5 reasons to skip Surface Laptop and wait for Intel Lunar Lake

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Microsoft's Surface Laptop 7th Edition is one of the first Copilot+ PCs equipped with various AI features thanks to Qualcomm's Snapdragon X series chips. However, despite the Surface Laptop's impressive specs, many people are still waiting for upcoming laptops equipped with Intel's Lunar Lake chips. Here are 5 reasons why!

1. Lunar Lake chip promises to be more powerful

The Intel Lunar Lake chip is a game changer for the x86 architecture, redesigned from the ground up, starting with the move to TSMC's 3nm N3B process node (the same thing Apple uses for its chips). my M3 series). The performance cores (P cores) and efficiency cores (E cores) of the CPU now use the new Lion Cove and Skymont microarchitectures respectively, thus delivering higher instructions per cycle (IPC) throughput. .

The company promises IPC increases of 14% and 68% for the new P core and E core, respectively. The new integrated Xe2 GPU also promises up to 1.5 times more performance than the previous generation. Overall, the Lunar Lake chip has solid specifications and is therefore a formidable competitor to Qualcomm's Snapdragon X series chips. In fact, Intel claims Lunar Lake outperforms the Snapdragon X Elite chip in CPU, GPU, and NPU tasks.

2. Equivalent battery performance

Besides increasing performance, Intel's Lunar Lake architecture also focuses on energy efficiency. Overall, Lunar Lake promises up to 40% power efficiency compared to Meteor Lake chips due to various architectural decisions made by the company.

First, the move to a 3nm process, from the previous 7nm process in Meteor Lake, is a big step forward in power efficiency for the next generation of Intel Core Ultra chips. Optimizing battery efficiency is also clearly shown in Intel reducing the number of cores from 16 to half (while also reducing the number of P cores to only 4 compared to the previous 6 cores) and disabling Enable hyper-threading.

Another power-saving move is the new unified memory architecture with integrated LPDDR5 memory and a new microarchitecture used for both the P core and E core.

3. Better NPU performance for AI tasks

Since the Surface Laptop uses a Qualcomm Snapdragon X series chip, it boasts 45 trillion operations per second (TOPS) from the Qualcomm Hexagon NPU. However, Intel's Lunar Lake chip is also ready for the AI ??future with an NPU that delivers 48 TOPS, 3 TOPS more than what you get on the Surface Laptop.

In total, Lunar Lake has up to 120 TOPS to accelerate AI tasks (including 5 and 67 TOPS from CPU and GPU respectively). Microsoft requires any laptop to have at least 40 TOPS from the NPU to be considered a Copilot+ PC, so more Lunar Lake-powered Copilot+ PCs are on the way.

4. Run native applications faster than emulators

Because the Surface Laptop uses an Arm-based chip, you have to emulate existing applications created for the dominant x86 architecture. That's right, Microsoft has provided a software called Prism for emulation.

However, while that means you have the ability to run any existing x86 app on the device, many people still prefer to run their apps natively because it's faster. Among other factors, running the app natively is better because direct access to the hardware allows the app to use its full power without the need for an intermediary layer.

5. Microsoft Surface Laptop has limited gaming support

Surface Laptop 7th Edition has impressive power, as evidenced by various online benchmarks. However, if you are a casual gamer who likes to play a game or two in your free time, you may encounter problems with your laptop due to its uneven gaming support.

As noted by Linus Tech Tips, some games work quite well, others run but are unstable, and some games are unplayable. If a game claims AVX2 support or has a kernel-level anti-cheat system, it will not work.

Another YouTuber, David, from the channel David Does Tech Stuff, also shares the same opinion. David tried playing many different games on the Surface Laptop and the results were very different. Some games can run quite easily (sometimes even at low resolution). Some don't work but can be played after some tinkering, while others don't.

There's no doubt that the Surface Laptop 7 is a great laptop. However, if you're concerned about the limitations of using a first-generation chip, skip the Surface Laptop and wait for laptops that support Lunar Lake.

Lunar Lake promises to bring a big change in both AI and battery efficiency while still allowing you to run your favorite apps and games without having to worry about whether they will work and, if so, whether they will work or not. whether they work effectively or not. These chips will be available in various devices starting in the third quarter of 2024.