Intel announced the new Gen 10th Comet Lake desktop CPU: still 14nm but max clocked up to 5.3GHz

Despite being a new bottle of old wine, Intel has added some new flavors to its wine.

Currently, chip generation Gen 10 th Intel has been deployed on most laptops and desktops now is the time of the company's chip surface. The company has officially introduced its latest Comet Lake-S processor with four new Core i chips: i3, i5, i7 and i9.

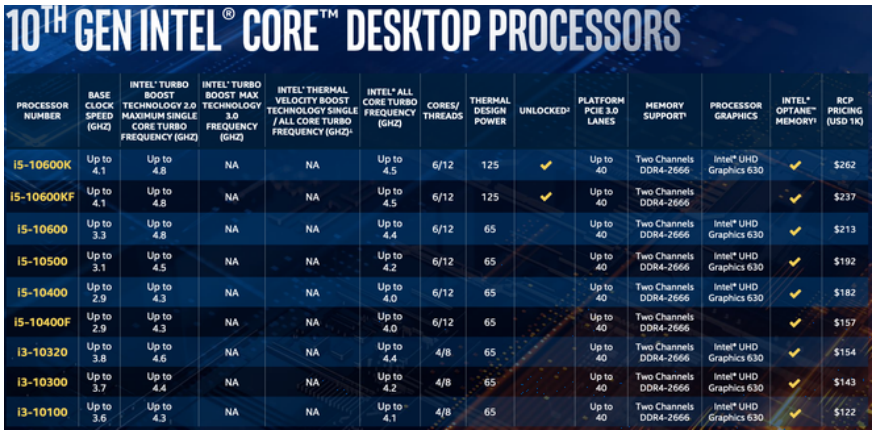
Leading performance is the Core i9-10900K, with 10 cores, 20 threads, TDP 125W, maximum clock speed of up to 5.3 GHz, and according to Intel, this is the fastest gaming processor in the world.

In addition to the top-of-the-line Core i9-10900K chip priced at 488 USD, Intel also introduces 2 other unlocked chips: Core i7-10700K (priced at 374 USD) with 8 cores, 16 threads, 3 core clock, 8 GHz and can increase the clock to 5.1 GHz. The cheapest unlocked chip, the Core i5-10600K, costs $ 262. With this price, users will have a 6-core processor, 12 threads, 4.1 GHz base clock and can increase the clock to 4.8 GHz.

However, the disappointing thing is that, like the recently launched H-series laptop chips, the new desktop chips continue to use the 14nm process - which has been used since 2015. . Currently, there are only a few lines of Ice Lake chips on new laptops using the 10nm process.

While still using the old technology process, the new chips can still achieve the same high speed thanks to the new technologies equipped on these chips, including Turbo Boost 3.0 and "Thermal Velocity Boost". "(This technology has been introduced in the H-series Gen 10 th laptop chips, but it is only limited to the Core i9 series.) The unique feature of Thermal Velocity Boost is that it can accelerate the clock when the processor reaches a temperature of 70 ° C or lower, if the power allows it.

The new chips also support memory up to DDR4-2933, Ethernet speeds up to 2.5 Gigabit, and like the rest of the Gen 10 th series , they all come with built-in Wi-Fi 6 by default.



10TH GEN INTEL® CORE™ DESKTOP PROCESSORS

PROCESSOR NUMBER	BASE CLOCK SPEED (GHZ)	INTEL® TURBO BOOST TECHNOLOGY 2.0 MAXIMUM SINGLE CORE TURBO FREQUENCY (GHZ)	INTEL® TURBO BOOST MAX TECHNOLOGY 3.0 FREQUENCY (GHZ)	INTEL® THERMAL VELOCITY BOOST TECHNOLOGY SINGLE / ALL CORE TURBO FREQUENCY (GHZ)[4]	INTEL® ALL CORE TURBO FREQUENCY (GHZ)	CORES/ THREADS	THERMAL DESIGN POWER	UNLOCKED[2]	PLATFORM PCIE 3.0 LANES	MEMORY SUPPORT[1]	PROCESSOR GRAPHICS	INTEL® OPTANE™ MEMORY[1]	RCP PRICING (USD 1K)
i5-10600K	Up to 4.1	Up to 4.8	NA	NA	Up to 4.5	6/12	125	✔	Up to 40	Two Channels DDR4-2666	Intel® UHD Graphics 630	✔	$262
i5-10600KF	Up to 4.1	Up to 4.8	NA	NA	Up to 4.5	6/12	125	✔	Up to 40	Two Channels DDR4-2666		✔	$237
i5-10600	Up to 3.3	Up to 4.8	NA	NA	Up to 4.4	6/12	65		Up to 40	Two Channels DDR4-2666	Intel® UHD Graphics 630	✔	$213
i5-10500	Up to 3.1	Up to 4.5	NA	NA	Up to 4.2	6/12	65		Up to 40	Two Channels DDR4-2666	Intel® UHD Graphics 630	✔	$192
i5-10400	Up to 2.9	Up to 4.3	NA	NA	Up to 4.0	6/12	65		Up to 40	Two Channels DDR4-2666	Intel® UHD Graphics 630	✔	$182
i5-10400F	Up to 2.9	Up to 4.3	NA	NA	Up to 4.0	6/12	65		Up to 40	Two Channels DDR4-2666		✔	$157
i3-10320	Up to 3.8	Up to 4.6	NA	NA	Up to 4.4	4/8	65		Up to 40	Two Channels DDR4-2666	Intel® UHD Graphics 630	✔	$154
i3-10300	Up to 3.7	Up to 4.4	NA	NA	Up to 4.2	4/8	65		Up to 40	Two Channels DDR4-2666	Intel® UHD Graphics 630	✔	$143
i3-10100	Up to 3.6	Up to 4.3	NA	NA	Up to 4.1	4/8	65		Up to 40	Two Channels DDR4-2666	Intel® UHD Graphics 630	✔	$122

One drawback of this processor upgrade is that Intel has changed the socket pins of the new chip line, so these new Comet Lake chips will not be compatible with past Coffee Lake motherboards - a common habit. Intel has been around for years - so you'll need to keep this in mind when upgrading your PC.

The new Core series is also equipped with Intel's integrated UHD Graphics 630 - except for the F-series when not equipped with integrated graphics to reduce costs.

In addition to the powerful processors that have been unlocked with 125W TDP (denoted by the letter K at the end of each version name), Intel also introduced the usual Gen 10 th chips with 65W TDP including the Core i3 series. , i5, i7 and i9, besides the low-power 35W T-series chips. Despite having the same cores and threads, it has lower clock speeds and less power consumption.