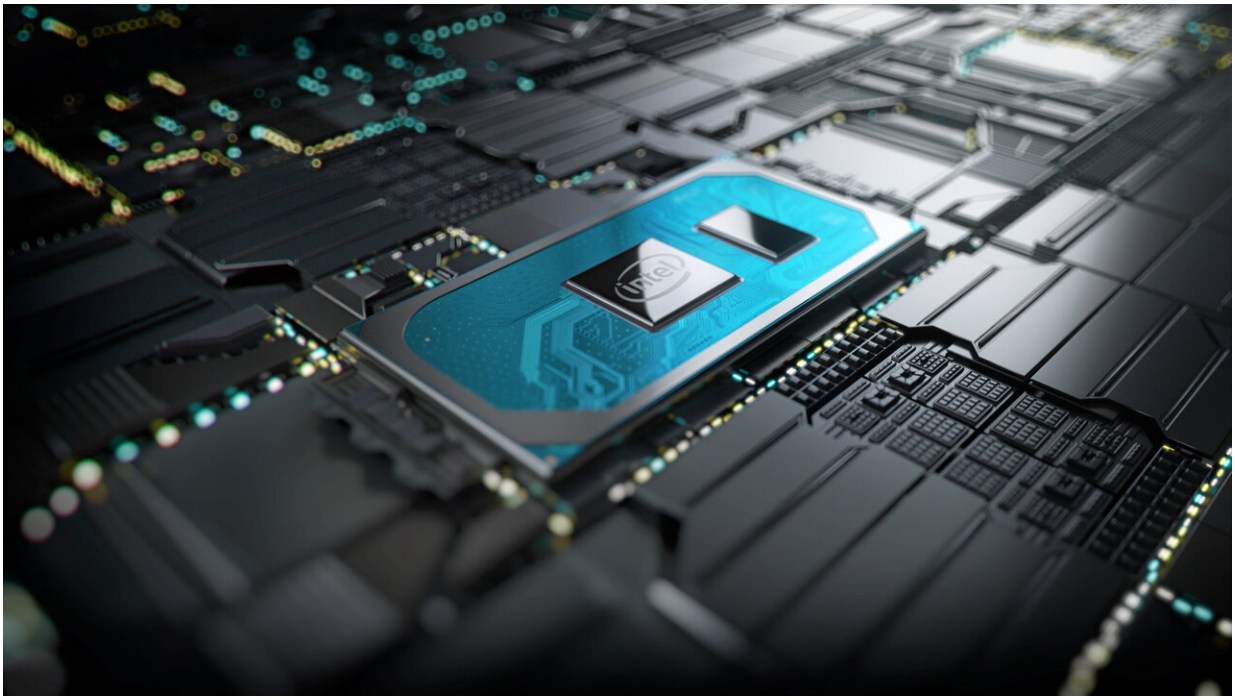
Intel's Ice Lake launch has tech world poking, prodding

August 2 2019, by Nancy Cohen



Credit: Intel

This week Intel watchers had their eyes peeled on reports about the first 10th-gen Ice Lake CPUs. The 10th Gen Intel Core processors are code-named "Ice Lake," and Ice Lake is built upon a "Sunny Cove" architecture that uses a 10nm process. Intel kicked off the first day of August by launching the processors—11 of them— designed for "remarkably sleek 2 in 1s and laptops."

Harrison Weber, senior news editor at *Gizmodo*: Intel's Ice Lake brand name covers the typical U-Series CPUs found in most of your mainstream laptops; the Y-Series CPUs are for thinner devices and often more experimental ones.

Among the features, according to Intel: (1) a graphics boost, with the Intel Iris Plus graphics for entertainment (2) artificial intelligence brought to PC at scale and (3) enabling "the best connectivity with Intel Wi-Fi 6 (Gig+) and Thunderbolt 3."

Sean Hollister, senior news editor, *The Verge*, said on Thursday that this marked Intel's first batch of 10nm processors to the world. Think laptops. Think "Ultraportables."

Expectations were that the 10th-gen Ice Lake CPU might be something to write home about.

Devindra Hardawar, senior editor, *Engadget*, said Intel was presenting 11 new processors ranging from "a lowly dual-core i3 to a quad-core i7, all built on its new 10-nanometer 'Sunny Cove' architecture."

Toward that end, Intel gave some hardware reviewers, including Gordon Mah Ung, executive editor, *PCWorld*, some time "to poke and prod" ahead of the launch.

The next reviews, however, are beyond this "pre-review" stage. *PCWorld* reminded readers that "Intel's 10th-gen Ice Lake won't be final until we see the first batch of laptops and what each OEM does with it."

Weber at *Gizmodo* also anticipated assessing improvements once actual devices appeared on the scene. "Intel's biggest boasts are related to thermals and battery life, and we simply won't have an understanding of how much those have improved—if they have improved—until devices

start shipping in the next few months."

At least based on specs, at this time, Hardawar said, the 10th-gen "Ice Lake" hardware seemed like a huge leap forward. Looking back, Intel's last few processor upgrades, said Hardawar, "felt like incremental steps."

That will also be an interesting time for Sean Hollister at *The Verge*. "Intel says 35 laptops are lined up to deliver Ice Lake chips this holiday season, some of them Project Athena designs that'll offer over 9 hours of real-world battery life. We'll be eagerly waiting to see how they perform."

Nonetheless, even in this early poke-it stage, *PCWorld* had a favorable reaction to graphics.

"The real surprise is the performance of the Gen11 graphics. Intel's integrated graphics have been the butt of jokes for years, but Iris Plus is a turning point," said *PCWorld*. "It is a generational performance uplift over UHD graphics and might just be the surprise killer feature of the CPU."

Meanwhile, Sean Hollister, *The Verge*, and Hardawar, *Engadget*, waded through the model numbers and characters so that their readers can understand what the processors are all about.

What's in a name? Hollister walked through example, "Core i5-1035G7." The first two digits are always "10," and they mean you're looking at a 10th Gen Ice Lake processor, he said, "with all the benefits that confers, like faster graphics and better battery life when playing HEVC video, but also often a lower base clockspeed than before."

Also, Hollister provided an instructive note on the G-number at the end. "Ice Lake's faster graphics doesn't mean fast graphics unless you see a

high G-number at the end of the processor's name, topping out at G7 for Intel Iris Plus graphics with 64 'execution units,'" he said.

Engadget's Hardawar similarly clarified chip model numbers. He explained that "only higher-end 10th-gen chips will get the full power of that hardware. "They'll be labeled with 'G7' at the end of their model numbers, indicating that they have 64 EUs (execution units)."

Processors called 'G4' will have the benefits of Iris Plus tech but will have 48 EUs. At the lowest end are G1 chips. The latter will carry Intel's integrated UHD graphics with 32 EUs. "You can also expect some clock speed variations across those graphics models," he wrote.

More information: newsroom.intel.com/news/intel- … periences/#gs.tqh6ka

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