



Intel® Core™ i5-520M Processor (3M Cache, 2.40 GHz)

SPECIFICATIONS

Essentials

Status	Launched
Launch Date	Q1'10
Processor Number	i5-520M
# of Cores	2
# of Threads	4
Clock Speed	2.4 GHz
Max Turbo Frequency	2.933 GHz
Intel® Smart Cache	3 MB
DMI	2.5 GT/s
Instruction Set	64-bit
Instruction Set Extensions	SSE4.1, SSE4.2
Embedded Options Available	Yes
Lithography	32 nm
Max TDP	35 W
Recommended Customer Price	TRAY: \$220.00 BOX : \$227.00

Memory Specifications

Max Memory Size (dependent on memory type)	8 GB
Memory Types	DDR3-800/1066
# of Memory Channels	2
Max Memory Bandwidth	17.1 GB/s
Physical Address Extensions	36-bit
ECC Memory Supported †	No

Graphics Specifications

Processor Graphics †	Intel® HD Graphics
Graphics Base Frequency	500 MHz
Graphics Max Dynamic Frequency	766 MHz
Intel® Flexible Display Interface (Intel® FDI)	Yes
Intel® Clear Video HD Technology	Yes
Macrovision* License Required	No
# of Displays Supported †	2

Expansion Options

PCI Express Revision	2.0
PCI Express Configurations †	1x16
Max # of PCI Express Lanes	16

Package Specifications

Max CPU Configuration	1
T _{JUNCTION}	105°C
Package Size	rPGA 37.5mmx 37.5mm, BGA 34mmx28mm
Processing Die Size	81 mm ²
# of Processing Die Transistors	382 million
Graphics and IMC Lithography	45 nm
Graphics and IMC Die Size	114 mm ²
# of Graphics and IMC Die Transistors	177 million
Sockets Supported	BGA1288, PGA988

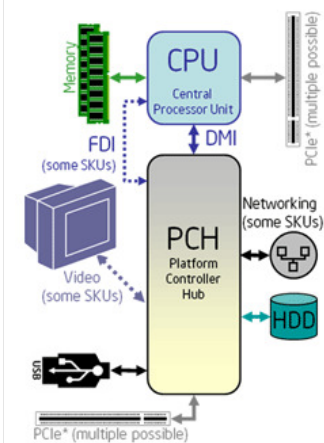
Low Halogen Options Available	See MDDS
<p>⊖ Advanced Technologies</p>	
Intel® Turbo Boost Technology †	Yes
Intel® vPro Technology †	Q Yes
Intel® Hyper-Threading Technology †	Q Yes
Intel® Virtualization Technology (VT-x) †	Q Yes
Intel® Virtualization Technology for Directed I/O (VT-d) †	Q Yes
Intel® VT-x with Extended Page Tables (EPT) †	Q Yes
Intel® 64 †	Q Yes
Idle States	Yes
Enhanced Intel SpeedStep® Technology	Q Yes
Thermal Monitoring Technologies	Yes
Intel® Fast Memory Access	Yes
Intel® Flex Memory Access	Yes

<p>⊖ Intel® Data Protection Technology</p>	
AES New Instructions	Q Yes
<p>⊖ Intel® Platform Protection Technology</p>	
Trusted Execution Technology †	Q Yes
Execute Disable Bit †	Yes

COMPATIBLE PRODUCTS

<p>⊖ Chipsets</p>						
Compare Select All	Product Name	Status	Embedded Options Available	Max TDP	Recommended Customer Price	
	Mobile Intel® HM57 Express Chipset (Intel® BD82HM57 PCH)	Launched	No	3.5 W	N/A	
	Mobile Intel® HM55 Express Chipset (Intel® BD82HM55 PCH)	Launched	Yes	3.5 W	T&R : \$40.00	
	Mobile Intel® QM57 Express Chipset (Intel® BD82QM57 PCH)	Launched	Yes	3.5 W	T&R : \$48.00	
	Mobile Intel® QS57 Express Chipset (Intel® BD82QS57 PCH)	Launched	No	3.4 W	N/A	
	Mobile Intel® PM55 Express Chipset (Intel® BD82PM55 PCH)	End of Life	No	3.5 W	N/A	

PRODUCT IMAGES



ORDERING AND SPEC INFORMATION

Trade Compliance Information

ECCN	CCATS	US HTS
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ECCN	CCATS	US HTS
5A992C	G077159	8542310000-HYBRD

Ordering and Spec Information

Spec Code	Ordering Code	Step	RCP	Socket
Intel® Core™ i5-520M Processor (3M Cache, 2.40 GHz) FC-PGA10, Tray				
SLBU3	CP80617004119AE	K0	\$220.00	PGA988

Retired and Discontinued

Spec Code	Ordering Code	Step	RCP	Socket
Boxed Intel® Core™ i5-520M Processor (3M Cache, 2.40 GHz) FC-PGA10				
SLBNB	BX80617I5520M	C2	\$227.00	PGA988
SLBU3	BX80617I5520M	K0	\$227.00	PGA988
Intel® Core™ i5-520M Processor (3M Cache, 2.40 GHz) FC-BGA10, Tray				
SLBNA	CN80617004119AE	C2	N/A	BGA1288
Intel® Core™ i5-520M Processor (3M Cache, 2.40 GHz) FC-PGA10, Tray				
SLBNB	CP80617004119AE	C2	N/A	PGA988

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*"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 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.

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

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.

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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