



Intel® Core™ X-series Processors Desktop Comparison Chart



INSTRUCTIONS

1. If the column heading is underlined, clicking on that will take you to a web site or document where you can get more information on that term.
2. Clicking on the individual processor number will take you to an Intel database that contains an expanded set of processor specifications.
3. Clicking on the individual box order code will take you to an Intel database that will show which Intel® Desktop Boards are compatible with that processor.

Processor Name		Ordering	Package Specification	Frequency/Turbo/Cache/Cores/Threads/TDP							Processor Graphics	Security & Reliability	Advanced Technologies				Memory Specifications	
Processors Number	Launch Year	Box Order Number (Click to link to Compatible Motherboards)	Processors Socket	Processor Base Frequency (GHz)	Max Turbo Frequency	Intel® Turbo Boost Max. Technology 3.0 Frequency †	Cache (MB)	Cores/Threads	TDP (Thermal Design Power) (Watts)	Intel® Graphics	Intel® AES New Instructions (AES)	Intel® Advanced Vector Extensions (AVX)	# of AVX-512 FMA (fused Multiply Add Instructions) Units	Intel® Virtualization Technology (VT-x)	Intel® Optane™ Memory Supported	Max # of Memory Channels	* Maximum DDR4 Supported Memory Speed (MHz)	
i9-10980XE Extreme Edition	Q4'19	BX8069510980XE	LGA2066	3.00	4.60	4.80	24.75	18/36	165	No	Yes	Yes	2	Yes	Yes	4	2933	
i9-10940X	Q4'19	BX8069510940X	LGA2066	3.30	4.60	4.80	19.25	14/28	165	No	Yes	Yes	2	Yes	Yes	4	2933	
i9-10920X	Q4'19	BX8069510920X	LGA2066	3.50	4.60	4.80	19.25	12/24	165	No	Yes	Yes	2	Yes	Yes	4	2933	
i9-10900X	Q4'19	BX8069510900X	LGA2066	3.70	4.60	4.70	19.25	10/20	165	No	Yes	Yes	2	Yes	Yes	4	2933	
i9-9980XE Extreme Edition	Q4'18	BX806739980XE	LGA2066	3.00	4.40	4.50	24.75	18/36	165	No	Yes	Yes	2	Yes	Yes	4	2666	
i9-9960X X-series	Q4'18	BX806739960X	LGA2066	3.10	4.40	4.50	22	16/32	165	No	Yes	Yes	2	Yes	Yes	4	2666	
i9-9940X X-series	Q4'18	BX806739940X	LGA2066	3.30	4.40	4.50	19.25	14/28	165	No	Yes	Yes	2	Yes	Yes	4	2666	
i9-9920X X-series	Q4'18	BX806739920X	LGA2066	3.50	4.40	4.50	19.25	12/24	165	No	Yes	Yes	2	Yes	Yes	4	2666	
i9-9900X X-series	Q4'18	BX806739900X	LGA2066	3.50	4.40	4.50	19.25	10/20	165	No	Yes	Yes	2	Yes	Yes	4	2666	
i9-9820X X-series	Q4'18	BX806739820X	LGA2066	3.30	4.10	4.20	16.5	10/20	165	No	Yes	Yes	2	Yes	Yes	4	2666	
i7-9800X X-series	Q4'18	BX806739800X	LGA2066	3.80	4.40	4.50	16.5	8/16	165	No	Yes	Yes	2	Yes	Yes	4	2666	
i9-7980XE Extreme Edition	Q3'17	BX8067397980XE	LGA2066	2.60	4.20	4.40	24.75	18/36	165	No	Yes	Yes	2	Yes	Yes	4	2666	
i9-7960X X-series	Q3'17	BX8067397960X	LGA2066	2.80	4.20	4.40	22	16/32	165	No	Yes	Yes	2	Yes	Yes	4	2666	
i9-7940X X-series	Q3'17	BX8067397940X	LGA2066	3.10	4.30	4.40	19.25	14/28	165	No	Yes	Yes	2	Yes	Yes	4	2666	
i9-7920X X-series	Q3'17	BX8067397920X	LGA2066	2.90	4.30	4.40	16.5	12/24	140	No	Yes	Yes	2	Yes	Yes	4	2666	
i9-7900X X-series	Q2'17	BX8067397900X	LGA2066	3.30	4.30	4.50	13.75	10/20	140	No	Yes	Yes	2	Yes	Yes	4	2666	
i7-7820X X-series	Q2'17	BX8067397820X	LGA2066	3.60	4.30	4.50	11	8/16	140	No	Yes	Yes	2	Yes	Yes	4	2666	
i7-7800X X-series	Q2'17	BX8067397800X	LGA2066	3.50	4.00	N/A	8.25	6/12	140	No	Yes	Yes	2	Yes	Yes	4	2666	
i7-7740X X-series	Q2'17	BX8067397740X	LGA2066	4.30	4.50	N/A	8	4/8	112	No	Yes	Yes	N/A	Yes	Yes	2	2666	
i5-7640X X-series	Q2'17	BX8067397640X	LGA2066	4.00	4.20	N/A	6	4/4	112	No	Yes	Yes	N/A	Yes	Yes	2	2666	
i7-6950X Extreme Edition	Q2'16	BX8067176950X	LGA2066	3.00	3.50	4.00	25	10/20	140	No	Yes	Yes	N/A	Yes	Yes	4	2666	
i7-6900K	Q2'16	BX8067176900K	LGA2066	3.20	3.70	4.00	20	8/16	140	No	Yes	Yes	N/A	Yes	Yes	4	2666	
i7-6850K	Q2'16	BX8067176850K	LGA2066	3.60	3.80	4.00	15	6/12	140	No	Yes	Yes	N/A	Yes	Yes	4	2666	
i7-6800K	Q2'16	BX8067176800K	LGA2066	3.40	3.60	3.80	15	6/12	140	No	Yes	Yes	N/A	Yes	Yes	4	2666	

* The value in column (Maximum DDR4/DDR3L/DDR3) is the maximum value, please refer to the [product specification page](#) for other possible values supported

Intel® Core™ X-series Processors Top Support Documents

Intel® Desktop Processor Support Resources	This document contains the most commonly sought after information on Intel® Desktop Processors.
Intel® Desktop Processors Motherboard Compatibility Tool	Use this tool to find compatible motherboards for the Intel® Desktop Processor
Desktop Processor Warranty Frequently Asked Questions	This documents provides answers to the most frequent questions we receive regarding processor warranty.
Intel® Processor Installation Center	This site contains installation material for this processors family and socket.

Intel® Core™ X-series Processors Top Support Home Page

<https://www.intel.com/content/www/us/en/support/products/123588/processors/intel-core-processors/intel-core-x-series-processors.html>

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