Quick Reference Guide

Intel® Core™ Desktop Processors (14th gen)

IMPROVED P-core and E-core Frequency[1]

MORE E-cores and Increased L3 Cache for Intel® Core™ i7 Processors

NEW Discrete Intel® Wi-Fi 7 (5 Gig) Support[2]

Support for DDR5 (Up to 5600 MHz) and DDR4 (Up to 3200 MHz)[3]

Intel® 600 & Intel® 700 Chipset-Based Motherboard Support[4]

INCREASED L2 & L3 Cache[5]

LARGER Max Memory Capacity (Up to 192GB)

Performance Hybrid Architecture[6] and Intel® Thread Director[7]

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Specification Table

Processor Number	Processor Cores (P-cores + E-cores)[8]	Processor Threads	Intel® Smart Cache (L3)	Total L2 Cache	Processor Turbo Frequency				Unlocked[11]	Processor Graphics[12]	Total CPU PCIe Lanes	Max Memory Speed (MT/s)[13]	Memory Channels	Max Memory Capacity[13]	Processor Base Power (W)	Maximum Turbo Power
					Intel® Thermal Velocity Boost Frequency (GHz)[9]	Intel® Turbo Boost Max Technology 3.0 Frequency (GHz)[9]	Single P-core Turbo Frequency (GHz)[9]	Single E-core Turbo Frequency (GHz)[10]								
Intel® Core™ i9 Processor 14900K	24 (8 +16)	32	36 MB	32 MB	Up to 6.0	Up to 5.8	Up to 5.6	Up to 4.4	✓	Intel® UHD Graphics 770	20	DDR5 5600 DDR4 3200	2	192 GB	125	253
Intel® Core™ i9 Processor 14900KF	24 (8 +16)	32	36 MB	32 MB	Up to 6.0	Up to 5.8	Up to 5.6	Up to 4.4	✓	n/a	20	DDR5 5600 DDR4 3200	2	192 GB	125	253
Intel® Core™ i7 Processor 14700K	20 (8 +12)	28	33 MB	28 MB	n/a	Up to 5.6	Up to 5.5	Up to 4.3	✓	Intel® UHD Graphics 770	20	DDR5 5600 DDR4 3200	2	192 GB	125	253
Intel® Core™ i7 Processor 14700KF	20 (8+12)	28	33 MB	28 MB	n/a	Up to 5.6	Up to 5.5	Up to 4.3	✓	n/a	20	DDR5 5600 DDR4 3200	2	192 GB	125	253
Intel® Core™ i5 Processor 14600K	14 (6+8)	20	24 MB	20 MB	n/a	n/a	Up to 5.3	Up to 4.0	✓	Intel® UHD Graphics 770	20	DDR5 5600 DDR4 3200	2	192 GB	125	181
Intel® Core™ i5 Processor 14600KF	14 (6+8)	20	24 MB	20 MB	n/a	n/a	Up to 5.3	Up to 4.0	✓	n/a	20	DDR5 5600 DDR4 3200	2	192 GB	125	181

For numbered references, see notices and disclaimers section.

Notices & Disclaimers

Performance varies by use, configuration, and other factors. Learn more on the Performance Index site.

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See backup for configuration details. No product or component can be absolutely secure.

Your costs and results may vary.

Intel technologies may require enabled hardware, software, or service activation.

1. Select SKUs E-cores frequency improved. See ark.intel.com for SKU details.
2. Subject to regional availability, operating system support and router compatibility. Learn more at https://www.intel.com/content/www/us/en/products/docs/wireless/wi-fi-7.html
3. On select processor SKUs. DDR5-5600 MT/s 1DPC UDIMM 1Rx8, 1Rx16 (lead supplier) and DDR5-5200 1Rx8, 1Rx16, 2Rx8 are POR on all Intel® Core™ i9 desktop processor SKUs, all Intel® Core™ i7 desktop processor SKUs, and select Intel® Core™ i5 desktop processor SKUs (14th gen).
4. Check motherboard vendor for compatible BIOS.
5. Intel® Core™ i5 desktop processors (14th gen), Intel® Core™ i7 desktop processors (14th gen), and Intel® Core™ i9 desktop processors (14th gen) only. See ark.intel.com for SKU details.
6. Performance hybrid architecture combines two core microarchitectures, Performance-cores (P-cores) and Efficient-cores (E-cores), on a single processor die first introduced on 12th Gen Intel® Core™ processors. Select 12th Gen and newer Intel® Core™ processors do not have performance hybrid architecture, only P-cores or E-cores, and may have the same cache size. See ark.intel.com for SKU details, including cache size and core frequency.
7. Built into the hardware, Intel® Thread Director is provided only in performance hybrid architecture configurations of 12th Gen or newer Intel® Core™ processors; OS enablement is required. Available features and functionality vary by OS.
8. Processor cores listed first are the total number of cores in the processor followed by the number of P-cores and E-cores in parentheses (P+E).
9. Intel® Hyper-Threading Technology, Intel® Turbo Boost Max Technology 3.0, and Intel® Thermal Velocity Boost are only available on Performance-cores.
10. Efficient-core frequencies are lower to optimize power usage. The frequency of cores and core types varies by workload, power consumption, and other factors. Visit https://www.intel.com/content/www/us/en/architecture-and-technology/turbo-boost/turbo-boost-technology.html for more information.
11. Unlocked features are present with select chipsets and processor combinations. Altering clock frequency or voltage may void any product warranties and reduce stability, security, performance, and life of the processor and other components. Check with system and component manufacturers for details.
12. Available only on Intel® Core™ processors (14th gen) featuring integrated graphics.
13. Maximum memory speeds are associated with 1 DIMM per Channel (1DPC) configurations. Additional DIMM loading on any channel may impact maximum memory speed. Up to DDR5-5600 MT/s 1DPC UDIMM 1Rx8, 1Rx16 and DDR5-5200 1Rx8, 1Rx16, 2Rx8 on select SKUs. Maximum memory capacity is achievable with 2DPC configurations. For additional 2DPC configuration details, refer to the Raptor Lake Processor External Design Specification (EDS), Doc ID 640555.