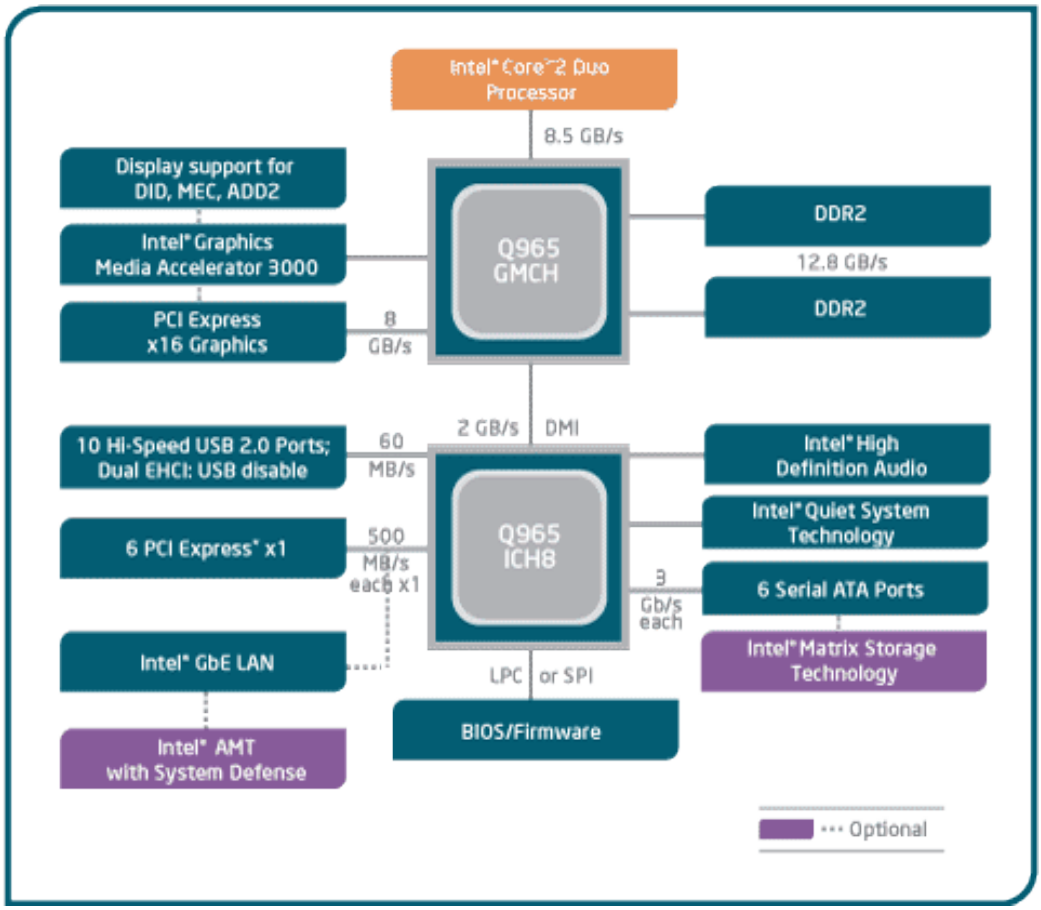
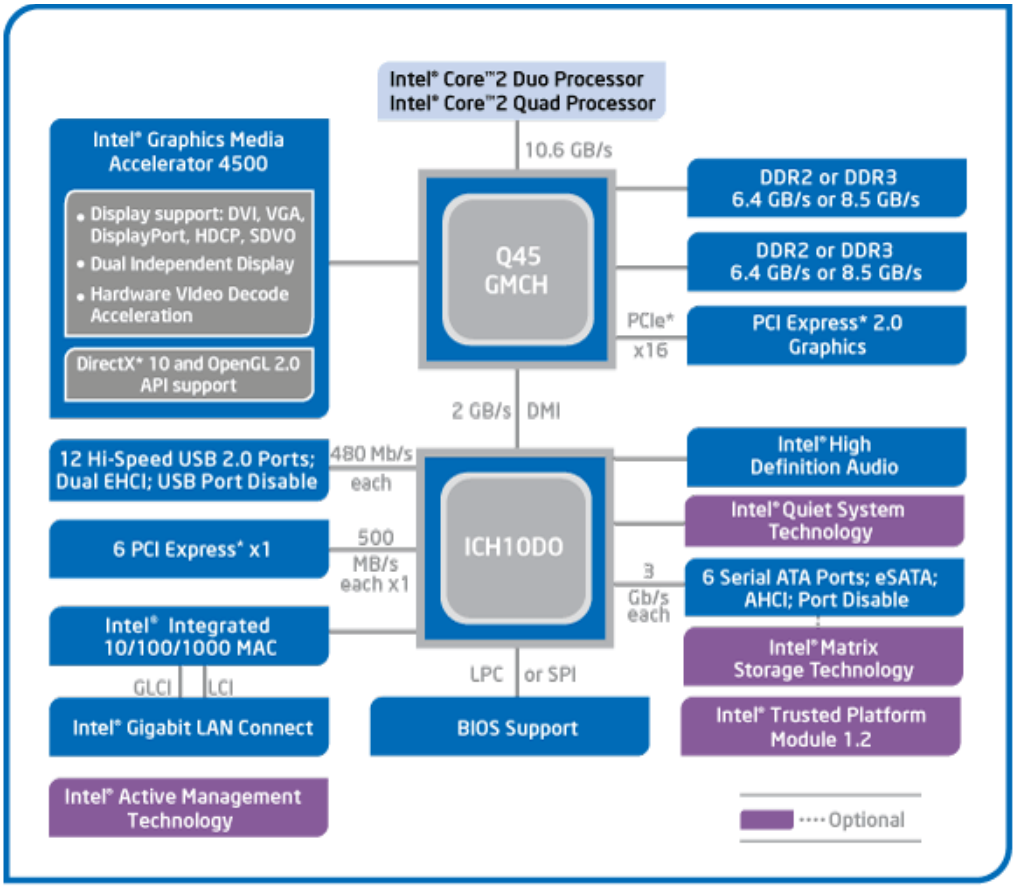
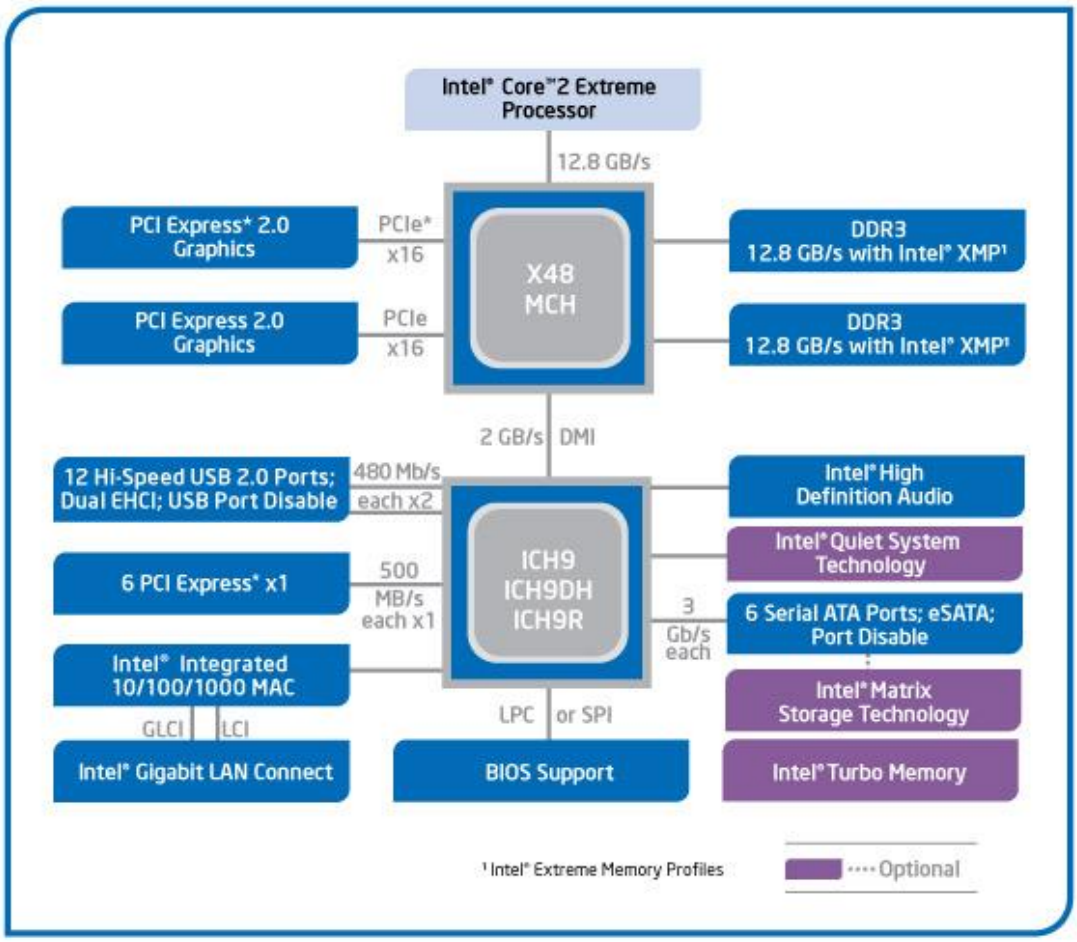


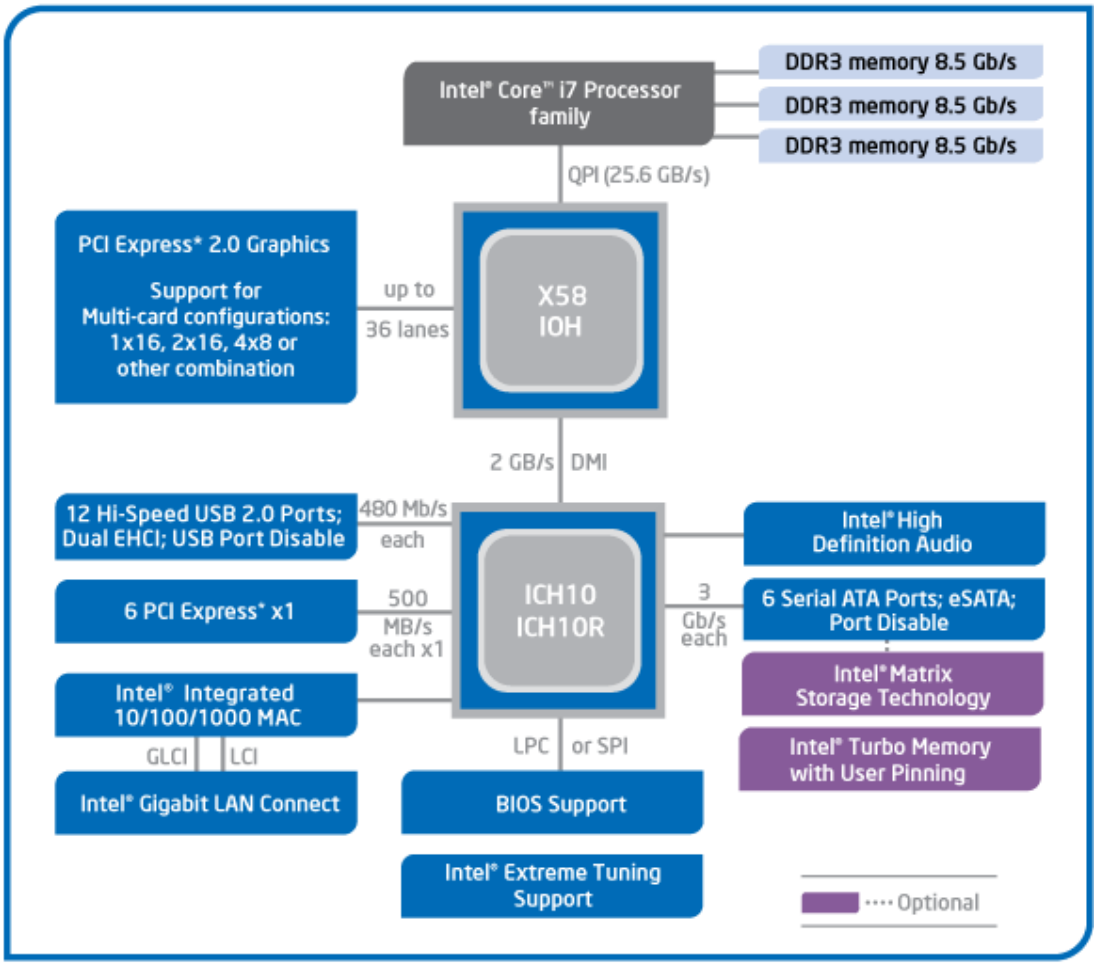
Intel Q965 Express Chipset Block Diagram



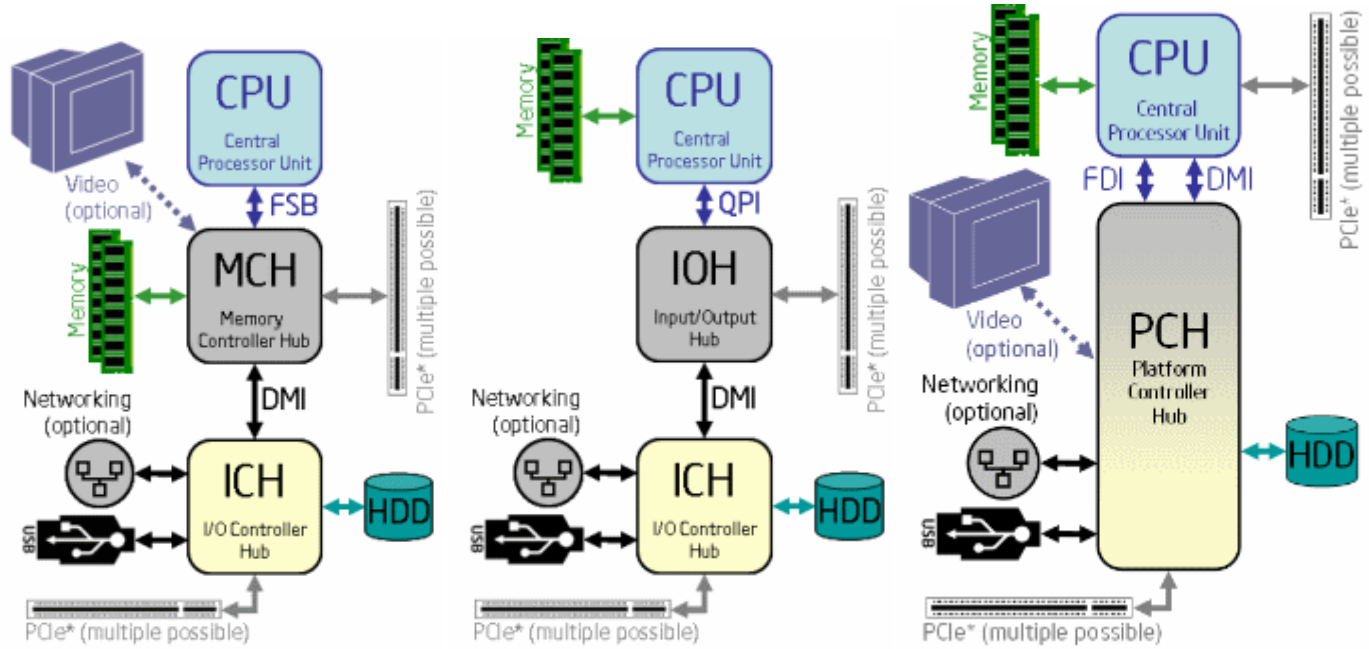
Intel® Q45 Express Chipset Block Diagram



Intel® X48 Express Chipset Block Diagram



Intel® X58 Express Chipset Block Diagram

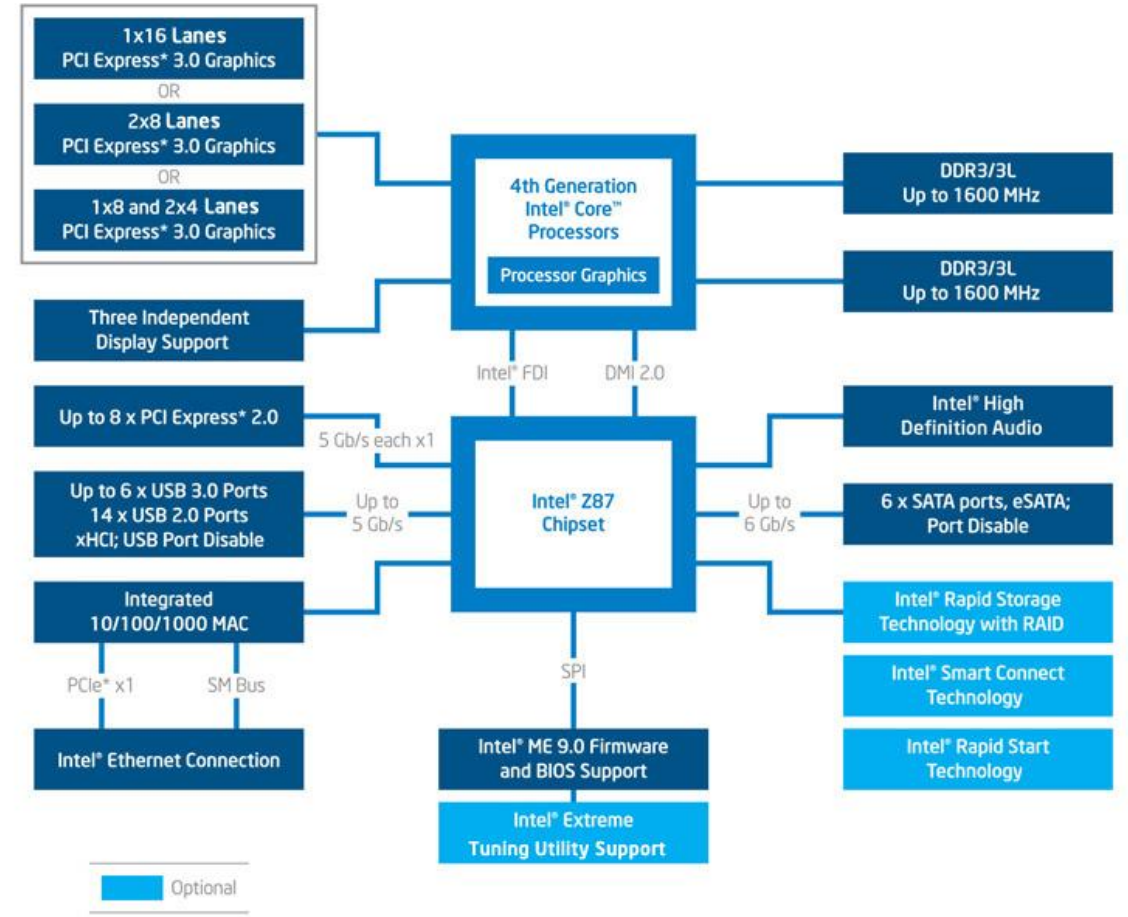


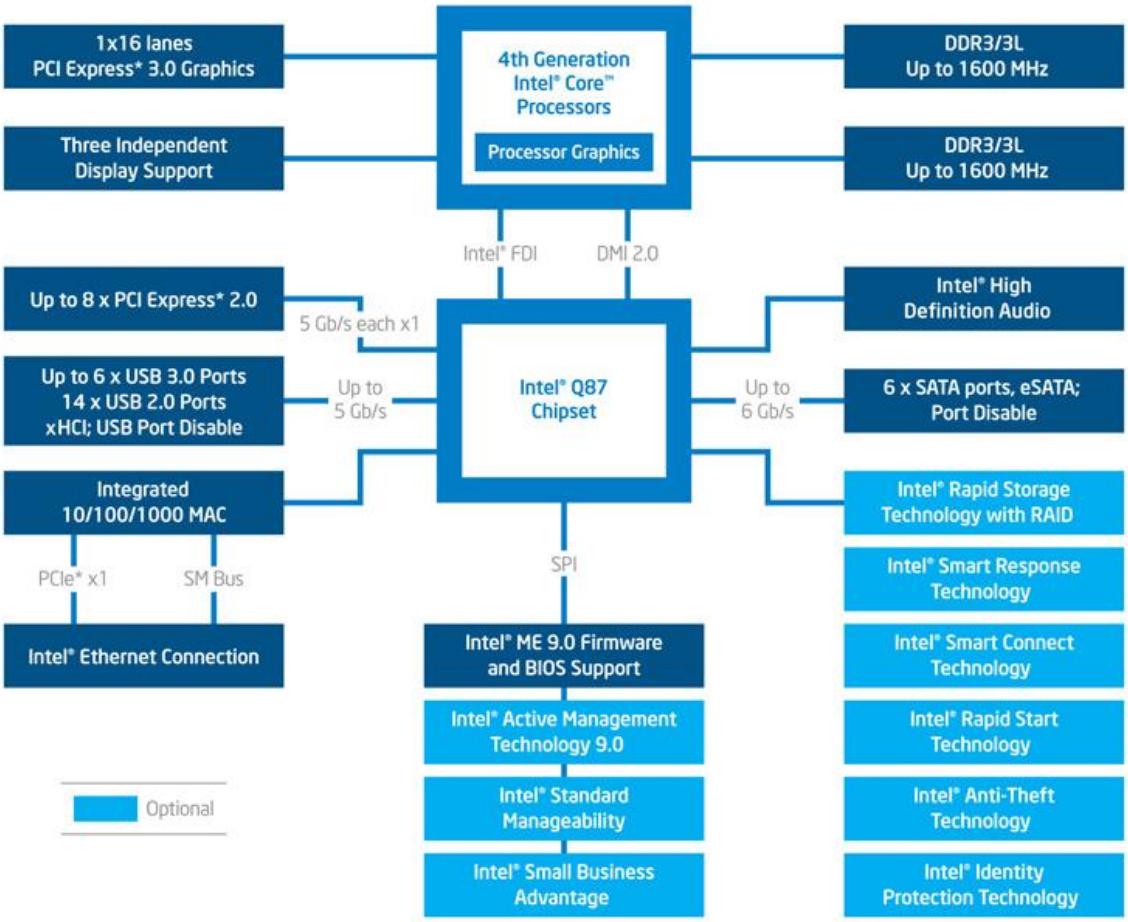
Čípsety a CPU 2008-2015

Rok	do 2008	2009-2010	2011	2012	2013	2014	2015
Chipset	do X48	X58/5x	6x	7x	8x	9x	9x/1xx
LGA	775	1366/1156	1155/2011	1155/2011	1150/2011	1150/2011	1150/1151/2011
CPU	Pentium Core 2	Core i7,i5,i3 1.gen.	Core i7,i5,i3 2.gen.	Core i7,i5,i3 3.gen.	Core i7,i5,i3 4.gen.	Core i7,i5,i3 4.gen./5.gen.	Core i7,i5,i3 5.gen./6.gen.
Litografia	45nm	45nm/32nm	32nm	22nm	22nm	22nm/14nm	14nm
Codename	Conroe	Penryn/ Nehalem	Westmere/ Sandy Bridge	Ive Bridge	Haswell	Haswell/ Broadwell	Broadwell/ Skylake

IDE-R Function

The IDE-R function is an IDE Redirection interface that provides client connection to management console ATA/ATAPI devices such as hard disk drives and optical disk drives. A remote machine can setup a diagnostic SW or OS installation image and direct the client to boot an IDE-R session. The IDE-R interface is the same as the IDE interface although the device is not physically connected to the system and supports the ATA/ATAPI-6 specification. IDE-R does not conflict with any other type of boot and can instead be implemented as a boot device option. The Intel AMT solution will use IDE-R when remote boot is required. The device attached through IDE-R is only visible to software during a management boot session. During normal boot session, the IDE-R controller does not appear as a PCI present device.


1x16 Lanes
PCI Express* 3.0 Graphics
OR
2x8 Lanes
PCI Express* 3.0 Graphics
OR
1x8 and 2x4 Lanes
PCI Express* 3.0 Graphics
4th Generation
Intel® Core™
Processors
Processor Graphics
DDR3/3L
Up to 1600 MHz
DDR3/3L
Up to 1600 MHz
Three Independent
Display Support
Intel® FDI
DMI 2.0
Up to 8 x PCI Express* 2.0
5 Gb/s each x1
Intel® High
Definition Audio
Up to 6 x USB 3.0 Ports
14 x USB 2.0 Ports
xHCI; USB Port Disable
Up to
5 Gb/s
Intel® Z87
Chipset
Up to
6 Gb/s
6 x SATA ports, eSATA;
Port Disable
Integrated
10/100/1000 MAC
Intel® Rapid Storage
Technology with RAID
Intel® Smart Connect
Technology
PCIe* x1
SM Bus
SPI
Intel® Ethernet Connection
Intel® ME 9.0 Firmware
and BIOS Support
Intel® Rapid Start
Technology
Intel® Extreme
Tuning Utility Support
Optional


1x16 lanes
PCI Express* 3.0 Graphics
4th Generation
Intel® Core™
Processors
Processor Graphics
DDR3/3L
Up to 1600 MHz
Three Independent
Display Support
DDR3/3L
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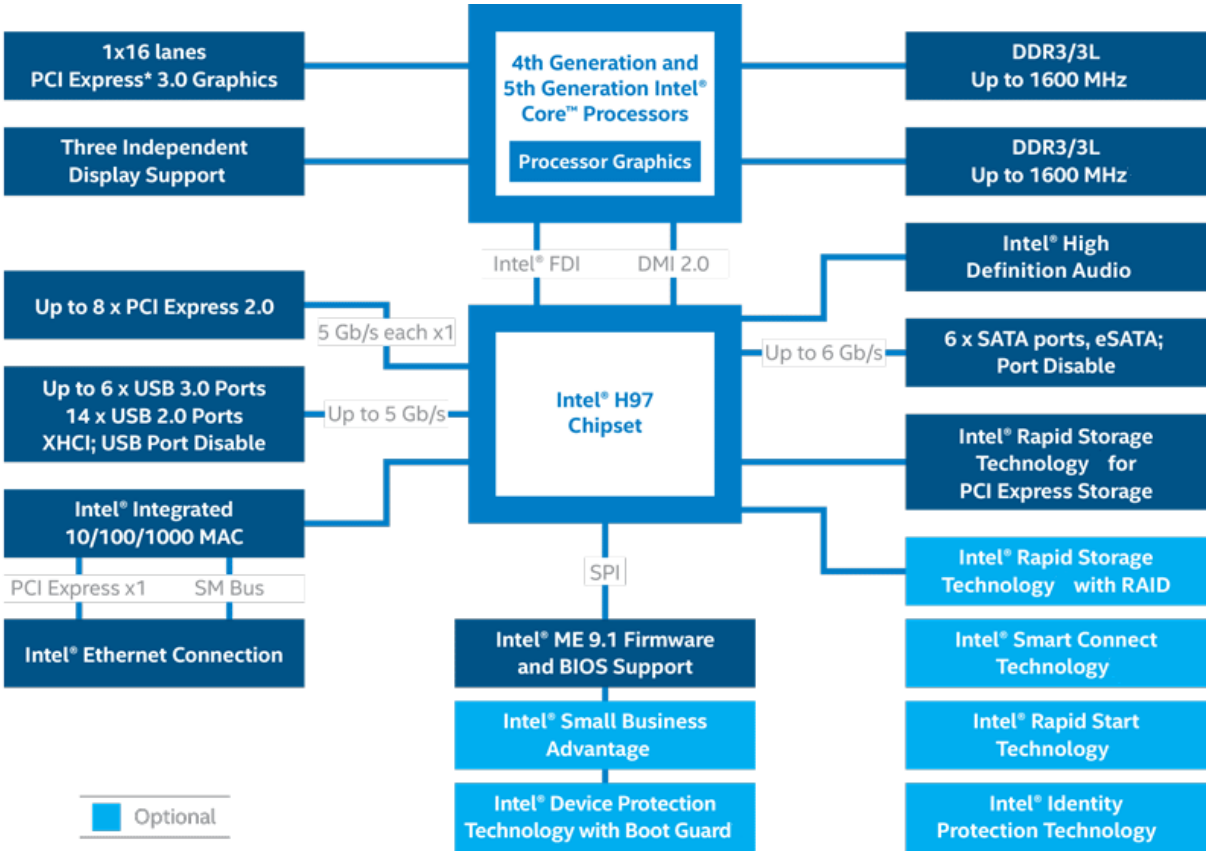
Up to
5 Gb/s
Intel® Q87
Chipset
Up to
6 Gb/s
6 x SATA ports, eSATA;
Port Disable
Integrated
10/100/1000 MAC
Intel® Rapid Storage
Technology with RAID
PCIe* x1
SM Bus
SPI
Intel® Smart Response
Technology
Intel® Ethernet Connection
Intel® ME 9.0 Firmware
and BIOS Support
Intel® Smart Connect
Technology
Intel® Active Management
Technology 9.0
Intel® Rapid Start
Technology
Intel® Standard
Manageability
Intel® Anti-Theft
Technology
Intel® Small Business
Advantage
Intel® Identity
Protection Technology
Optional


1x16 lanes
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DDR3/3L
Up to 1600 MHz
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Up to 8 x PCI Express 2.0
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Chipset
Intel® Rapid Storage
Technology for
PCI Express Storage
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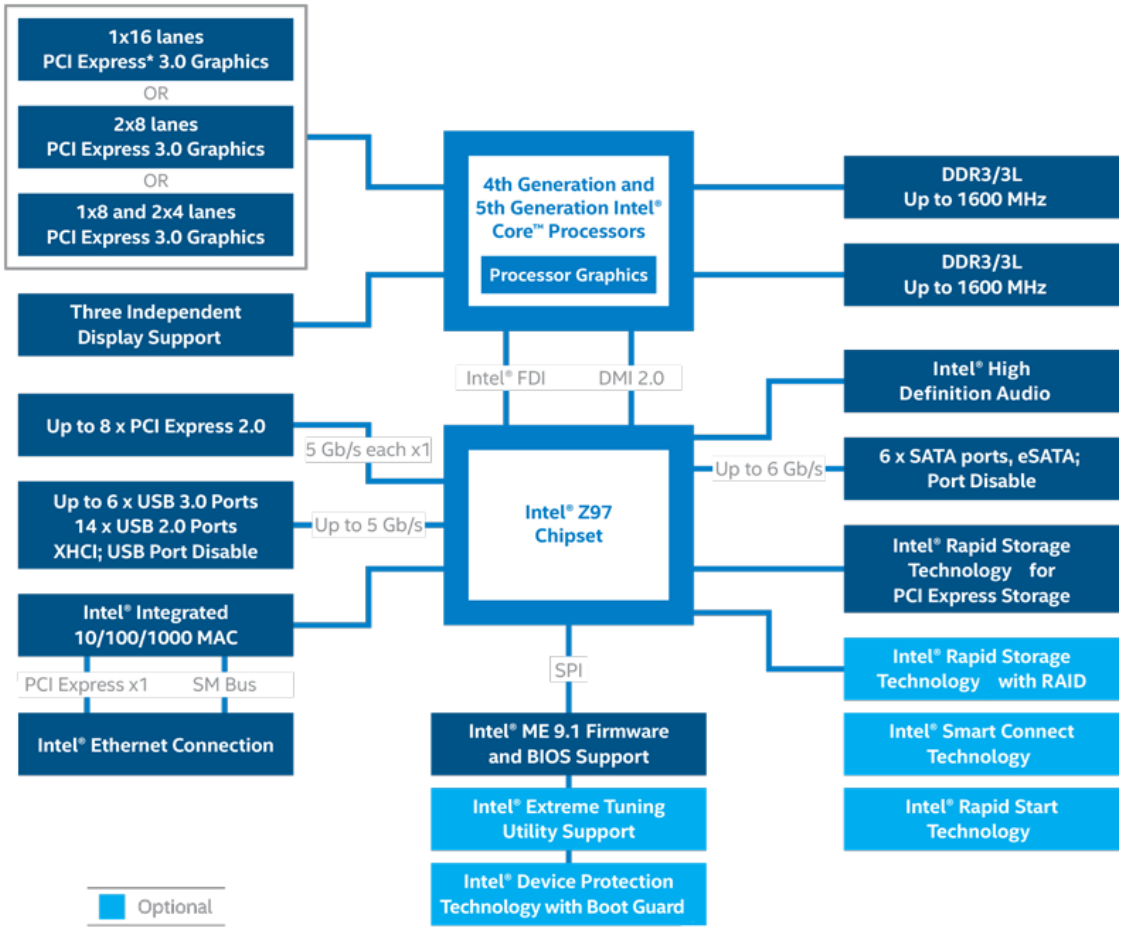
10/100/1000 MAC
SPI
Intel® Rapid Storage
Technology with RAID
PCI Express x1
SM Bus
Intel® ME 9.1 Firmware
and BIOS Support
Intel® Smart Connect
Technology
Intel® Ethernet Connection
Intel® Small Business
Advantage
Intel® Rapid Start
Technology
Intel® Device Protection
Technology with Boot Guard
Intel® Identity
Protection Technology
Optional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OR
2x8 lanes
PCI Express 3.0 Graphics
OR
1x8 and 2x4 lanes
PCI Express 3.0 Graphics
4th Generation and
5th Generation Intel®
Core™ Processors
Processor Graphics
DDR3/3L
Up to 1600 MHz
DDR3/3L
Up to 1600 MHz
Three Independent
Display Support
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Intel® High
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Up to 8 x PCI Express 2.0
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Up to 5 Gb/s
Intel® Z97
Chipset
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Technology for
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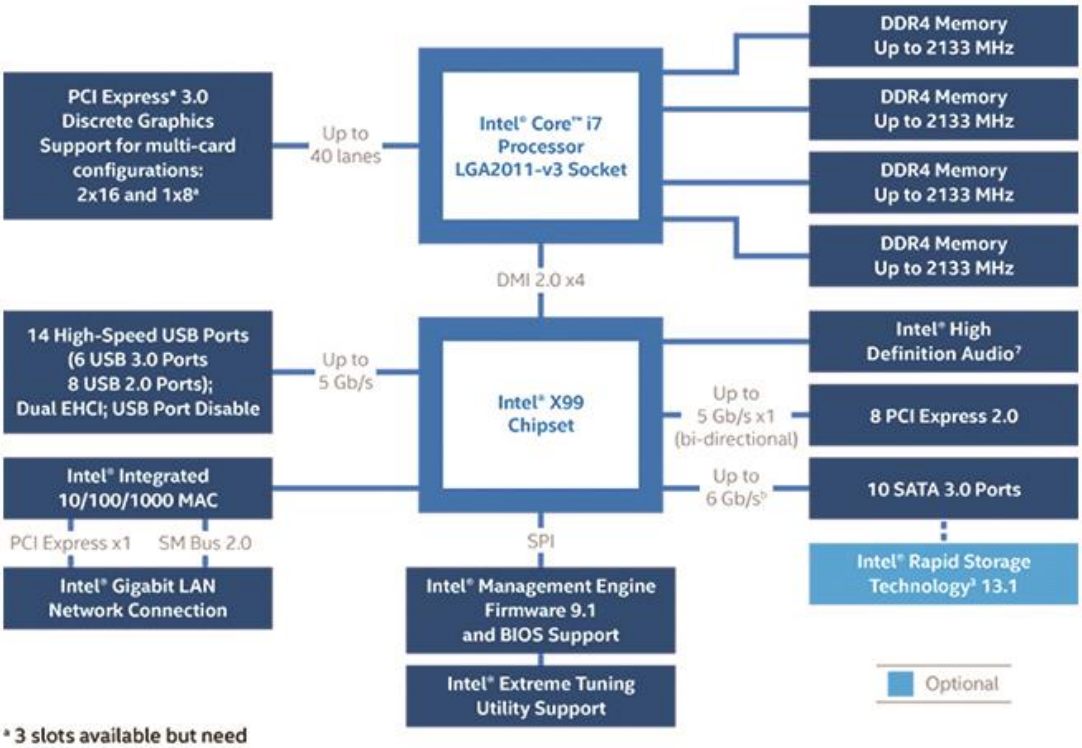
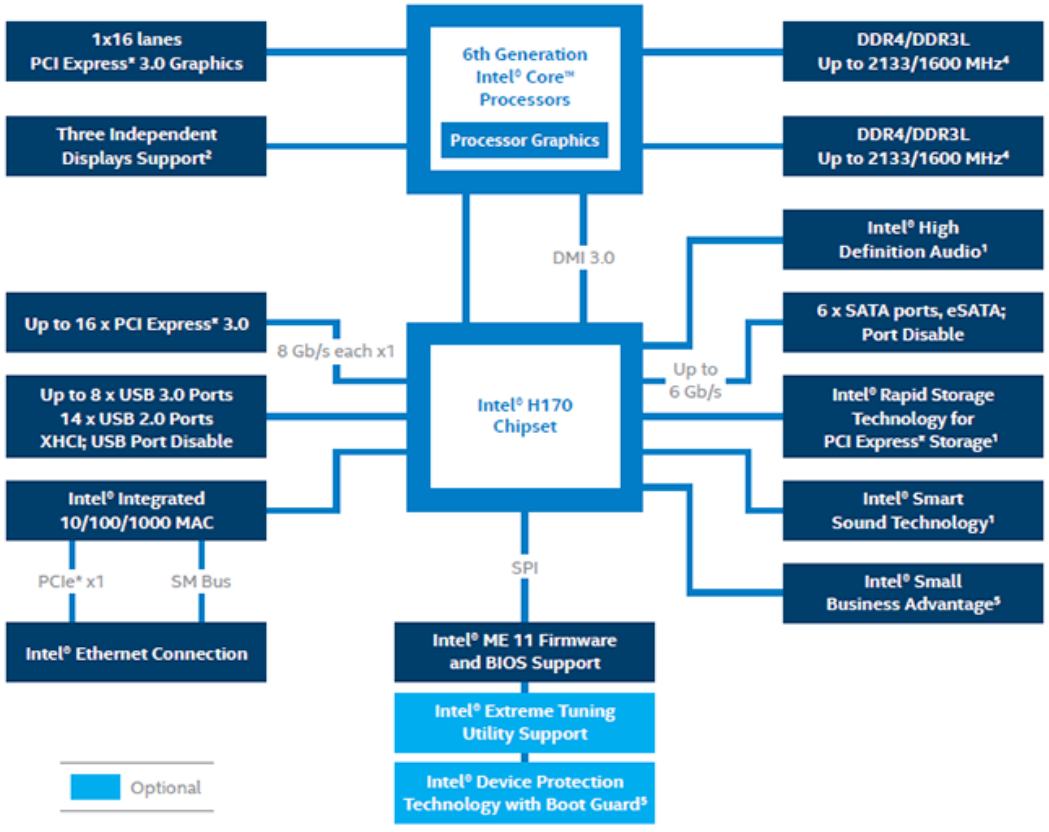
Intel® Smart Connect
Technology
Intel® Ethernet Connection
Intel® Extreme Tuning
Utility Support
Intel® Rapid Start
Technology
Intel® Device Protection
Technology with Boot Guard
Optional



[a] 3 slots available but need additional logic onboard to support more slots. 5x8 configuration requires additional system clocks to be provided by third party components.

[b] All SATA ports capable of 6 Gb/s.

Intel® H170 Chipset Block Diagram



Intel® Q170 and Q150 Chipsets Block Diagram