

# Intel introduces a new series of H-series chips for laptops, clocking beyond 5.0GHz

A commendable effort for Intel when its new series of chips still use the 14nm process but have a very high clock speed.

Comet Lake Gen 10<sup>th</sup> processor has just been added by Intel a series of new products with H-series chips for laptops. As usual, the H series has always been the most powerful processor, designed towards high-end gaming laptops and innovative machines for users with high demands on performance and portability. .

The most remarkable thing in these new chips is that their clocks can exceed the 5.0 GHz threshold, and have a TDP of 45W. This is the first time Intel has released processors whose clock speed exceeds this threshold.

## INTEL 10TH GEN H-SERIES

Model	Cores / Threads	Watts	Boost / Base Frequency (GHz)
Intel Core i9-10980HK	8C / 16T	45W	Up to 5.3 / 2.4 GHz
Intel Core i7-10875H	8C / 16T	45W	Up to 5.1 / 2.3 GHz
Intel Core i7-10850H	6C / 12T	45W	Up to 5.1 / 2.7 GHz
Intel Core i7-10750H	6C / 12T	45W	Up to 5.0 / 2.6 GHz
Intel Core i5-10400H	4C / 8T	45W	Up to 4.6 / 2.6 GHz
Intel Core i5-10300H	4C / 8T	45W	Up to 4.5 / 2.5 GHz

New Intel Gen 10th series of chips for laptops.

The star of this performance is the new Core i9 processor, Core i9-10980K, with 8 cores, 16 threads and has a base clock of 5.3 GHz but can push up to 5.3 GHz. But it is not just the processor that can surpass the 5.0 GHz threshold. Core i7 processors, including the Core i7-10850H (6-core 12-thread) and Core i7-10875H (8-core 16-thread), also have a single core with a maximum clock speed that exceeds this threshold with 5.1 GHz.

Bringing a laptop processor clock beyond 5.0 GHz is really a big step, especially since these new Intel chips are still dependent on the 14nm process. At present, Intel's 10nm process is only used to produce Y and U series processors (both for devices that are more energy efficient than processing power).

These new Gen 10<sup>th</sup> processors also come with some useful new features, like Thermal Velocity Boost. This feature increases the processor clock speed to another 200 MHz if the CPU temperature is below 65 ° C. Unfortunately, this feature is only available for Core i7 and i9 chips.

There's also a one-click overclocking tool like Speed Optimizer and Turbo Boost Max 3.0 to get workloads to the fastest processors. Another fascinating feature of these processors: they all support DDR4-2933 RAM.



Asus new Zephyrus Duo 15 dual screen gaming laptop: The gaming laptop comes with Intel's new Gen 10th H-series processor.

Intel is currently competing directly with AMD's new mobile processors, the Ryzen 4000 series, which also has eight cores but have a maximum clock speed of less than 4.4 GHz. However AMD uses 7nm process, bring higher power efficiency. Moreover, the new AMD chips are also equipped with 8 Radeon Vega graphics cores, with the performance to crush Intel's outdated UHD graphics chips.

But perhaps powerful processors like Intel's will fit into discrete graphics chips rather than integrated graphics chips.

This is probably why in the introduction of Intel's new processor, we see the guests who accompany it: new laptops from the brands Razer, MSI, Gigabyte, Asus and Acer. Besides Intel's new processors, they all use Nvidia's new mobile graphics chips and new Super Mobile RTX GPUs.

In the near future, we will certainly see these new processors and GPUs appearing on more laptops.

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