Quick Reference Guide

Intel® Core™ Desktop Processors (14ᵗʰ gen)

Intel® Core™ Processors (14th gen) Deliver the World's Best Desktop Experience[14]

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]

LARGER Max Memory Capacity (Up to 192GB)

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

INCREASED L2 & L3 Cache[5]

Support for DDR5 (Up to 5600 MT/s) and DDR4 (Up to 3200 MT/s)[3]

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

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Intel® Core™ Desktop Processors (14ᵗʰ gen)

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 (W)
					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

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Intel® Core™ i9 Processor 14900	24 (8+16)	32	36 MB	32 MB	Up to 5.8 GHz	Up to 5.6 GHz	Up to 5.4 GHz	Up to 4.3 GHz	Intel® UHD Graphics 770	20	DDR5 5600 DDR4 3200	2	192GB	65	219
Intel® Core™ i7 Processor 14700	20 (8+12)	28	33 MB	28 MB	n/a	Up to 5.4 GHz	Up to 5.3 GHz	Up to 4.2 GHz	Intel® UHD Graphics 770	20	DDR5 5600 DDR4 3200	2	192GB	65	219
Intel® Core™ i5 Processor 14600	14 (6+8)	20	24 MB	20 MB	n/a	n/a	Up to 5.2 GHz	Up to 3.9 GHz	Intel® UHD Graphics 770	20	DDR5 5600 DDR4 3200	2	192GB	65	154
Intel® Core™ i5 Processor 14500	14 (6+8)	20	24 MB	11.5 MB	n/a	n/a	Up to 5.0 GHz	Up to 3.7 GHz	Intel® UHD Graphics 770	20	DDR5 4800 DDR4 3200	2	192GB	65	154
Intel® Core™ i5 Processor 14400	10 (6+4)	16	20 MB	9.5 MB	n/a	n/a	Up to 4.7 GHz	Up to 3.5 GHz	Intel® UHD Graphics 730	20	DDR5 4800 DDR4 3200	2	192GB	65	148
Intel® Core™ i3 Processor 14100	4 (4+0)	8	12 MB	5 MB	n/a	n/a	Up to 4.7 GHz	n/a	Intel® UHD Graphics 730	20	DDR5 4800 DDR4 3200	2	192GB	60	110
Intel® Core™ i9 Processor 14900F	24 (8+16)	32	36 MB	32 MB	Up to 5.8 GHz	Up to 5.6 GHz	Up to 5.4 GHz	Up to 4.3 GHz	n/a	20	DDR5 5600 DDR4 3200	2	192 GB	65	219
Intel® Core™ i7 Processor 14700F	20 (8+12)	28	33 MB	28 MB	n/a	Up to 5.4 GHz	Up to 5.3 GHz	Up to 4.2 GHz	n/a	20	DDR5 5600 DDR4 3200	2	192 GB	65	219
Intel® Core™ i5 Processor 14400F	10 (6+4)	16	20 MB	9.5 MB	n/a	n/a	Up to 4.7 GHz	Up to 3.5 GHz	n/a	20	DDR5 4800 DDR4 3200	2	192 GB	65	148
Intel® Core™ i3 Processor 14100F	4 (4+0)	8	12 MB	5 MB	n/a	n/a	Up to 4.7 GHz	n/a	n/a	20	DDR5 4800 DDR4 3200	2	192 GB	58	110

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.

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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.
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, and have same cache size as prior generation. Intel® Core™ i3 N-series processors only have E-cores. See ark.intel.com for SKU details.
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.

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14. Based on the performance (as of October 2023) and other attributes of Intel® Core™ processors (14th gen) that combine to form the best overall desktop experience. These include:

- Fast speeds: up to Max Turbo Frequency of 6GHz – the highest for any desktop processor at volume. See ark.intel.com for details.
- Strong processor performance across a collection of benchmarks and real-world gaming, productivity, and content creation workloads, including in relation to prior generation (13th Gen Intel® Core™ processors) and AMD Ryzen 9 7950X and AMD Ryzen 9 7950X3D processors.
- New and improved tuning and optimization features.
- Broad memory support for both DDR4 and DDR5 memory modules.
- Support for best in class wired and wireless connectivity, including discrete Intel® Wi-Fi 7 (5 Gig) support. See intel.com/PerformanceIndex (connectivity) for details.
- Intel's unparalleled approach to security like security assurance programs founded on security by design principles, transparency, and disclosure of vulnerabilities and a robust Intel® Platform Update process, an esteemed bug bounty program as well as internal research through red teams and more.
- Breadth of price and performance options available in Intel® Core™ processor family (14th gen).
- Extensive open ecosystem enablement (e.g., OEMs, ODMs, OSs, ISVs, etc.).

Additional details available at intel.com/14thgen