	No
PCI Express Revision ?	2.0
PCI Express Configurations ‡ ?	4x1, 2x4
Max # of PCI Express Lanes ?	12

I/O Specifications

# of USB Ports	4
USB Revision ?	3.0
Total # of SATA Ports ?	4
Integrated LAN ?	No
Integrated IDE ?	No
General Purpose IO	Yes
UART	Yes
Max # of SATA 6.0 Gb/s Ports	4

Package Specifications

Sockets Supported ?	FCBGA1168
Max CPU Configuration	1
T _{JUNCTION} ?	100°C
Package Size	40mm x 24mm x 1.5mm

Advanced Technologies

Intel® Turbo Boost Technology ‡ ?	2.0
Intel® vPro™ Platform Eligibility ‡ ?	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® TSX-NI ?	No
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® ME Firmware Version ?	9.5
Intel® HD Audio Technology ?	Yes
Intel® Identity Protection Technology ‡ ?	Yes
Intel® Rapid Storage Technology ?	Yes
Intel® Smart Connect Technology ?	Yes

Security & Reliability

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

More support options for Intel® Core™ i7-4558U Processor (4M Cache, up to 3.30 GHz)



Product Support



Downloads and Software



Support Community



Warranty and
Replacement



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

‡ 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.

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.

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

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

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

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.

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.

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.



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