


Intel launches 14th generation desktop CPU without E core: Flagship Core i9-14901KE with 8 P cores, clocked at 5.8GHz, TDP 125W

What's interesting is that these new chips only offer high-performance P-Core cores without any power-saving E-Core cores.

In the context that Intel's 14th and 13th generation desktop CPU lines are facing a number of stability and software compatibility issues, the company today surprised everyone by quietly introducing New SKUs in this product line.

Starting with the specifications, there are a total of 11 14th generation "E" SKUs that adopt only the P-Core architecture. Since these are Raptor Lake CPUs, they are based on Raptor Cove's P-Core. And while the standard product line features up to 16 Gracemont cores, these new "E" SKUs don't come with any Gracemont cores. According to Intel, these chips are aimed at the Embedded and Commercial markets so most likely will not be offered in the DIY channel, although some distributors and retailers may launch them to the market. systems configured with such chips. Below is a list of newly launched 14th generation "E" CPUs:

1. Core i9-14901KE
2. Core i9-14901E
3. Core i9-14901TE
4. Core i7-14701E
5. Core i7-14701TE
6. Core i5-14501E
7. Core i5-14501TE
8. Core i5-14401E
9. Core i5-14401TE



Intel® Core™ i9 processor 14901KE

36M Cache, up to 5.80 GHz

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Product Collection	Intel® Core™ i9 processors (14th gen)
Code Name	Products formerly Raptor Lake
Vertical Segment	Embedded
Processor Number	i9-14901KE
Lithography	Intel 7

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CPU Specifications

Physical Core Count	8
# of Performance-cores	8
# of Efficient-cores	0
Total Threads	16
Max Turbo Frequency	5.8 GHz
Intel® Thermal Velocity Boost Frequency	5.8 GHz
Intel® Turbo Boost Max Technology 3.0 Frequency [†]	5.8 GHz
Performance-core Max Turbo Frequency	5.8 GHz
Performance-core Base Frequency	3.8 GHz
Cache	36 MB Intel® Smart Cache
Total L2 Cache	16 MB
Processor Base Power	125 W
TDP	125 W

The top SKU in Intel's 14th generation "E" CPU series is the Core i9-14901KE, which has 8 P cores, 16 threads, base clock of 3.8GHz and boost clock of up to 5.8GHz. The chip contains 36MB of L3 cache, 16MB of L2 cache and has a PL1 TDP of 125W. There are no PL2/PL4 ratings listed, so this is likely the default power of the "E" series chip. The Core i9-14901KE features fully unlocked overclocking support, making this an interesting proposition for the limited embedded and DIY market.

The Core i7 and Core i5 SKUs in this product line also have the same number of P-Cores as the standard variant, with 8 P-cores and 6 P-cores respectively. All these processors (Core i9, Core i7, Core i5) will also be available in "T" and "F" series variants, listed in the following:

Intel 14th Gen P-Core Only "E" Series Desktop CPUs:

CPU NAME	CORES / THREADS	BASE / BOOST (MAX) CLOCK	L3 / L2 CACHE	TDP
Core i9-14901KE	8 P / 16	3.8 / 5.8 GHz	36 MB / 16 MB	125W
Core i9-14901E	8 P / 16	2.8 / 5.6 GHz	36 MB / 16 MB	65W
Core i9-14901TE	8 P / 16	2.3 / 5.5 GHz	36 MB / 16 MB	45W
Core i7-14701E	8 P / 16	2.6 / 5.4 GHz	33 MB / 16 MB	65W
Core i7-14701TE	8 P / 16	2.1 / 5.2 GHz	33 MB / 16 MB	45W
Core i5-14501E	6 P / 12	3.3 / 5.2 GHz	24 MB / 12 MB	65W
Core i5-14501TE	6 P / 12	2.2 / 5.1 GHz	24 MB / 12 MB	45W
Core i5-14401E	6 P / 12	2.5 / 4.7 GHz	24 MB / 12 MB	65W
Core i5-14401TE	6 P / 12	2.0 / 4.5 GHz	24 MB / 12 MB	45W
Core i5-14401EF	6 P / 12	2.5 / 4.7 GHz	24 MB / 12 MB	65W
Core i5-14401TEF	6 P / 12	2.0 / 4.5 GHz	24 MB / 12 MB	45W

Intel has listed that these new P-Core-only 14th generation SKUs have been "released". However, since they haven't appeared on any retail store shelves yet, it seems like these chips aren't really designed for the DIY market. Intel is also preparing to introduce more P-Core-only SKUs in its desktop processor lineup, such as the Bartlett Lake-S chip that will have up to 12 P-Cores but it is expected that will launch at the end of 2025.

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