

**For Dual Socket Motherboards
Intel Chipset 5500 / 5520 | Socket FCLGA1366**



Intel® Xeon® Processor E5502 (4M Cache, 1.86 GHz, 4.80 GT/s Intel® QPI)	Intel® Xeon® Processor E5504 (4M Cache, 2.00 GHz, 4.80 GT/s Intel® QPI)	Intel® Xeon® Processor E5506 (4M Cache, 2.13 GHz, 4.80 GT/s Intel® QPI)	Intel® Xeon® Processor E5520 (8M Cache, 2.26 GHz, 5.86 GT/s Intel® QPI)	Intel® Xeon® Processor E5530 (8M Cache, 2.40 GHz, 5.86 GT/s Intel® QPI)	Intel® Xeon® Processor E5540 (8M Cache, 2.53 GHz, 5.86 GT/s Intel® QPI)	Intel® Xeon® Processor X5550 (8M Cache, 2.66 GHz, 6.40 GT/s Intel® QPI)	Intel® Xeon® Processor X5560 (8M Cache, 2.80 GHz, 6.40 GT/s Intel® QPI)	Intel® Xeon® Processor X5570 (8M Cache, 2.93 GHz, 6.40 GT/s Intel® QPI)	Intel® Xeon® Processor W5580 (8M Cache, 3.20 GHz, 6.40 GT/s Intel® QPI)	Intel® Xeon® Processor W5590 (8M Cache, 3.33 GHz, 6.40 GT/s Intel® QPI)
---	---	---	---	---	---	---	---	---	---	---

Processor number	E5502	E5504	E5506	E5520	E5530	E5540	X5550	X5560	X5570	W5580	W5590
External Link	http://ark.intel.com/Product.aspx?id=37092&processor=E5502&spec-codes=SLBEZLink	http://ark.intel.com/Product.aspx?id=40711&processor=E5504&spec-codes=SLBF9Link	http://ark.intel.com/Product.aspx?id=37096&processor=E5506&spec-codes=SLBF8Link	http://ark.intel.com/Product.aspx?id=40200&processor=E5520&spec-codes=SLBFDLink	http://ark.intel.com/Product.aspx?id=37103&processor=E5530&spec-codes=SLBF7Link	http://ark.intel.com/Product.aspx?id=37104&processor=E5540&spec-codes=SLBF6Link	http://ark.intel.com/Product.aspx?id=37106&processor=X5550&spec-codes=SLBF5Link	http://ark.intel.com/Product.aspx?id=37109&processor=X5560&spec-codes=SLBF4Link	http://ark.intel.com/Product.aspx?id=37111&processor=X5570&spec-codes=SLBF3Link	http://ark.intel.com/Product.aspx?id=37113&processor=W5580&spec-codes=SLBF2Link	http://ark.intel.com/Product.aspx?id=41643&processor=W5590&spec-codes=SLBGELink
Socket	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366
# of Cores	2	4	4	4	4	4	4	4	4	4	4
# of Threads	2	4	4	8	8	8	8	8	8	8	8
Processor Base Frequency	1.86 GHz	2 GHz	2.13 GHz	2.26 GHz	2.4 GHz	2.53 GHz	2.66 GHz	2.8 GHz	2.93 GHz	3.2 GHz	3.33 GHz
Max Turbo Frequency	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Intel® Smart Cache	4 MB	4 MB	4 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB
Bus/Core Ratio	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Intel® QPI Speed	4.8 GT/s	4.8 GT/s	4.8 GT/s	5.86 GT/s	5.86 GT/s	5.86 GT/s	6.4 GT/s	6.4 GT/s	6.4 GT/s	6.4 GT/s	6.4 GT/s
# of QPI Links	2	2	2	2	2	2	2	2	2	2	2
Instruction Set	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit
Instruction Set Extensions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Embedded	No	Yes	No	No	No	Yes	No	No	No	No	No
Supplemental SKU	No	No	No	No	No	No	No	No	No	No	No
Processing Die Lithography	45 nm	45 nm	45 nm	45 nm	45 nm	45 nm	45 nm	45 nm	45 nm	45 nm	45 nm
Max TDP	80W	80 W	80 W	80 W	80 W	80 W	95 W	95 W	95 W	130 W	130 W
VID Voltage Range	0.75V -1.35V	0.75V -1.35V	0.75V -1.35V	0.75V -1.35V	0.75V -1.35V	0.75V -1.35V	0.75V -1.35V	0.75V -1.35V	0.75V -1.35V	0.75V -1.35V	0.75V -1.35V
Memory Specifications											
Max Memory Size (dependent on memory type)	144 GB	144 GB	144 GB	144 GB	144 GB	144 GB	144 GB	144 GB	144 GB	144 GB	144 GB
Memory Types	DDR3-800	DDR3 800	DDR3-800	DDR3 1066/800	DDR3-800/1066	DDR3-800/1066	DDR3-800/1066/1333	DDR3-800/1066/1333	DDR3-800/1066/1333	DDR3-800/1066/1333	DDR3-800/1066/1333
# of Memory Channels	3	3	3	3	3	3	3	3	3	3	3
Max Memory Bandwidth	19.2 GB/s	19.2 GB/s	19.2 GB/s	25.6 GB/s	25.6 GB/s	25.6 GB/s	32 GB/s	32 GB/s	32 GB/s	32 GB/s	32 GB/s
Physical Address Extensions	40-bit	40-bit	40-bit	40-bit	40-bit	40-bit	40-bit	40-bit	40-bit	40-bit	40-bit
ECC Memory Supported	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Advanced Technologies											
Intel® Turbo Boost Technology	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel® Hyper-Threading Technology	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel® Virtualization Technology (VT-x)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel® Virtualization Technology for Directed I/O (VT-d)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel® Trusted Execution Technology	No	No	No	No	No	No	No	No	No	No	No
AES New Instructions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Intel® 64	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Idle States	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enhanced Intel® Speedstep Technology	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel® Demand Based Switching	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Thermal Monitoring Technologies	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Execute Disable Bit	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**For Single Socket Motherboards
Intel Chipset x58 | Socket FCLGA1366**

**For Single Socket Motherboards
Intel Chipset P55 / H55 / H57 / Q57 | Socket LGA1156**



Intel® Core™ i7-920 Processor (8M Cache, 2.66 GHz, 4.80 GT/s Intel® QPI)

Intel® Core™ i7-930 Processor (8M Cache, 2.80 GHz, 4.80 GT/s Intel® QPI)

Intel® Core™ i7-940 Processor (8M Cache, 2.93 GHz, 4.80 GT/s Intel® QPI)

Intel® Core™ i7-950 Processor (8M Cache, 3.06 GHz, 4.80 GT/s Intel® QPI)

Intel® Core™ i7-960 Processor (8M Cache, 3.20 GHz, 4.80 GT/s Intel® QPI)

Intel® Core™ i7-965 Processor Extreme Edition (8M Cache, 3.20 GHz, 6.40 GT/s Intel® QPI)

Intel® Core™ i7-975 Processor Extreme Edition (8M Cache, 3.33 GHz, 6.40 GT/s Intel® QPI)



Intel® Core™ i7-860 Processor (8M Cache, 2.80 GHz)

Intel® Core™ i7-860S Processor (8M Cache, 2.53 GHz)

Intel® Core™ i7-870 Processor (8M Cache, 2.93 GHz)

Processor number	i7-920	i7-930	i7-940	i7-950	i7-960	i7-965	i7-975	Processor number	i7-860	i7-860S	i7-870
External Link	http://ark.intel.com/Product.aspx?id=37147 Link	http://ark.intel.com/Product.aspx?id=41447 Link	http://ark.intel.com/Product.aspx?id=37148 Link	http://ark.intel.com/Product.aspx?id=37150 Link	http://ark.intel.com/Product.aspx?id=37151 Link	http://ark.intel.com/Product.aspx?id=37149 Link	http://ark.intel.com/Product.aspx?id=37153 Link	External link	http://ark.intel.com/Product.aspx?id=41316 Link	http://ark.intel.com/Product.aspx?id=41318 Link	http://ark.intel.com/Product.aspx?id=41315 Link
Socket	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	FCLGA1366	Socket	LGA1156	LGA1156	LGA1156
# of Cores	4	4	4	4	4	4	4	# of Cores	4	4	4
# of Threads	8	8	8	8	8	8	8	# of Threads	8	8	8
Processor Base Frequency	2.66 GHz	2.8 GHz	2.93 GHz	3.06 GHz	3.2 GHz	3.2 GHz	3.33 GHz	Processor Base Frequency	2.8 GHz	2.53 GHz	2.93 GHz
Max Turbo Frequency	2.93 GHz	3.06 GHz	3.2 GHz	3.33 GHz	3.46 GHz	3.46 GHz	3.6 GHz	Max Turbo Frequency	3.46 GHz	3.46 GHz	3.6 GHz
Intel® Smart Cache	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	Intel® Smart Cache	8 MB	8 MB	8 MB
Bus/Core Ratio	20	21	22	23	24	24	25	Bus/Core Ratio	21	19	22
Intel® QPI Bus Speed	4.8 GT/s	4.8 GT/s	4.8 GT/s	4.8 GT/s	4.8 GT/s	6.4 GT/s	6.4 GT/s	DMI Bus speed	2.5 GT/s	2.5 GT/s	2.5 GT/s
# of QPI Links	1	1	1	1	1	1	1	# of QPI Links	n/a	n/a	n/a
Instruction Set	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit	Instruction Set	64-bit	64-bit	64-bit
Instruction Set Extensions	SSE4.2	SSE4.2	SSE4.2	SSE4.2	SSE4.2	SSE4.2	SSE4.2	Instruction Set Extensions	SSE4.2	SSE4.2	SSE4.2
Embedded	No	No	No	No	No	No	No	Embedded	Yes	No	No
Supplemental SKU	No	No	No	No	No	No	No	Supplemental SKU	No	No	No
Processing Die Lithography	45 nm	45 nm	45 nm	45 nm	45 nm	45 nm	45 nm	Processing Die Lithography	45 nm	45 nm	45 nm
Max TDP	130 W	130 W	130 W	130 W	130 W	130 W	130 W	Max TDP	95 W	82 W	95 W
VID Voltage Range	0.800V-1.375V	0.800V-1.375V	0.800V-1.375V	0.800V-1.375V	0.800V-1.375V	0.800V-1.375V	0.800V-1.375V	VID Voltage Range	n/a	n/a	n/a
Memory Specifications								Memory Specifications			
Max Memory Size (dependent on memory type)	24 GB	24 GB	24 GB	24 GB	24 GB	24 GB	24 GB	Max Memory Size (dependent on memory type)	16 GB	16 GB	16 GB
Memory Types	DDR3-800/1066	DDR3-800/1066	DDR3-800/1066	DDR3-800/1066	DDR3-800/1066	DDR3-800/1066	DDR3-800/1066	Memory Types	DDR3-1066/1333	DDR3-1066/1333	DDR3-1066/1333
# of Memory Channels	3	3	3	3	3	3	3	# of Memory Channels	2	2	2
Max Memory Bandwidth	25.6 GB/s	25.6 GB/s	25.6 GB/s	25.6 GB/s	25.6 GB/s	25.6 GB/s	25.6 GB/s	Max Memory Bandwidth	21 GB/s	21 GB/s	21 GB/s
Physical Address Extensions	36-bit	36-bit	36-bit	36-bit	36-bit	36-bit	36-bit	Physical Address Extensions	36-bit	36-bit	36-bit
ECC Memory Supported	No	No	No	No	No	No	No	ECC Memory Supported	No	No	No
Advanced Technologies								Advanced Technologies			
Intel® Turbo Boost Technology	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Intel® Turbo Boost Technology	Yes	Yes	Yes
Intel® Hyper-Threading Technology	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Intel® Hyper-Threading Technology	Yes	Yes	Yes
Intel® Virtualization Technology (VT-x)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Intel® Virtualization Technology (VT-x)	Yes	Yes	Yes
Intel® Virtualization Technology for Directed I/O (VT-d)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Intel® Virtualization Technology for Directed I/O (VT-d)	Yes	Yes	Yes
Intel® Trusted Execution Technology	No	No	No	No	No	No	No	Intel® Trusted Execution Technology	Yes	Yes	Yes
AES New Instructions	No	No	No	No	No	No	No	AES New Instructions	No	No	No
Intel® 64	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Intel® 64	Yes	Yes	Yes
Idle States	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Idle States	Yes	Yes	Yes
Enhanced Intel® Speedstep Technology	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Enhanced Intel® Speedstep Technology	Yes	Yes	Yes
Intel® Demand Based Switching	No	No	No	No	No	No	No	Intel® Demand Based Switching	No	No	No
Thermal Monitoring Technologies	No	No	No	No	No	No	No	Thermal Monitoring Technologies	No	No	No
Execute Disable Bit	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Execute Disable Bit	Yes	Yes	Yes