



Intel® Core™ i7 Desktop Processors 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 and Collection		Frequency/Turbo/Cache/Cores/Threads/TDP					Processor Graphics		Security & Reliability	Advanced Technologies			Memory Specifications	
Processors Number	Product Collection	Processor Base Frequency (GHz)	Max Turbo Frequency	Cache (MB)	Cores/Threads	Thermal Design Power (Watts)	Intel® Graphics	Graphics Speed (MHz)	Intel® AES New Instructions (AES)	Intel® Advanced Vector Extensions (AVX)	Intel® Virtualization Technology (VT-X)	Intel® Optane™ Memory Supported	Max # of Memory Channels	* Maximum DDR4/DDR3L/DDR3 Supported Memory (MHz)
i7-9700	9th Gen	3.00	4.70	12	8/8	65	UHD 630	350/1200	Yes	Yes	Yes	Yes	2	2666/NA/NA
i7-9700F	9th Gen	3.00	4.70	12	8/8	65	No	N/A	Yes	Yes	Yes	Yes	2	2666/NA/NA
i7-9700T	9th Gen	2.00	4.30	12	8/8	35	UHD 630	350/1200	Yes	Yes	Yes	Yes	2	2666/NA/NA
i7-9700KF	9th Gen	3.60	4.90	12	8/8	95	No	N/A	Yes	Yes	Yes	Yes	2	2666/NA/NA
i7-9800X	X-series	3.80	4.40	16.5	8/16	165	No	N/A	Yes	Yes	Yes	Yes	4	2666/NA/NA
i7-9700K	9th Gen	3.60	4.90	12	8/8	95	UHD 630	350/1200	Yes	Yes	Yes	Yes	2	2666/NA/NA
i7-8700T	8th Gen	2.40	4.00	12	6/12	35	UHD 630	350/1200	Yes	Yes	Yes	Yes	2	2666/NA/NA
i7-8086K	8th Gen	4.00	5.00	12	6/12	95	UHD 630	350/1200	Yes	Yes	Yes	Yes	2	2666/NA/NA
i7-8700K	8th Gen	3.70	4.70	12	6/12	95	UHD 630	350/1200	Yes	Yes	Yes	Yes	2	2666/NA/NA
i7-8700	8th Gen	3.20	4.60	12	6/12	65	UHD 630	350/1200	Yes	Yes	Yes	Yes	2	2666/NA/NA
i7-7700T	7th Gen	2.90	3.80	8	4/8	35	HD 630	350/1150	Yes	Yes	Yes	Yes	2	1333,2400/1333,1600/NA
i7-7700K	7th Gen	4.20	4.50	8	4/8	91	HD 630	350/1150	Yes	Yes	Yes	Yes	2	2133,2400/1333,1600/NA
i7-7700	7th Gen	3.60	4.20	8	4/8	65	HD 630	350/1150	Yes	Yes	Yes	Yes	2	2133,2400/1333,1600/NA
i7-6900K	6th Gen	3.20	3.70	20	8/16	140	No	N/A	Yes	Yes	Yes	No	4	2400,2133/NA/NA
i7-6850K	6th Gen	3.60	3.80	15	6/12	140	No	N/A	Yes	Yes	Yes	No	4	2400,2133/NA/NA
i7-6800K	6th Gen	3.40	3.60	15	6/12	140	No	N/A	Yes	Yes	Yes	No	4	2400/NA/NA
i7-6785R	6th Gen	3.30	3.90	8	4/8	65	HD 530	350/1150	Yes	Yes	Yes	No	2	1866,2133/1333,1600/NA
i7-6700T	6th Gen	2.80	3.60	8	4/8	35	HD 530	350/1100	Yes	Yes	Yes	No	2	1866,2133/1333,1600/NA
i7-6700K	6th Gen	4.00	4.20	8	4/8	91	HD 530	350/1150	Yes	Yes	Yes	No	2	1866,2133/1333,1600/NA
i7-6700	6th Gen	3.40	4.00	8	4/8	65	HD 530	350/1150	Yes	Yes	Yes	No	2	1866,2133/1333,1600/NA
i7-5775R	5th Gen	3.30	3.80	6	4/8	65	6200	300/1150	Yes	Yes	Yes	No	2	NA/1333,1600,1866/NA
i7-5775C	5th Gen	3.30	3.70	6	4/8	65	6200	300/1150	Yes	Yes	Yes	No	2	NA/1333,1600/NA
i7-5820K	5th Gen	3.30	3.60	15	6/12	140	No	N/A	Yes	Yes	Yes	No	4	1600,1866,2133/NA/NA
i7-5930K	5th Gen	3.50	3.70	15	6/12	140	No	N/A	Yes	Yes	Yes	No	4	1600,1866,2133/NA/NA
i7-4790T	4th Gen	2.70	3.90	8	4/8	45	HD 4600	350/1200	Yes	Yes	Yes	No	2	NA/1333/1333,1600
i7-4790S	4th Gen	3.20	4.00	8	4/8	65	HD 4600	350/1200	Yes	Yes	Yes	No	2	NA/1333,1600/1333,1600
i7-4790K	4th Gen	4.00	4.40	8	4/8	88	HD 4600	350/1250	Yes	Yes	Yes	No	2	NA/1333,1600/1333,1600
i7-4790	4th Gen	3.60	4.00	8	4/8	84	HD 4600	200/1200	Yes	Yes	Yes	No	2	NA/1333,1600/1333,1600
i7-4785T	4th Gen	2.20	3.20	8	4/8	35	HD 4600	350/1200	Yes	Yes	Yes	No	2	NA/1333,1600/1333,1600
i7-4930K	4th Gen	3.40	3.90	12	6/12	130	No	N/A	Yes	Yes	Yes	No	4	NA/NA/1333,1600,1866
i7-4820K	4th Gen	3.70	3.90	10	4/8	130	No	N/A	Yes	Yes	Yes	No	4	NA/NA/1333,1600,1866
i7-4771	4th Gen	3.50	3.90	8	4/8	84	HD 4600	350/1200	Yes	Yes	Yes	No	2	NA/1333,1600/1333,1600
i7-4770T	4th Gen	2.50	3.70	8	4/8	45	HD 4600	350/1200	Yes	Yes	Yes	No	2	NA/1333,1600/1333,1600
i7-4770S	4th Gen	3.10	3.90	8	4/8	65	HD 4600	350/1200	Yes	Yes	Yes	No	2	NA/1333,1600/1333,1600
i7-4770R	4th Gen	3.20	3.90	8	4/8	65	5200	200/1300	Yes	Yes	Yes	No	2	NA/1333,1600/1333,1600
i7-4770K	4th Gen	3.50	3.90	8	4/8	84	HD 4600	350/1250	Yes	Yes	Yes	No	2	NA/1333,1600/1333,1600
i7-4770	4th Gen	3.40	3.90	8	4/8	84	HD 4600	350/1200	Yes	Yes	Yes	No	2	NA/1333,1066/1333,1600
i7-4765T	4th Gen	2.00	3.00	8	4/8	35	HD 4600	350/1200	Yes	Yes	Yes	No	2	NA/1333,1066/1333,1600
i7-3930K	3rd Gen	3.20	3.80	12	6/12	130	N/A	N/A	Yes	Yes	Yes	No	2	NA/NA/1066,1333,1600
i7-3770T	3rd Gen	2.50	3.70	8	4/8	45	HD 4000	650/1150	Yes	Yes	Yes	No	2	NA/NA/1333,1600
i7-3770S	3rd Gen	3.10	3.90	8	4/8	65	HD 4000	650/1150	Yes	Yes	Yes	No	2	NA/NA/1333,1600
i7-3770K	3rd Gen	3.50	3.90	8	4/8	77	HD 4000	650/1150	Yes	Yes	Yes	No	2	NA/NA/1333,1066
i7-3770	3rd Gen	3.40	3.90	8	4/8	77	HD 4000	650/1150	Yes	Yes	Yes	No	2	NA/NA/1333,1066
i7-2700K	2nd Gen	3.50	3.90	8	4/8	95	HD 3000	850/1350	Yes	Yes	Yes	No	2	NA/NA/1333,1066
i7-980	N/A	3.30	3.60	12	6/12	130	N/A	N/A	Yes	Yes	Yes	No	2	NA/NA/1066
i7-2600S	2nd Gen	2.80	3.80	8	4/8	65	HD 2000	850/1350	Yes	Yes	Yes	No	2	NA/NA/1333,1066
i7-2600K	2nd Gen	3.40	3.80	8	4/8	95	HD 3000	850/1350	Yes	Yes	Yes	No	2	NA/NA/1333,1066
i7-2600	2nd Gen	3.40	3.80	8	4/8	95	HD 2000	850/1350	Yes	Yes	Yes	No	2	NA/NA/1333,1066
i7-970	N/A	3.20	3.46	12	6/12	130	N/A	N/A	Yes	Yes	Yes	No	2	NA/NA/1066,800
i7-880	N/A	3.06	3.73	8	4/8	95	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1333,1066
i7-875K	N/A	2.93	3.60	8	4/8	95	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1333,1066
i7-870S	N/A	2.66	3.60	8	4/8	82	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1333,1066
i7-860S	N/A	2.53	3.46	8	4/8	82	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1333,1066
i7-930	N/A	2.80	3.06	8	4/8	130	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1066,800
i7-960	N/A	3.20	3.46	8	4/8	130	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1066,800
i7-870	N/A	2.93	3.60	8	4/8	95	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1333,1066
i7-860	N/A	2.80	3.46	8	4/8	95	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1333,1066
i7-950	N/A	3.06	3.33	8	4/8	130	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1066,800
i7-940	N/A	2.93	3.20	8	4/8	130	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1066,800
i7-920	N/A	2.66	2.93	8	4/8	130	N/A	N/A	No	Yes	Yes	No	2	NA/NA/1066,800

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

Intel® Core™ i7 Desktop Processor Support Documents

Technical Documents (Datashets, Design Guides, etc)	Technical resources for the processors
Intel® Desktop Processors Motherboard Compatibility Tool	Use this tool to find compatible motherboards for the Intel® Desktop Processor
Intel® Processor Installation Center	This web site contains installation and integration material for Intel® Desktop Processors across various sockets.
Intel® Core™ i7 Desktop Processor Support Home Page	This is the home page for Intel® Core™ Desktop Processors.

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