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SPENDING
A DIME

PLUS

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DISAPPEARING



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But what's really scary,
and even deadly,
is distracted driving.

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Don't drive distracted.**



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AGING INSTILLS CONFIDENCE, NOT CONFUSION.

Some things come with age.
Some others don't.

Learn the warning
signs of Alzheimer's.

...

10signs.org





AT&T breach may have leaked 70 million Social Security numbers to the dark web

Data breach occurred two weeks ago. **BY MICHAEL SIMON**

If you're an AT&T subscriber, you might want to keep a close eye on your credit reports. The company has disclosed (fave.co/3PYDS9d) that approximately 7.6 million current account holders and approximately 65.4 million former account

holders "were contained in a data set released on the dark web approximately two weeks ago."

While it's unclear how the breach occurred or if it involves AT&T directly or one of its vendors, the company says it includes



It's unclear how the breach occurred or whether it involves AT&T directly or one of its vendors.

personal information such as names and Social Security numbers. A preliminary analysis appears to indicate that the data is from 2019 and earlier, though AT&T is still conducting "a robust investigation supported by internal and external cybersecurity experts."

The company reports (fave.co/3Jh5UsH) the compromised data likely does not contain personal financial information or call history.

AT&T says it does not have evidence of

unauthorized access to its systems and will be reaching out to all current and former customers who may have been impacted. The company notes that the incident "has not had a material impact on AT&T's operations."

If you are contacted by AT&T, there's not a lot you can do but hope the leak isn't as bad as it sounds. AT&T will be "offering credit monitoring at our expense where applicable," so you'll be able to monitor any suspicious activity. Additionally, AT&T

has reset the passcodes for anyone who may have been affected. 🔌

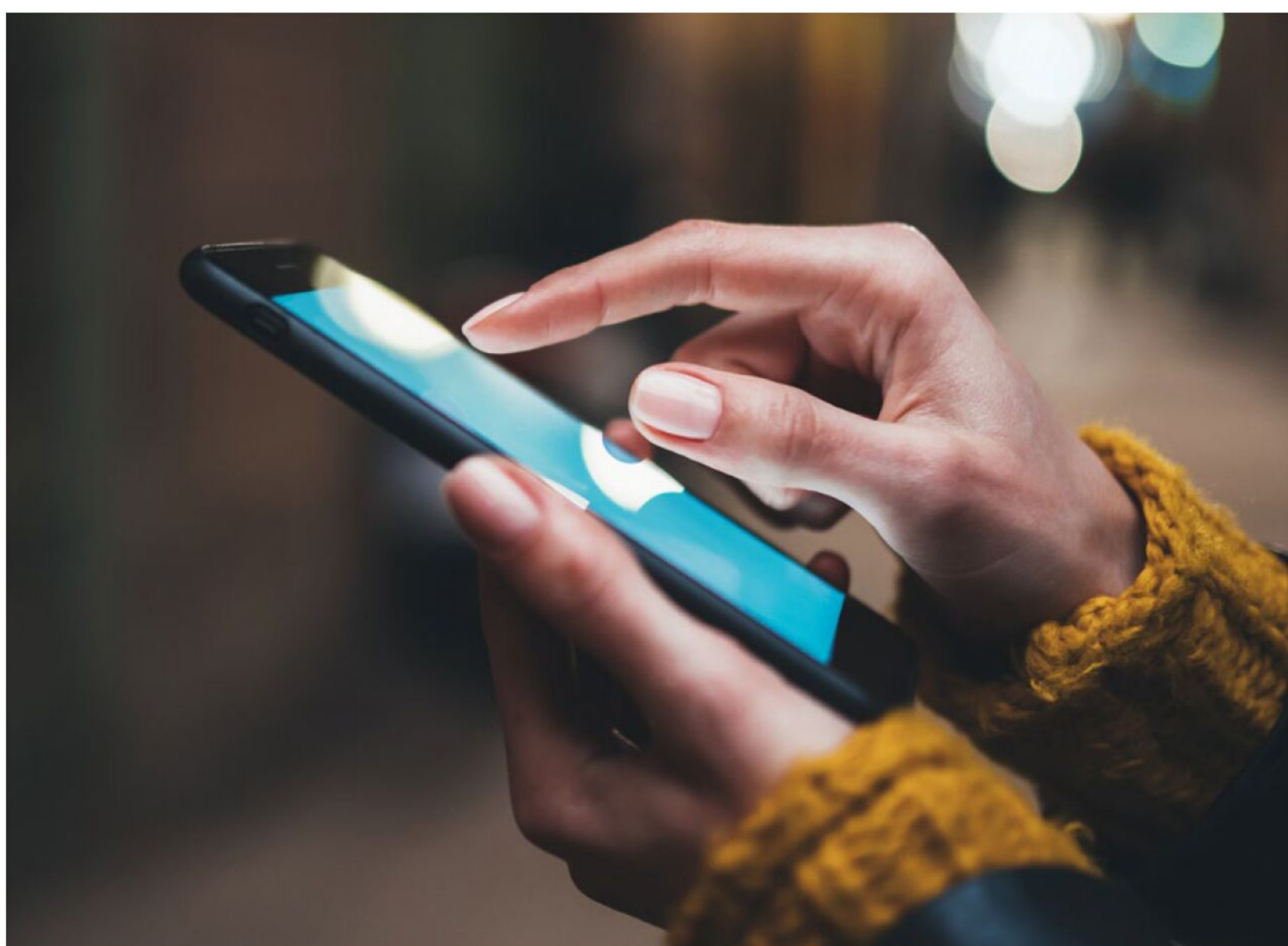


IMAGE: A_B_C/SHUTTERSTOCK

AT&T recommends that its customers reset their passwords.

Microsoft's 'AI PC' definition: An NPU and a keyboard sticker

Microsoft's guidelines for the year's hottest branding trend don't say much to consumers. **BY MICHAEL CRIDER**



This year everything is “AI,” whatever that means. Every new computer, game, software service, and soft-serve ice cream machine is apparently imbued with digital sentience, at least according to its branding. But when it comes to laptops and desktops, Microsoft has a very specific definition of “AI PC.” Surprise...it's mostly branding.

According to a presentation from Intel on Tuesday (fave.co/3VVq6Yr), which weirdly

debuted Microsoft's “requirements for an AI PC,” vendors will need three specific components if they want to advertise their new machines as such. One, “NPU, CPU, and GPU powered silicon.” Since that presumably includes integrated GPUs like Intel's Xe systems, the NPU (neural processing unit) is the new hotness in question.

What exactly is an NPU? That's a bit nebulous at the moment. An NPU is a distinct (if not necessarily discrete) processor

designed for specific tasks (fave.co/3SG6Nza), very much like a GPU for visuals, but it's for "AI." Another term for an NPU is "AI accelerator." But again, exactly what it does isn't exactly clear. For the live demos I've seen, the most interesting thing it's doing is blurring the background in video calls somewhat more efficiently than existing chips.

Microsoft also demands that an AI PC include its Copilot assistant...which is built into Windows 11 (fave.co/3saaN1k). So, that's basically a given. And also that there be a dedicated Copilot button on the keyboard (fave.co/49QnG1u), generally replacing the right-side Windows or Ctrl key. In some pre-CES demos I saw last year showing off near-final laptop designs, this was accomplished with a sticker on said key.

Finalized designs probably use more standard printing. You can see the new Copilot button on the keyboard for the latest Surface designs (fave.co/3w07UIU).



You can see the new Copilot button on the keyboard for the latest Surface designs.

PCWorld's Mark Hachman compares it to the Cortana button formerly seen on Microsoft's Siri-style voice command tool, which is now dead as a doornail (fave.co/3VQw4KI).

If I take off my curmudgeon hat for a moment, I'll have to admit that, yes, Intel and AMD's latest processor designs both include (fave.co/3U1YPmm) NPU cores (fave.co/3O2qT5c), and they're being used to do more stuff. Take Intel's AI Acceleration program for example, which is claimed to have been adopted by dozens of software vendors. But it seems like most of what they're doing is offloading highly specific tasks from the CPU to the NPU to save battery life. Tasks like...blurring the background in a video call or processing an OBS stream while you play games. Not exactly revolutionary.

Microsoft's Copilot system is still almost entirely dependent upon remote data centers to deliver its large language model magic, assuming you're willing to pay for its fanciest tricks (fave.co/3upBAbB). In the future Copilot will be more efficient thanks to local hardware, including NPUs, but there's no indication that it'll be able to function entirely on local hardware any time soon.

So Microsoft has an answer to that most timely question, "what is an AI PC?" (fave.co/49qe3pW)" But it still isn't saying a whole lot about exactly what that means for consumers, or how a new AI PC is better than the PC they already have. 🔌



Broadband 'nutrition labels' kick in, revealing hidden fees for ISPs

ISPs are now required to reveal hidden costs and speeds. **BY MARK HACHMAN**

New FCC "broadband nutrition labels" go into effect beginning today, forcing ISPs to disclose all of the normally hidden costs and speeds.

And yes, the term "nutrition label" is accurate — they're modeled after the list of ingredients you might find on a box of cereal, say, along with a breakdown of what you're being charged. Those labels must be posted on the websites of ISPs as well as in retail stores. The labels also cover both wired and

wireless broadband plans, so you should see them, for example, in a Verizon store.

The idea is to allow consumers to know just exactly what they'll receive when they sign up for broadband service — and what they'll be charged for, too. The new labels won't eliminate the fees that are sometimes hidden in a customer's bill — they'll just make them more obvious so that you can factor all of that in when evaluating broadband providers.

"The labels must disclose important

The FCC’s Broadband Nutrition label.

Broadband Facts	
Acme Wired Signature Plan/gigabit Fixed Broadband Consumer Disclosure	
Monthly Price	\$89.99
This monthly price is an introductory rate	
Time the introductory rate applies	12 months
Monthly price after the introductory rate	\$109.99
Length of contract	24 months
Link to Terms of Contract https://www.example.com/terms-of-contract	
Additional Charges & Terms	
Provider Monthly Fees	
Modem Rental	\$10.00
Wifi Extender	\$5.00
One-Time Purchase Fees	
Installation	\$100.00
Battery Back-up	\$60.00
Early Termination Fee	\$75.00
Government Taxes	\$27.57
Discounts & Bundles	
Visit the link below for available billing discounts and pricing options for broadband service bundled with other services like video, phone, and wireless service, and use of your own equipment like modems and routers.	
https://www.example.com/discounts	
Speeds Provided with Plan	
Typical Download Speed	1,200 Mbps
Typical Upload Speed	200 Mbps
Typical Latency	47 ms
Data Included with Monthly Price	
Charges for Additional Data Usage	n/a
https://www.example.com/data-usage	
Network Management Policy	
https://www.example.com/network-management	
Privacy Policy	
https://www.example.com/privacy	
Customer Support	
Phone:	(555) 555-5555
Website:	https://www.example.com
Learn about the terms used on this label. Visit the Federal Communications Commission's Consumer Resource Center.	
fcc.gov/consumer	
Unique Plan Identifier: F0005937974123ABC456EMC789	

information about broadband prices, introductory rates, data allowances, and broadband speeds,” the FCC says ([fave.co/3VVfuZC](https://www.fcc.gov/consumer)). “They also include links to information about network management practices and privacy policies.”

The process dates back to 2021, when Congress passed the Bipartisan Infrastructure Law, which ordered the FCC to begin work crafting consumer-friendly broadband labels. In 2022, the FCC began actually creating those rules.

The labels themselves will look like the above example, provided by the FCC.

Some ISPs are exempt,

specifically smaller ISPs with less than 100,000 subscribers. But by October, they’ll be required to comply, too.

It’s unclear what will happen if an ISP does not comply with the new federal regulations. I tried signing up for new service with Comcast Xfinity, and couldn’t find the new breakdown. I also tried Spectrum’s ISP service in North Carolina, and didn’t see the new labels either. (The service timed out as it was showing a signup page.)

In October, the ISPs will also be required to make the broadband “nutrition labels” machine-readable — so that not only will you be able to see an accurate, detailed breakdown of the ISP’s services, but automated tools will as well. Unfortunately, the new labels don’t do anything to help the de facto monopolies that many broadband ISPs have, but at least you’ll know how much it will cost you. 🔌



At the time of writing, I tried signing up for new service with Comcast Xfinity, and couldn’t find the new breakdown.

These 10 Windows features will disappear soon

Here's a rundown of everything on its last legs, from Windows Mail to WordPad and more. **BY THOMAS JOOS**



Microsoft not only introduces new features or programs with Windows updates, it also removes obsolete functions. Many people don't notice this until they need a specific feature or the outdated program. One example is WordPad, which will soon be removed from Windows, or Windows-to-Go and the Homegroup.

If you use WordPad, you should look for a

replacement in good time. In most cases, however, Microsoft does not remove features immediately, but instead marks them as "obsolete."

This means that no more improvements are being developed for these features or tools and that Microsoft will remove them from Windows in a future version. Here's a list of the Windows features destined to get the axe soon.

WORDPAD WILL NO LONGER BE PART OF WINDOWS

Microsoft has announced that WordPad will be completely removed from Windows. Although the limited word processor is still included in Windows 11 23H2, this may change with the update to Windows 11 24H2 later this year. Microsoft is already no longer updating the program.

Anyone who relies on WordPad should therefore look for a replacement. Microsoft recommends using Word Online on the Internet at this point. Google Docs, OpenOffice, and LibreOffice are also useful.

CORTANA NO LONGER EXISTS

The stand-alone Cortana app in Windows is also outdated and is being replaced by Microsoft's new Copilot AI. If you use Cortana for certain areas, you should familiarize yourself with the possibilities of Copilot.

TLS CERTIFICATES UNDER 2,048 BITS WILL BE REMOVED

Microsoft is removing support for TLS certificates with an RSA key of less than 2,048 bits from Windows 10 and Windows 11. If you are therefore still using older certificates for applications, there is a risk that these will no longer work after an update in the future.

You should therefore replace them as

soon as possible if you become aware of this. However, this mostly affects companies that operate their own web applications.

VBS SCRIPT IS BEING REMOVED FROM WINDOWS

Anyone who uses their own scripts with VBScript will also have to find a replacement: Microsoft will completely remove VBScript in the next Windows versions, presumably in Windows 11 24H2.

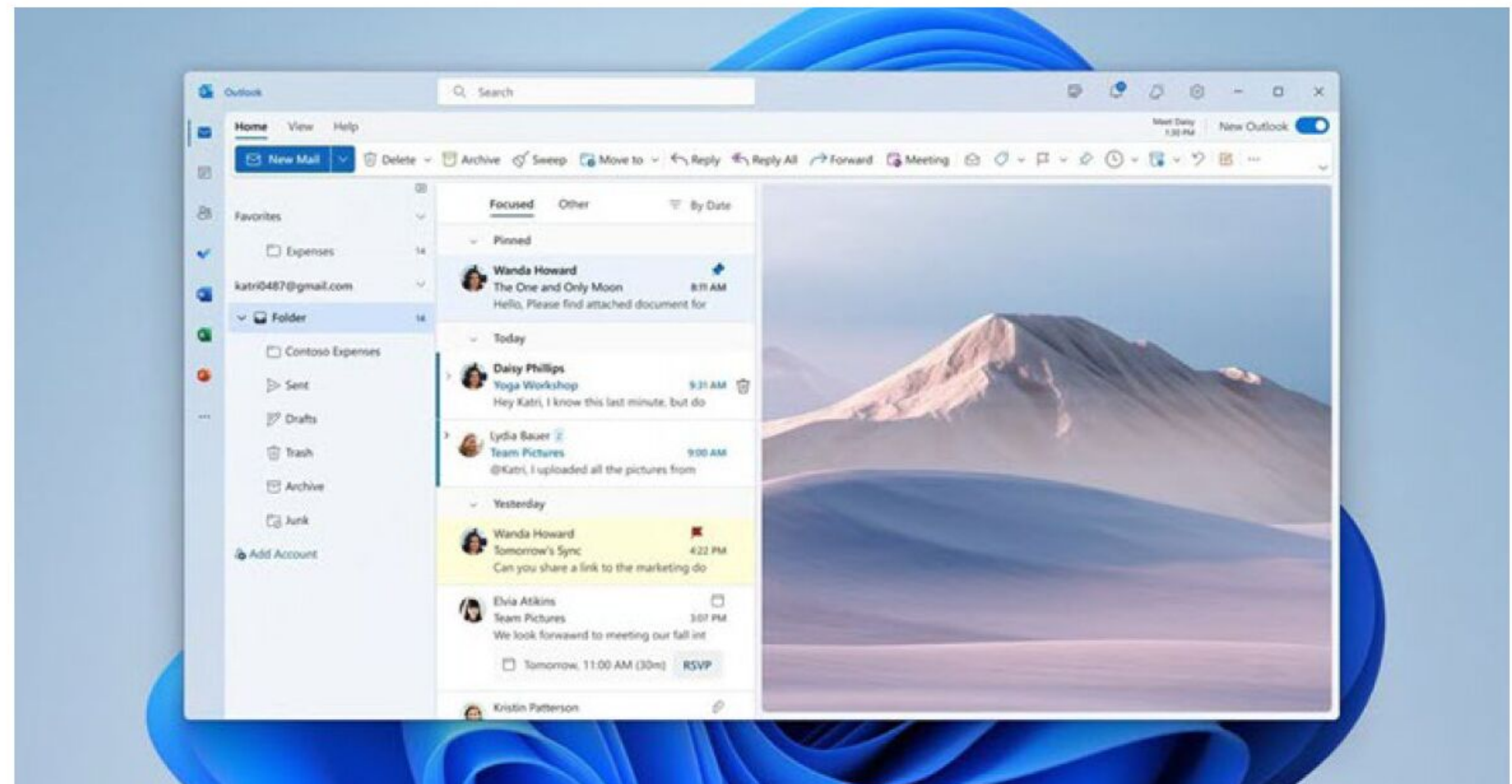
WEBDAV WILL NO LONGER BE PART OF WINDOWS

With the removal of the WebClient, Microsoft is removing WebDAV from Windows. This means that the protocol cannot be used to connect network drives with WebDAV. Users often use the protocol to integrate cloud storage directly as a drive in Windows, for example. This won't be so easy in future. Microsoft no longer wants to start the service at bootup, and one of the next steps will probably be to remove it, perhaps even in Windows 11 24H2.

WINDOWS MAIL AND OUTLOOK EXPRESS WILL BE REMOVED AND REPLACED BY OUTLOOK

Microsoft is removing the Windows Mail app in Windows 10 and Windows 11 and replacing it with the new, free Outlook app (fave.co/4awkSa7). This is currently being

criticized not only due to Outlook's lackluster feature set compared to the original Mail app, but because it routes all emails via Microsoft servers. This also applies to mail accounts that are not hosted by Microsoft. Many users are already swapping Windows Mail for Mozilla Thunderbird (fave.co/4cVbP4b).



Microsoft is replacing Windows Mail with a new Outlook app.

PROBLEM LOGGING IS COMING TO AN END – PSR.EXE

With problem recording, users can create step-based screenshots to create documentation or recreate errors so that a support employee can help. Microsoft wants to remove the recording completely from Windows. Here too, you should obtain a replacement if you use the problem recordings. Microsoft recommends using the snipping tool in Windows for this purpose.

WMIC.EXE TO BE DISCONTINUED: USE WMI QUERIES IN WINDOWS


With “wmic.exe”, users and administrators can use Windows Management Instrumentation (WMI) for queries – for example, for information about a computer's hardware. Microsoft has marked “wmic.exe” as obsolete and will permanently remove this command line program from Windows 10

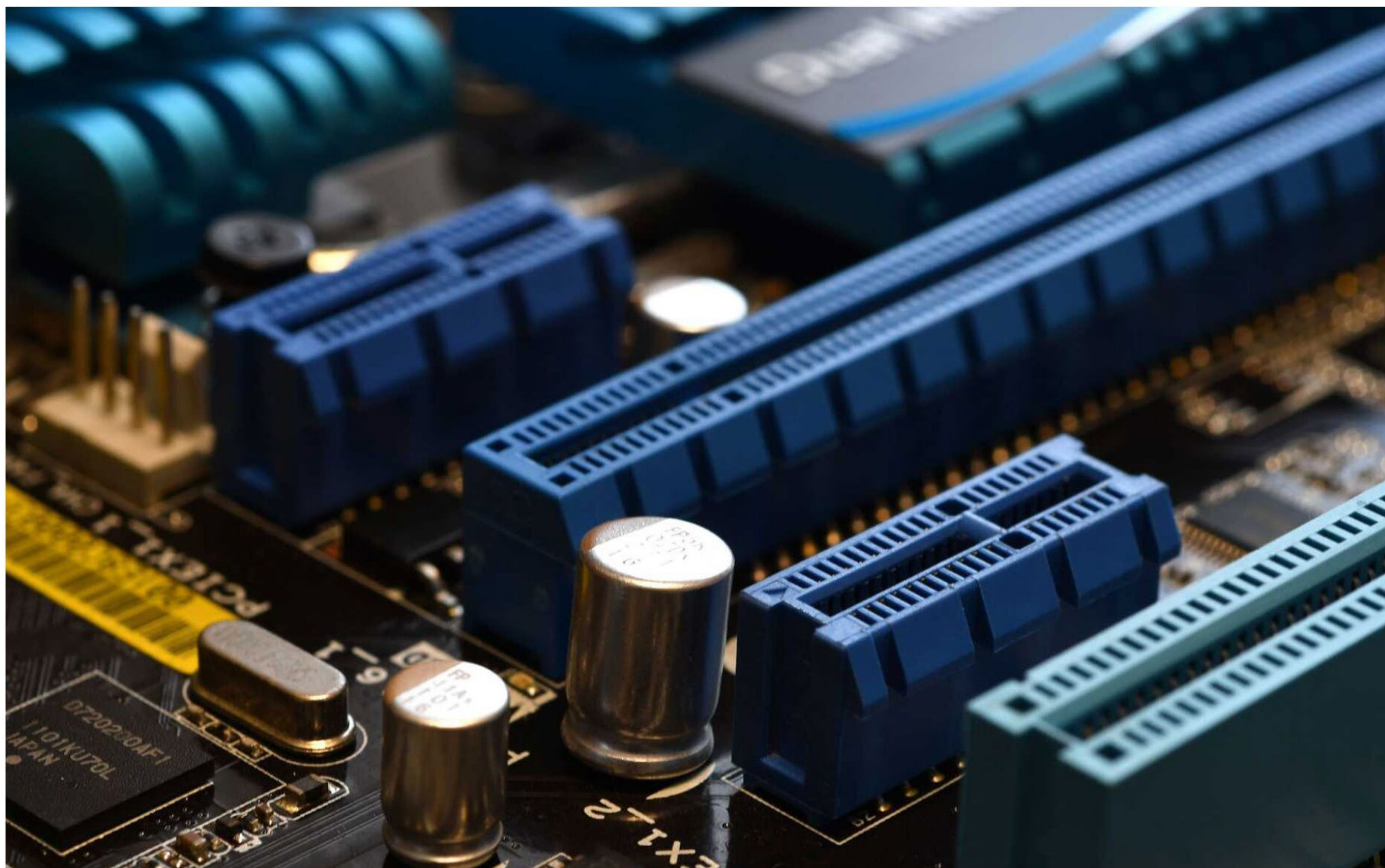
and Windows 11. However, there is the option of using PowerShell and the Get-WmiObject cmdlet in future.

WINDOWS-TO-GO NO LONGER PART OF WINDOWS

With Windows-to-Go, it was previously possible to save Windows on an external hard drive and start it on different computers. This option will be removed from Windows. Microsoft is already no longer providing support for this feature.

NO MORE HOMEGROUP IN WINDOWS

Microsoft has discontinued support for HomeGroups/home network groups. If you have created shares based on HomeGroups, these will be retained, but the HomeGroup view will be completely removed from the operating system. Resources can still be shared via workgroups and Active Directory domains. 



Early PCIe 7.0 specs foretell a ludicrously fast future for SSDs

The next-next version of PCI Express will be twice as fast as 6.0 and four times as fast as 5.0. **BY MICHAEL CRIDER**

Are you ready for PCIe version 6.0? No? Your motherboard doesn't even have PCIe 5.0 yet, because you're squeezing every last possible ounce of value out of AM4 (fave.co/3jeytqu)? Well too bad, because PCIe 7.0 is now on the horizon. And while it's still a ways off — the final version of the spec won't be available until next year — the speed it's offering will be mind-blowing.

We're talkin' up to 512 gigabits of data per second when using x16 lanes on a fully-open motherboard slot, double the prospective speed of PCIe 6 (fave.co/3TT5ttv) and four times the speed of PCIe 5. So says the Peripheral Component Interconnect Special Interest Group (PCI-SIG). The group has released its 0.5 spec for members, according to a public post spotted by AnandTech (fave.co/3Vb2do).



PCIe 5.0 SSDs, such as the Crucial T705 SSD (pictured), are really only necessary if you're handling truly massive amounts of data.

PCI-SIG doubled down on its stated goals for the final version of PCIe 7.0, a little less than two years after its announcement. According to the blog post, these include:

- Delivering 128 GT/s raw bit rate and up to 512 GB/s bi-directionally via x16 configuration
- Utilizing PAM4 (Pulse Amplitude Modulation with 4 levels) signaling
- Focusing on the channel parameters and reach
- Continuing to deliver low-latency and high-reliability targets
- Improving power efficiency
- Maintaining backwards compatibility with all previous generations of PCIe technology

It's all a fairly

straightforward evolution of the PCI Express standard, and frankly, it's so gosh-darn speedy that it's rapidly eclipsing the needs of basic consumers with standard PCs. There aren't any graphics cards that actually use the PCIe 5.0 standard for data at the moment, and PCIe 5.0 SSDs (fave.co/4ajqMEQ) are really only necessary if you're

handling truly massive amounts of data, like 4K video production or high-end 3D modeling. Gamers shouldn't waste their money on a PCIe 5.0 SSD (fave.co/4auLKHK).


PCI-SIG says the incredible speed will be useful for "data-intensive markets like 800G Ethernet, Artificial Intelligence/Machine Learning, Hyperscale Data Centers, HPC, Quantum Computing and the Cloud." 



IMAGE: MAXX-STUDIO/SHUTTERSTOCK

Gamers are advised not to waste their money on a PCIe 5.0 SSD.

Devious 'man in the middle' hacks on the rise: How to stay safe

A few precautions go a long way. **BY ALAINA YEE**



In the old days, anyone could easily snoop on internet traffic. The data was unprotected, so everything getting passed between a computer and a server was out in the open, whether that was website text and images or your username and password. When universal encryption

took over, it blocked spying—but unfortunately, bad actors evolved along with the increased security.

One kind of attack is especially popular: First known as a man-in-the-middle attack (now referred to machine-in-the-middle, adversary-in-the-middle, or on-path attacks), it

lets hackers insert themselves between your devices and the server they communicate with, in order to steal login information and session cookies to then take over your account.

It starts with you clicking on a phishing link, then entering your credentials on a fake copy of a legitimate website. Bad actors then capture the username and password, along with the access token, then redirect you to the real website.

MitM attacks can be used on accounts with strong, unique passwords and even locked down with two-factor authentication, fave.co/41SY7rQ (2FA), as recently popped up in the news (fave.co/43WscC) when Google and Microsoft accounts became targets of a new phishing kit. (Yep, even hacking can be as simple as a software subscription.)

But as unnerving as it can feel to know that hackers can “defeat” 2FA, you’re not defenseless against an MitM attack. In fact, you can strengthen your security with a simple change in how you login—though you can do a couple of other things to help, too.

USE A PASSKEY

When passkey support began rolling out widely last year, experts heralded them as a huge step up in security—for good reason. They’re easier to use than passwords, and they can’t be stolen in phishing attacks

(ahem). Against MitM attacks, a passkey is one of the strongest defenses available.

All you need is a device like a smartphone, PC, or hardware key. You can also use a password manager that supports passkey storage. For each website, your device will create a unique passkey, which is made up of two encryption keys—one public and one private. The public key gets shared with the website, while the private key stays protected on the device. No one can guess the private key based on the public key. And relevant to MitM attacks, a passkey only works with the site it’s created for. At login, the website will send a prompt to your device, asking for permission to authenticate through the passkey. All you need to do is grant permission by entering a PIN or using biometrics (e.g., fingerprint or facial recognition).

Many major websites now support passkeys, including Google, Microsoft, and Apple—accounts that can be highly dangerous to lose control of. (Our guide for setting up passkeys on a Google account [fave.co/47aEq2I] gives a general idea of how to get started overall.) In fact, when asked for comment on the latest MitM attack targeting Gmail accounts, Google mentioned passkeys as a way to reduce vulnerability to such attacks.

The main downside to passkeys is that if you lose your device, you can lose access to the passkey, so having backups is important.

USE STRONGER TWO-FACTOR AUTHENTICATION

Even with the introduction of passkeys, passwords haven't disappeared yet—not by a long shot. Most websites with passkey support still keep your password on file. And of course, some sites have yet to implement passkeys.

In both cases, two-factor authentication (2FA) should still be a first move to counter MitM attacks. Not all such campaigns circumvent 2FA just yet, and for those that do, 2FA doesn't become completely useless—it just narrows what types still work. Codes sent over SMS (or email) or generated by an app can be stolen, but hardware keys using protocols like FIDO2 operate similar to passkeys. For authentication to work, the request must come from the trusted domain (fave.co/43TvcGR). Any others won't get the same data during the exchange.

Security keys do cost money, however. For example, a basic YubiKey, fave.co/3Q2GOlc (a popular brand of hardware keys favored by security enthusiasts) starts at \$25, and goes up to as much as \$75 for ones with wider 2FA protocol support and connection types (fave.co/3PZiTMa). And like passkeys, if you lose the device with no backups, you'll land in a tough spot.

AVOID PHISHING LINKS

Sometimes, the best solution to a problem is to cut it off at its source. In the case of MitM

attacks, you can achieve this by steering clear of phishing links (and sites).

It's a common sense approach, but it's not always possible to nail it perfectly. You can stumble upon a phishing website in multiple ways: Maybe you mistype a url. You click on an malicious advertisement. You don't look closely enough at an email or text message. And even if you're not distracted or in a rush, AI chatbots can now help non-native speakers polish up the messages that accompany phishing links, making phony URLs harder to spot.

But you can still avoid them. Refinements in your behavior help. Get an unsolicited message asking you to log into your account or change your password? Open a fresh tab and navigate directly to the site. Not sure if you're on the correct site? Scrutinize the address before clicking around or filling out any forms. Want to ensure you're selecting an actual search result? Use an ad-blocker to keep sponsored results from appearing. Hopping on public Wi-Fi? Fire up your own personal hotspot, or at least use a VPN (fave.co/3FtTTMs) so no one can manipulate your traffic.

But software can also assist you. Antivirus is a main line of defense, be an independent security suite (fave.co/3CnDHuk) or Microsoft's native Windows Security tools. These apps now automatically screen for shady websites while you browse and download email, and will block known



Qualcomm says Snapdragon X Elite kicks Intel Core Ultra's butt

We're officially putting in a request to test the Snapdragon X Elite laptops ASAP.

BY MARK HACHMAN

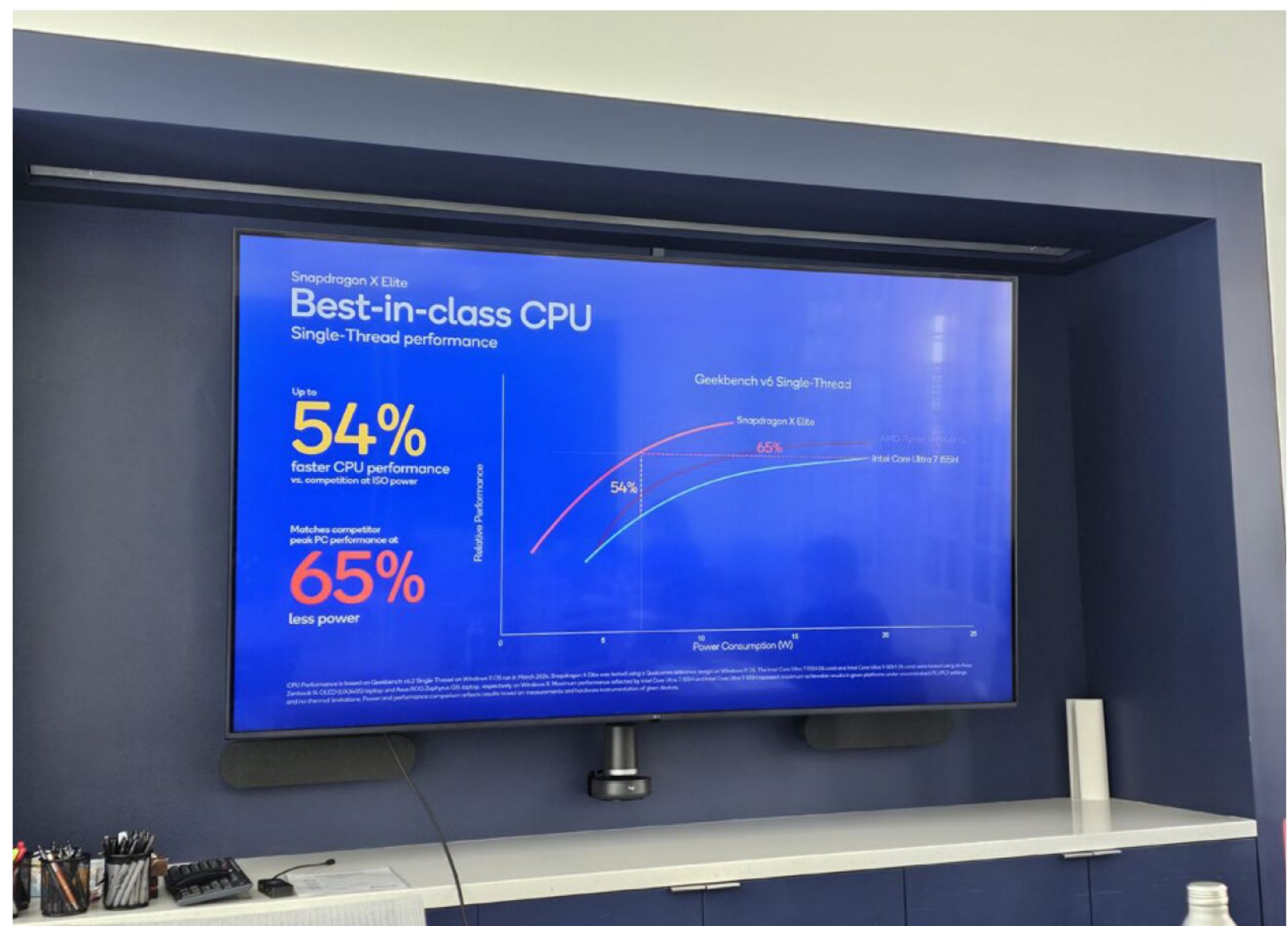
When Qualcomm showed off its benchmarks of its new Snapdragon X Elite chips last October, there was one flaw in its argument: Qualcomm was comparing the new Snapdragon platform to Intel's older 13th-gen Core chips. That's been fixed. Now Qualcomm says that the Snapdragon X Elite is faster than Intel's new Core Ultra (Meteor Lake) chips, too.

Last October, Qualcomm said that its Snapdragon X Elite could match the performance of the Intel Core i9-13980HX at 70 percent less power. Subsequent hands-off benchmarks of the Snapdragon X Elite (fave.co/4cX88uH) appeared to bear that out. But Intel hadn't launched its Meteor Lake architecture (fave.co/3U1YPmm) yet to provide a head-to-head comparison. Now it has, and Qualcomm is crowing once again.

In a Monday afternoon briefing, Qualcomm executives provided the same sort of comparisons to Intel's Core Ultra as it did to Intel's 13th-gen chips, comparing power and performance. Specifically, Qualcomm called out two chips: the Core Ultra 7 155H, fave.co/3PZ27ny (16 cores, which include 6 performance cores and 8 efficiency cores, with a 4.8GHz max turbo speed) and the premium though similar Core Ultra 9 185H, fave.co/3Q2VYH1 (16 cores, which include 6 performance cores and 8 efficiency cores, with a 5.1GHz max turbo speed).

Qualcomm's Snapdragon X Elite (fave.co/40topBX), meanwhile, is made up of 12 Oryon CPU cores, each running at 3.8GHz. Two of those cores can boost up to 4.3GHz. Though the Oryon is based upon the Arm architecture, Qualcomm didn't adopt the traditional hierarchy of performance and

efficiency cores. That approach instead was adopted by Intel, and its Core Ultra (Meteor Lake) processor (fave.co/3PUqbHI).



Move over, Meteor Lake: Qualcomm's own tests claim that the Snapdragon X Elite one-ups both the Intel Core Ultra 7 as well as the Ryzen 9 7940HS.

Here's how Qualcomm sees the two compare. (The Geekbench 6.2 benchmark is being used as a point of comparison. If it matters, Qualcomm used the Asus Zenbook 14 OLED (fave.co/3JhbeMP) to test the Core Ultra 7 155H and the Asus ROG Zephyrus

G16 to test the Core Ultra 9 chip. PCWorld has tested the similar Asus ROG Zephyrus M16, fave.co/3VplObE.)

- In single-threaded performance, Qualcomm says that the Snapdragon X Elite is 54 percent faster than the Core Ultra 7 155H

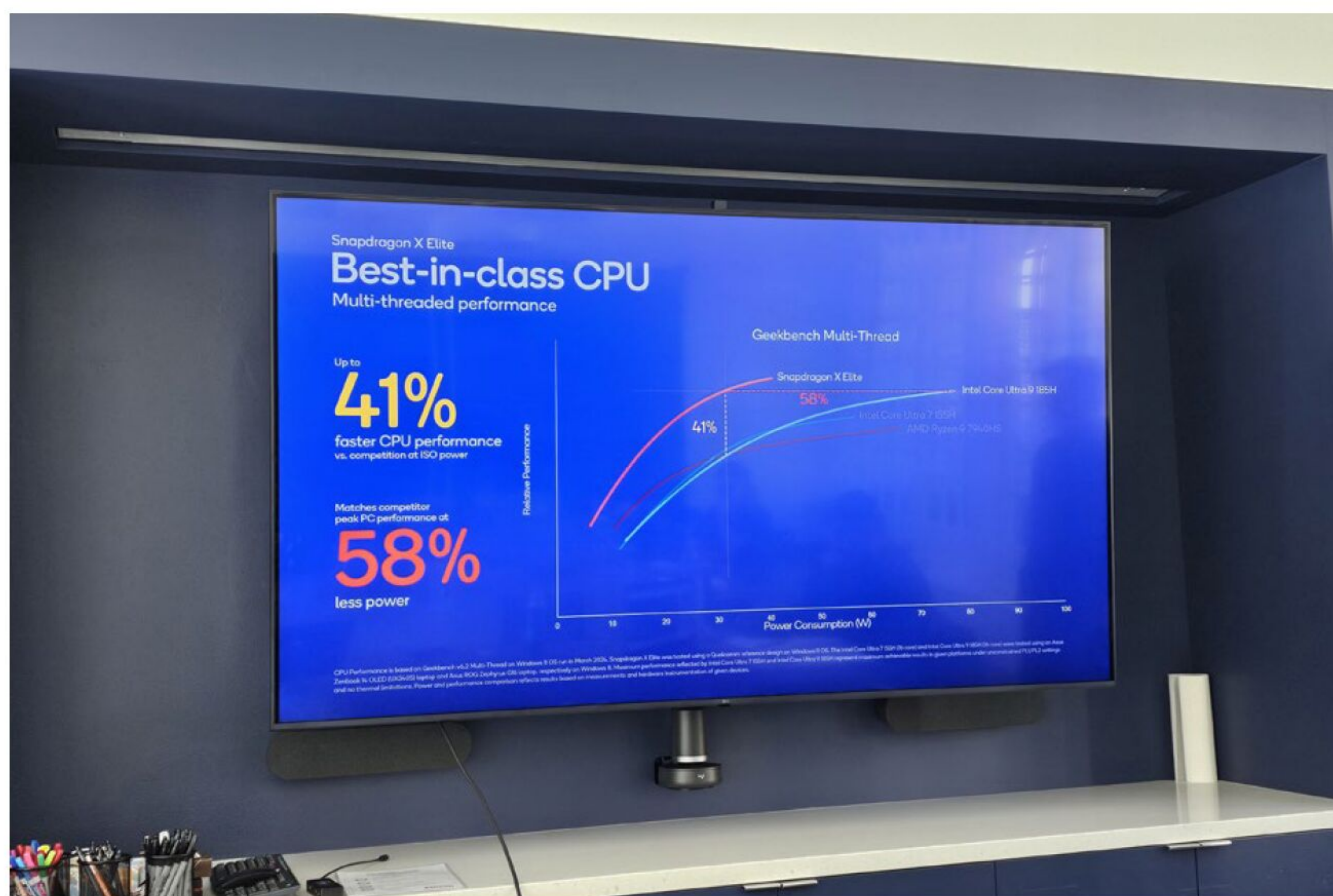
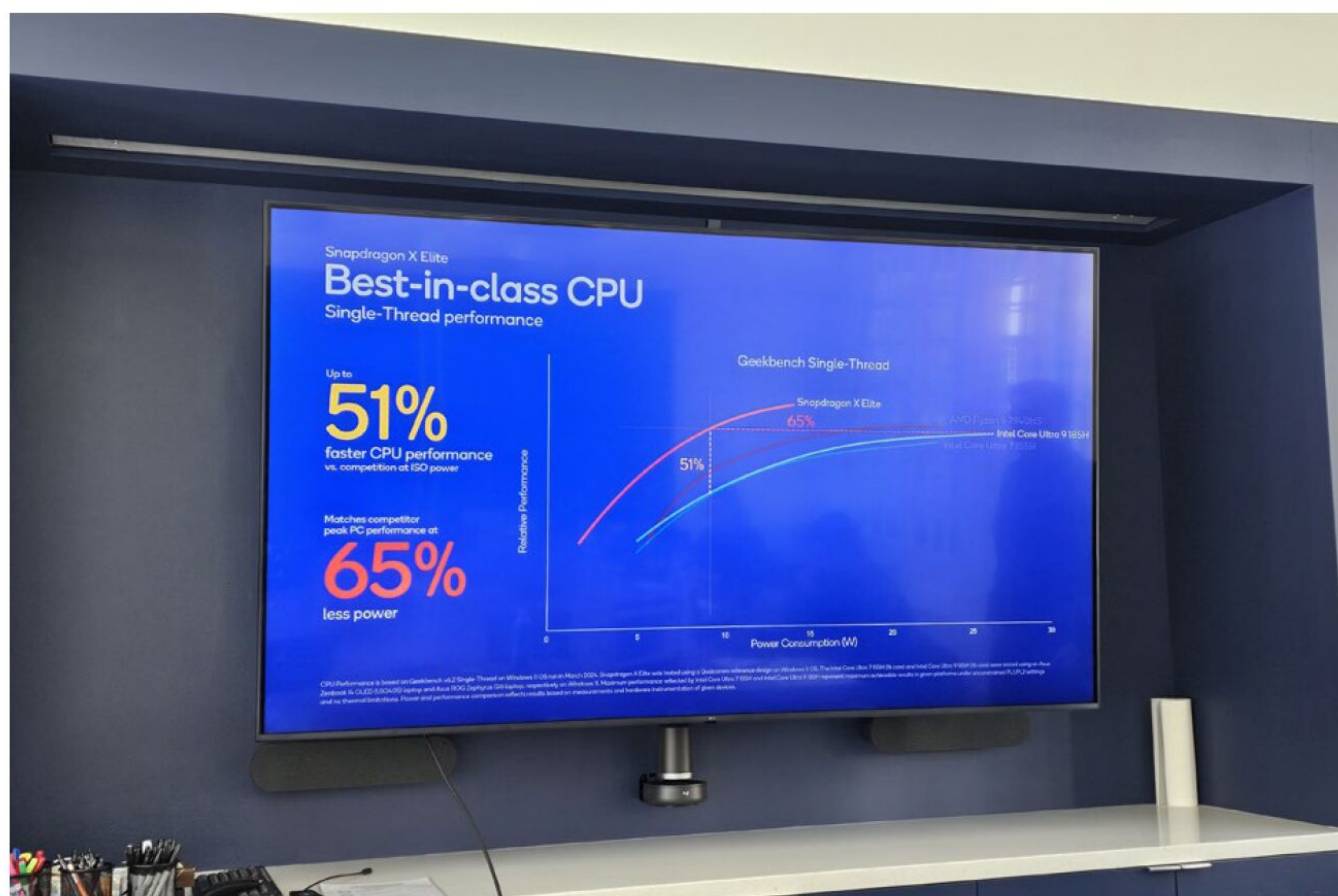
at the same power, or, when performance is equalized, consumes 65 percent less power.

- In multi-threaded performance, the Snapdragon X Elite is 52 percent faster than the Core Ultra 7 155H at the same power, or, when performance is equalized, consumes 60 percent less power.

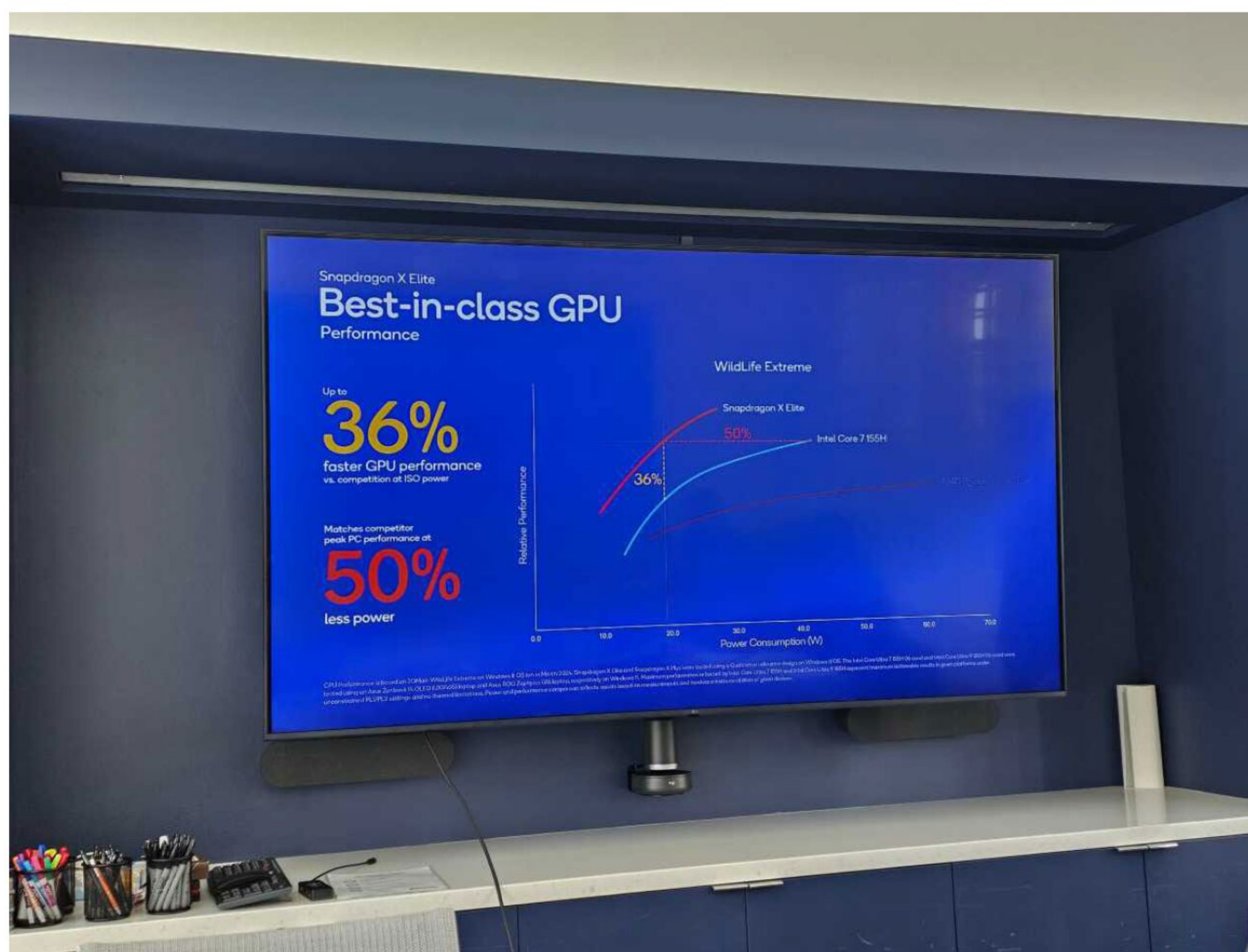
Against the Core Ultra 7 155H Qualcomm sees its Snapdragon X Elite also compare favorably:

- In single-threaded applications at the same power, Qualcomm says that the Snapdragon X Elite is 51 percent faster than the Core Ultra 9 155H, consuming 65 percent less power if the performance is equalized.

- In multi-threaded applications at the same



Qualcomm's own benchmarks claim that the Snapdragon X Elite is faster than Intel Core Ultra 9 as well as the Ryzen 9 7940HS.



The Snapdragon X Elite’s graphics performance compares favorably to the Core Ultra 7 155H.

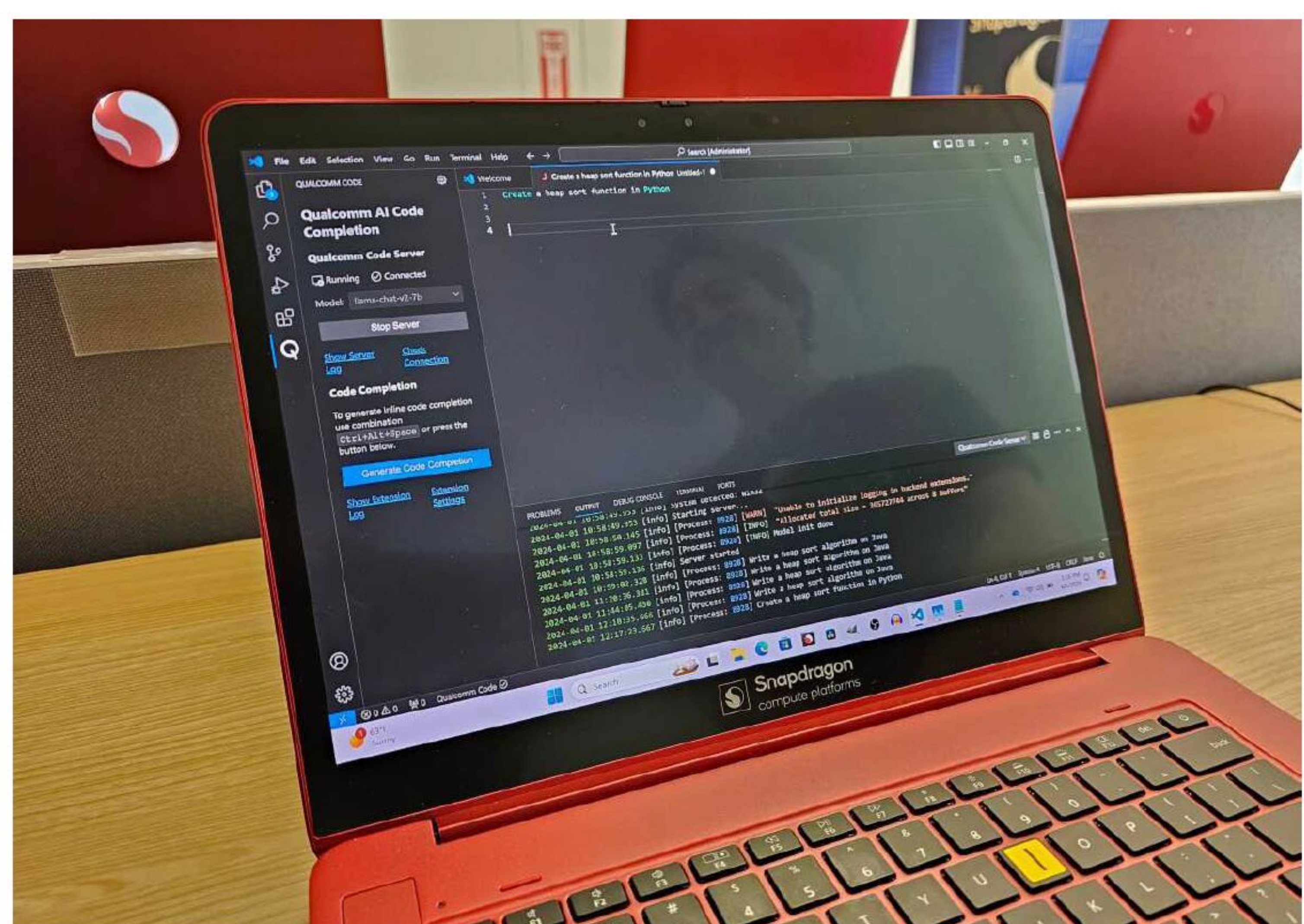
There is, of course, an omission: Qualcomm isn’t saying how well the Snapdragon X Elite compares to Intel’s 14th-gen Core HX parts. But PCWorld’s tests show that Intel’s 14th-gen Core HX mobile chips don’t exceed the very similar 13th-gen Core HX chips (fave.co/4az0khn) by that much, meaning we probably already have a solid point of comparison here, too.

power, the Snapdragon X Elite is 41 percent faster than the Core Ultra 9 155H, consuming 58 percent less power if the performance is equalized.

- In graphics, the Snapdragon X Elite is 36 percent faster using the UL 3DMark Wild Life Extreme benchmark than the Core Ultra 9 155H at the same power, and consumes 50 percent less power if the performance is normalized (1.).

Qualcomm is also saying that its Oryon core inside the Snapdragon X Elite outperforms Apple’s M3 processor by 22 percent: 15,610 versus 12,154 using Geekbench 6.2.

“This is a phenomenal part, the coverage has been awesome, the reception has been great,” said Nitin Kumar, Qualcomm senior director of product



Local LLMs running on the NPU will be invaluable for working on flights, Qualcomm executives said.

management, said in an interview with PCWorld. “We’re very excited about what we announced and where we are headed.”

Qualcomm executives have still not nailed down the exact battery life of a Snapdragon X Elite platform, which is affected by the battery size, workloads, and other factors. But “multiday” battery life is possible, executives said. Just using a Snapdragon X Elite chip, versus the competing Intel processor, could increase the battery life by 40 percent.

Qualcomm also continued to show off more and more applications that will run natively on the Arm processor used by the Snapdragon chips. Even if they do have to be emulated, Qualcomm executives believe that the performance of the chip will elevate application performance. “Even apps that are not native, but are running in emulation

mode, emulation performance is vastly improved,” Kumar said.

A BRIEF BIT OF GAMING

Qualcomm has said before that games should “just work” on the Snapdragon X Elite, and I was able to try out two: *Control* and *Redout 2*.

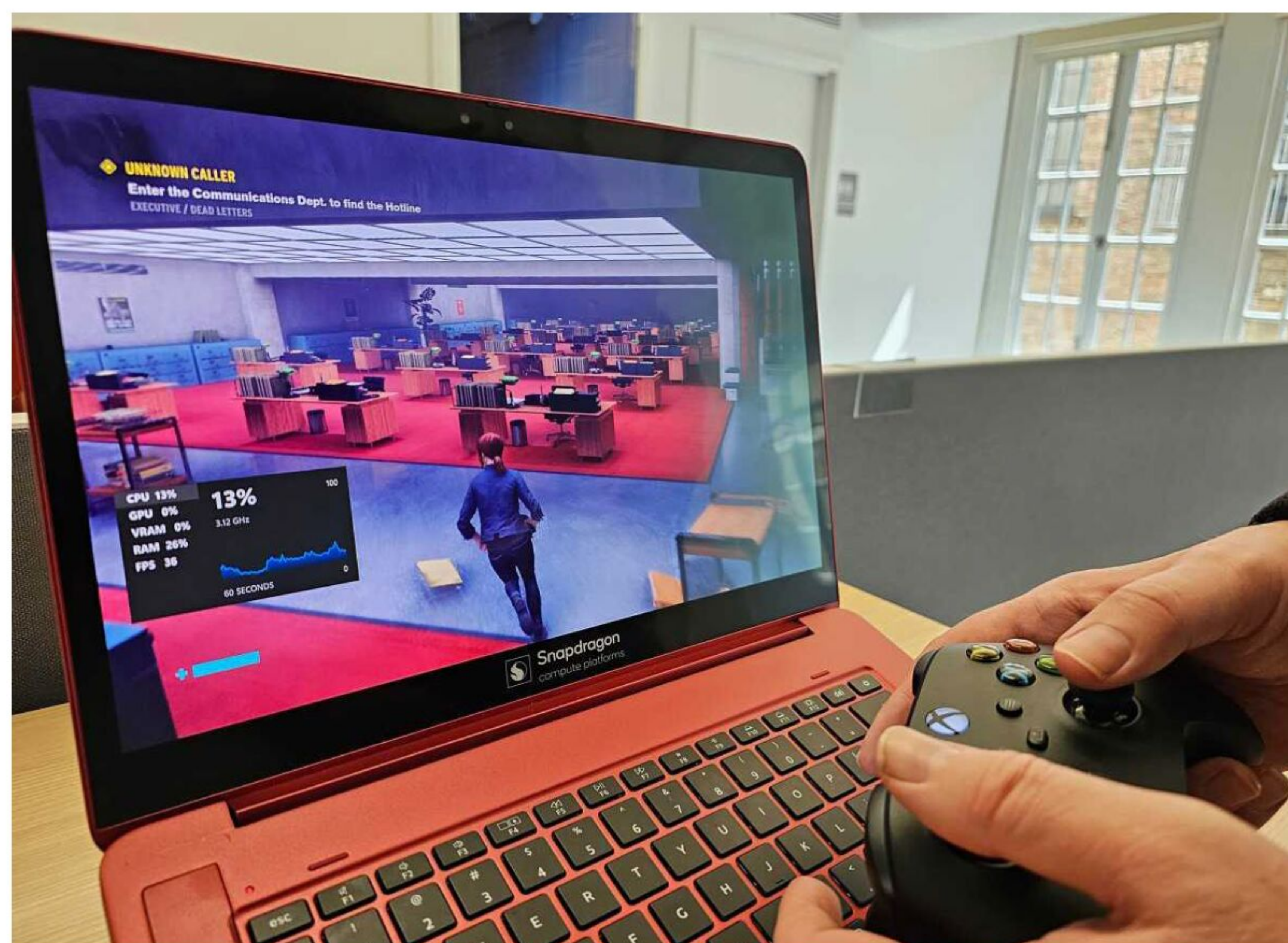
Were they playable? Yes, to an extent. Both defaulted (?) to 1900×1200 on the prototype Snapdragon X Elite hardware, and both ran on “Low” graphics options.

The saved game of *Control* hadn’t progressed far enough along, unfortunately, for me to try out combat in The Oldest House. I was able to run around and shoot watercoolers, albeit at about 30-40 fps.

Redout 2 looked great, though — again, at about 40 fps, but it was seamless and smooth. Qualcomm also had a copy of

Baldur’s Gate 3 available to play, but I didn’t have time to actually play it.

We won’t know how Qualcomm’s Snapdragon X Elite actually performs until laptops using it enter our labs. A grand total of nine PC makers have signed on to use Qualcomm’s new Snapdragon X Elite chip (fave.co/3VUA38N) — which, at least on paper, continues to impress. 🔌



***Control* was one of two games I used to test the Snapdragon X Elite.**

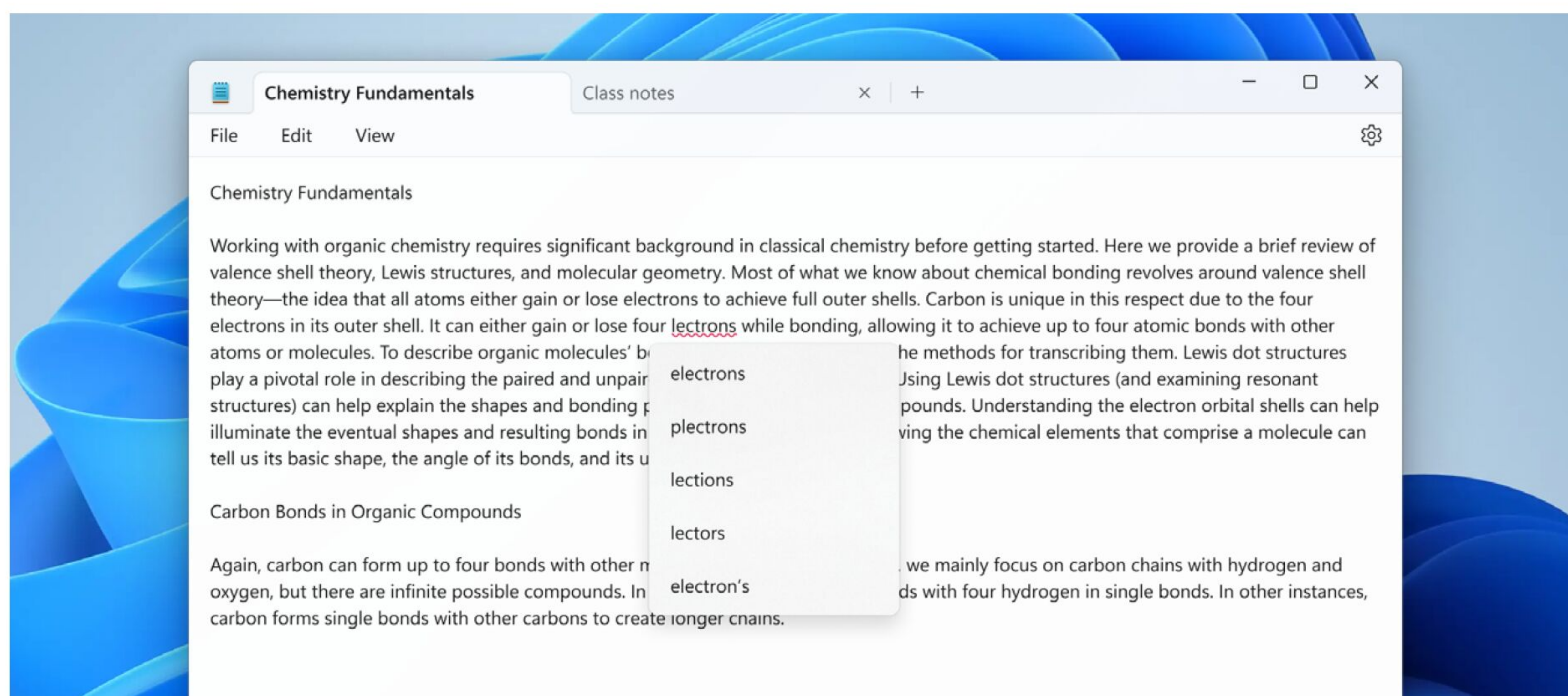
41 years later, Windows Notepad finally gets spell check

Writres, rejoice! **BY MICHAEL CRIDER**



Though it's intentionally simple and there are some excellent alternatives, Microsoft's humble Notepad text editor has gained a massive following through sheer ubiquity. Today it finally gets a feature that even the best writers (and also I) can't live without: spell check. The feature is now live in the latest Windows 11 Insider build.

According to Wikipedia ([fave.co/49BvnaU](https://en.wikipedia.org/wiki/Notepad_(Microsoft)#.co/49BvnaU)), the Notepad program is actually older than *Windows itself*, going all the way back to the Multi-Tool Notepad program that was included in the MS-DOS update which introduced mouse support in 1983. Then, as now, it was a faster and less resource-intensive alternative to Microsoft Word — and the fact that it was free with the




Notepad highlights typos and incorrectly spelled words with a red squiggly line.

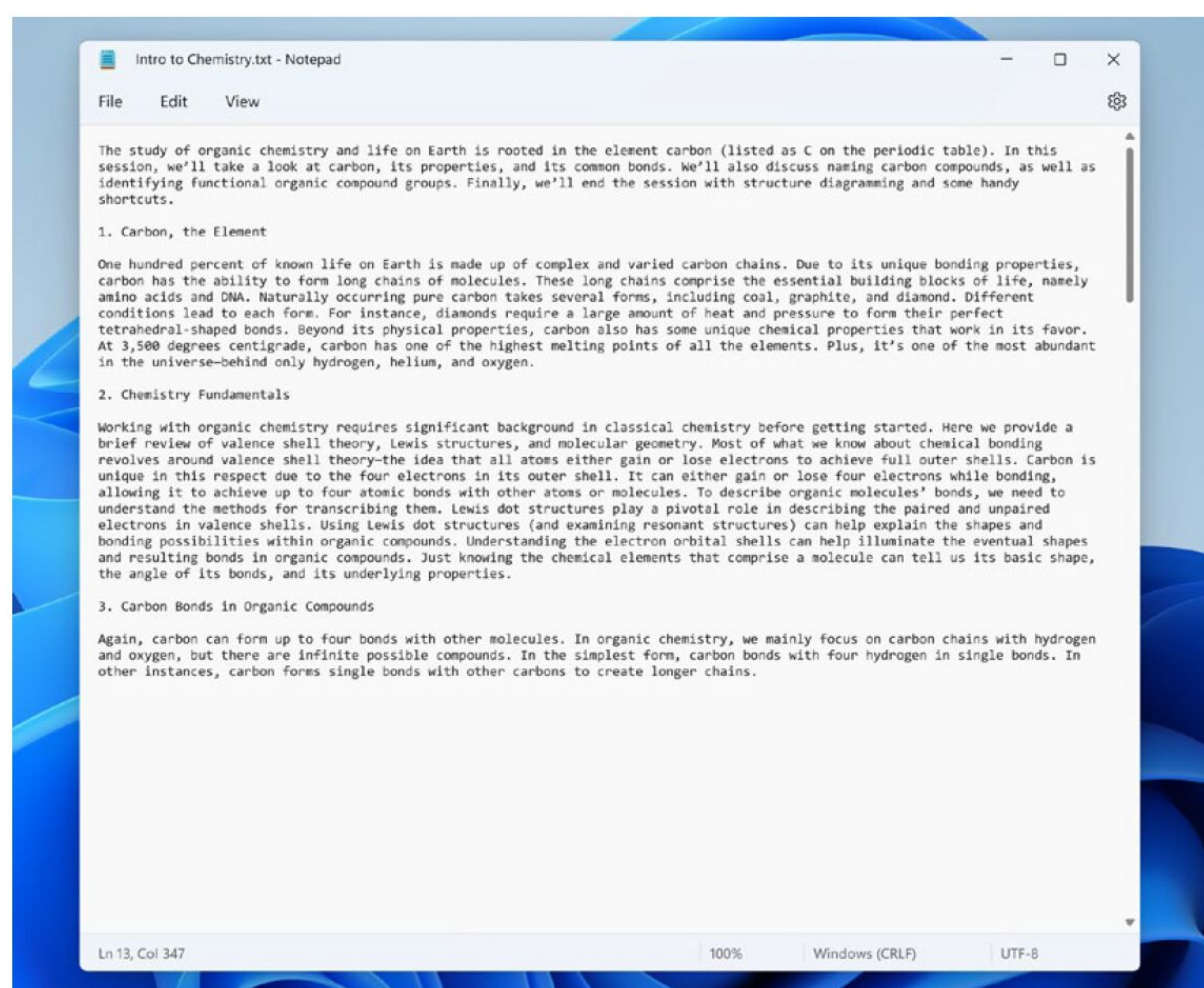
operating system didn't hurt. It's since become a feature in every single release of Windows.

The Windows Insider blog ([fave.co/3TSMWxo](https://blogs.windows.com/windows-insider/2024/05/20/windows-11-notepad-spell-check/)) notes that the spell check

features works in the familiar way, highlighting typos and incorrectly spelled words with a red squiggly line and offering alternatives with a left click or go through all the detected mistakes with Shift + F10. Users can enable

and disable spell check for different types of files.

Not everyone who downloads the latest Windows Insider build (11.2402.18.0) will get the updated version of Notepad, as there appears to be some A-B testing going on. But based on the update schedule, and barring any disasters with the implementation, it seems like a safe bet that release versions of the improved text editor will be headed to all Windows 11 builds before the end of the year. 



The Notepad program is older than Windows.



DROP THE F*BOMB



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Fentanyl is being used to make counterfeit pills and is being laced into other illicit drugs. Make sure your teens know the facts.

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SEIZE THE AWKWARD



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Asus Zenbook 14 OLED: A budget laptop star

Asus gets the gold star. **BY MATTHEW S. SMITH**

PCWorld
EDITORS'
CHOICE

AMD's Ryzen mobile chips are increasingly competitive with Intel's Core mobile lineup, and in recent years, AMD has taken a lead in some areas, such as battery life. The new Ryzen 7 8840HS is one of AMD's best mid-range mobile processors yet, and it gives the Zenbook 14 OLED the edge it needs to stand out from Intel-powered competitors.

SPECS AND FEATURES

The laptop's headline feature is certainly the AMD Ryzen 7 8840HS processor. This is a new chip from AMD, and it'll be interesting to see how it performs relative to older AMD chips, as well as Intel's new Core Ultra 7 series.

CPU: AMD Ryzen 7 8840HS

Memory: 16GB LPDDR5x

Graphics/GPU: AMD Radeon integrated

Display: 1920×1200 OLED 60Hz

touchscreen

Storage: 512GB PCIe 4.0 NVMe solid state drive

Webcam: 1080p camera with IR sensor for Windows Hello, physical privacy shutter

Connectivity: 1× USB-C 4 Gen 3 with DisplayPort and Power Delivery, 1× USB-C 3.2 Gen 2 with DisplayPort and Power Delivery, 1× USB-A 3.2 Gen , 1× HDMI 2.1, 1× 3.5mm combo audio jack

Networking: Wi-Fi 6E, Bluetooth 5.3

Biometrics: Windows Hello facial recognition

Battery capacity: 75 watt-hours

Dimensions: 12.3×8.67×0.59 inches

Weight: 2.82 pounds

MSRP: \$849.99

The laptop otherwise embraces typical

budget to mid-range specifications, including 16GB of memory, 512GB of solid-state storage, and a 1920×1200 OLED touchscreen. Asus prices their Zenbook 14 OLED at the retail MSRP of approximately \$850, which is definitely a reasonable price for the hardware.

DESIGN AND BUILD QUALITY

The Asus Zenbook 14 OLED, much like its predecessors, is a black slate adorned only with subtle etchings across the display lid. I always grumble about this because I remember when the Zenbook featured a stunning concentric circle design (fave.co/3VYtdiA) that stood out from the crowd. The current Zenbook 14 OLED's design is inoffensive, but shoppers craving a more

luxurious look should consider the Lenovo Slim 7 14 (fave.co/3TQQsrW).

It's a functional design, at least. The Zenbook measures just a hair over 12 inches wide and less than nine inches deep, as well as under 0.6 inches thick. It's also light at only 2.82 pounds. These are excellent numbers. It's just a tenth of a pound heavier than the MacBook Air M1 13 or Dell XPS 13, and lighter than the Lenovo Slim 7 14 or Dell Inspiron 14



The Zenbook 14 OLED is a black slate adorned only with subtle etchings across the display lid.

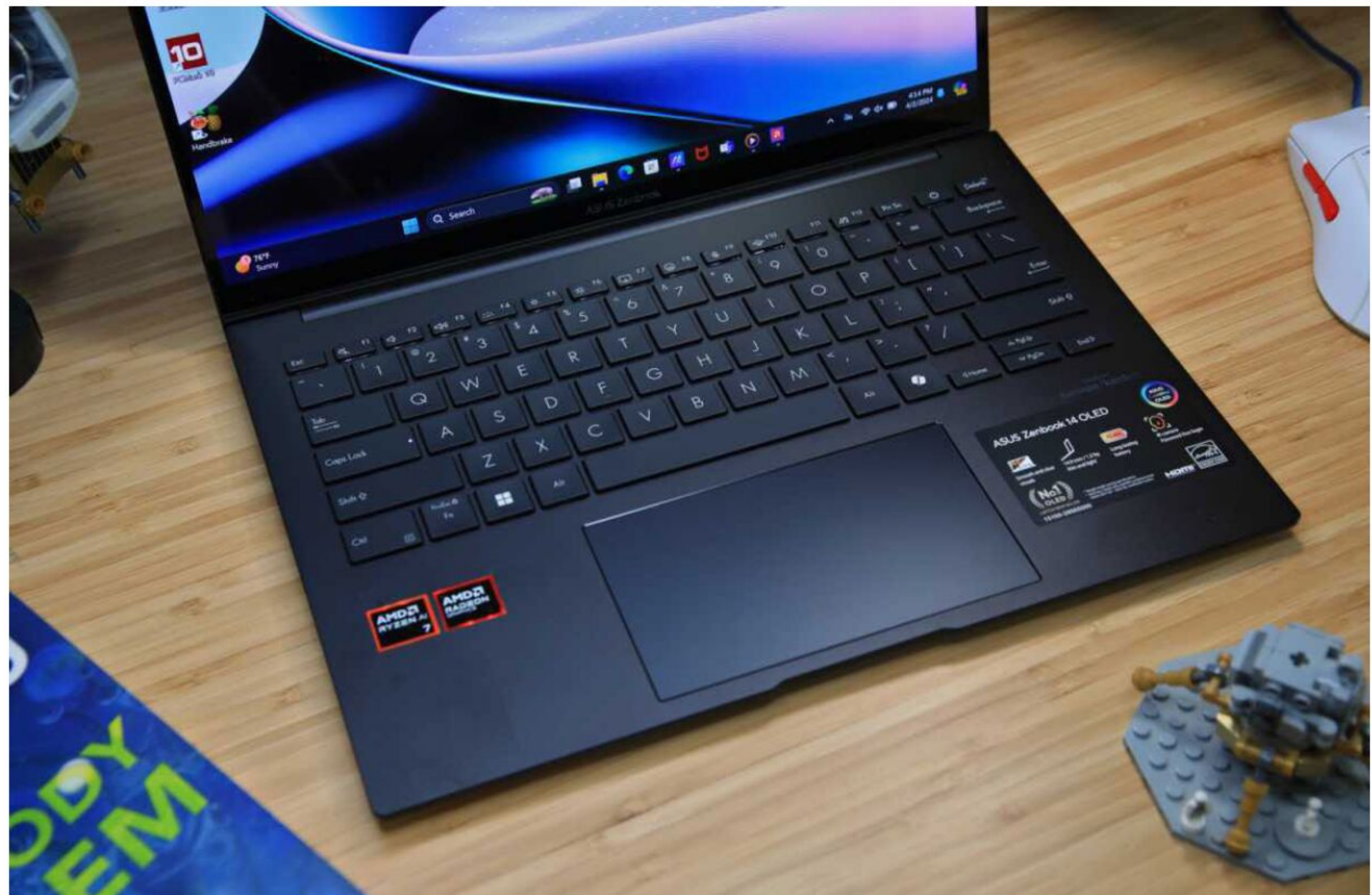
Plus (fave.co/49EfdOa).

Surprisingly, the Zenbook's lightweight design doesn't compromise build quality. The chassis allows minimal flex and feels solid when handled roughly. A wide display hinge, which is nearly as wide as the laptop itself, provides good tension, yet it's still possible to open the laptop with a single finger. This is great to see in any laptop, but especially appreciated in a budget-friendly device.

KEYBOARD, TRACKPAD

I was pleased, though not overjoyed, by the Asus Zenbook 14 OLED's keyboard. Though some keys are slightly undersized, such as the backspace key, the layout is otherwise spacious and more accommodating than most 14-inch laptops. There's a good amount of space on the palm rest as well, so wrist cramps are unlikely.

Key feel is acceptable. There is a reasonable amount of travel and crisp key activation, but the bottoming action is abrupt. It's totally usable and comparable to many laptops but some similarly priced competitors, like the Lenovo Slim 7 14, have a slight edge. A white LED keyboard backlight is included and serves its purpose, providing



The laptop's keyboard is spacious and more accommodating than most 14-inch laptops.

several brightness levels with none being too dim or overly bright.

The touchpad measures about five inches wide and three inches deep. That's plenty of space for mouse navigation and generally great for Windows multitasking gestures, with one exception. I would like to see a little bit more depth, as three inches is barely enough for using a two-finger gesture to scroll through a web page or document. There's still a few quarters of an inch of space above and below the touchpad that Asus might manage to harness in future versions.

DISPLAY, AUDIO

0Asus equips the Zenbook 14 OLED with a 1920×1200 resolution OLED touchscreen with a maximum refresh rate of 60 Hz.

This is an entry-level OLED display, and its

resolution is lower than the 2880×1800 displays that are common in many more expensive laptops. However, it still delivers the perks that would be expected from an OLED display, including an excellent contrast ratio and vivid colors. Movies and games look realistic and vibrant.

I appreciate that the display is a touchscreen, as well. This isn't true of all competitive laptops, as some brands choose to save the touchscreen for 2-in-1 devices. I always find touch a nice option when using apps that are optimized for it, and it's good to see it included in a budget laptop.

Though bright enough, the OLED display can be difficult to use in a bright room or outdoors, a problem not helped by the highly reflective display coat. HDR is supported and works reasonably well for a laptop but, as mentioned, the display's maximum brightness isn't up for delivering a truly brilliant HDR picture. To be fair, this is also true of similarly priced competitors.

Audio performance is a pleasant surprise. The laptop has downward-facing speakers with Harman Kardon branding, and they provide a great experience with a high maximum volume and a decent amount of



The laptop has a 1920×1200 resolution OLED touchscreen.

bass when required. The sound can become a bit muddy when listening to complex music at maximum volume, but it's an enjoyable experience overall, and owners with less critical ears won't hear a reason to use external speakers or a headset.

WEBCAM, MICROPHONE, BIOMETRICS

A 1080p webcam is stuffed in the Asus Zenbook 14 OLED's top bezel. It provides crisp video with good color reproduction with balanced exposure. I don't think the webcam's quality stands out in 2024, as most laptops have now moved to 1080p webcams as well, but it remains excellent for video calls and other less demanding video recording needs. The laptop also includes several AI-powered features including background blur, automatic framing, and eye

contact correction.

Asus provides a physical privacy shutter that slides over the camera and completely blocks it. The shutter is bright red, so it's easy to tell when it's activated (or not). The shutter does not deactivate the microphone.

The laptop's microphone array captures audio with clear, crisp reproduction, and it easily picked up my voice even when I spoke softly. AI-powered noise cancellation is included and can remove most repetitive background noise. The laptop also includes several noise canceling modes for different situations: a single presenter, multiple presenters, and a "360-degree" mode for capturing all sounds around the laptop. These modes significantly changed how the microphone performed, so it's important to use the right mode for the job.

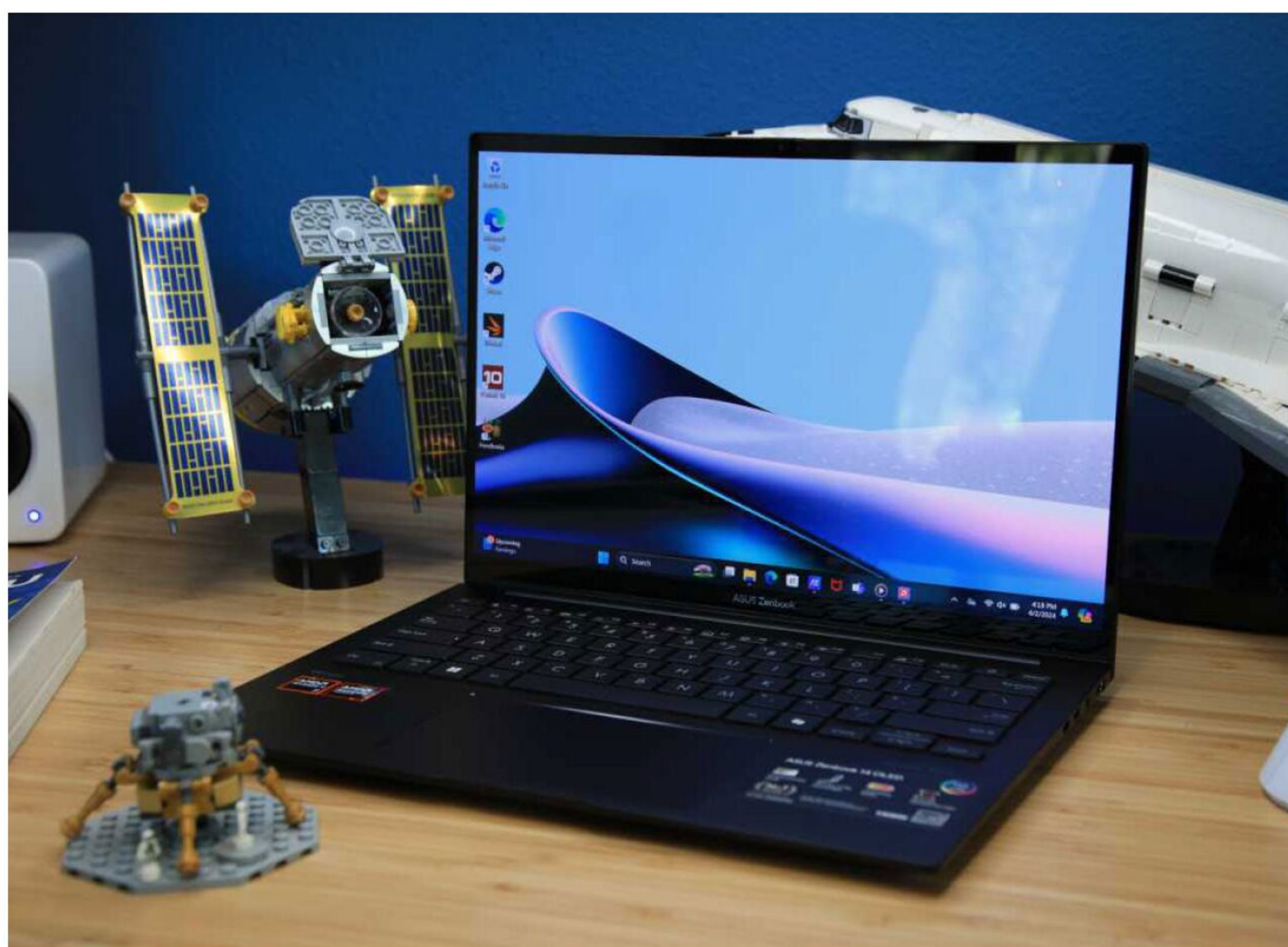
Biometric login is supported through Windows Hello facial recognition. It works well, as usual, with fast and reliable login once the feature is set up. However, the Zenbook lacks the automatic human presence detection feature found on some alternatives, like the Lenovo Slim 7 14. That laptop can automatically detect when you approach the laptop and then

activate Windows Hello for seamless, zero-touch login.

CONNECTIVITY

The Asus Zenbook 14 OLED's connectivity is a bit slim but covers all the bases. It has one USB-C 4.0 port and one USB-C 3.2 port; both of these support DisplayPort Alternate Mode and power delivery. That means both can be connected to an external monitor or be used to charge the laptop.

These ports are complemented by one USB 3.2 Gen 1 port for connecting older wired devices. The laptop also has a single HDMI 2.1 port and a 3.5 mm combo audio jack. I would have liked to see an additional USB port, and there's certainly room on the laptop for it. Ethernet is absent, as well, so wired internet isn't an



Connectivity is a bit slim but covers all the bases.

option without an adapter.

The wireless connectivity spans Wi-Fi 6E and Bluetooth 5.3. I would like to see Wi-Fi 7 supported since it’s the most recent standard, but it’s not common among budget laptops. Wi-Fi 6E will be adequate for many years in any case, as most people have yet to upgrade their routers to that older standard. I also found the Wi-Fi to be speedy and reliable as it performed well, even in my detached office, which is several walls and over 50 feet away from my router.

PERFORMANCE

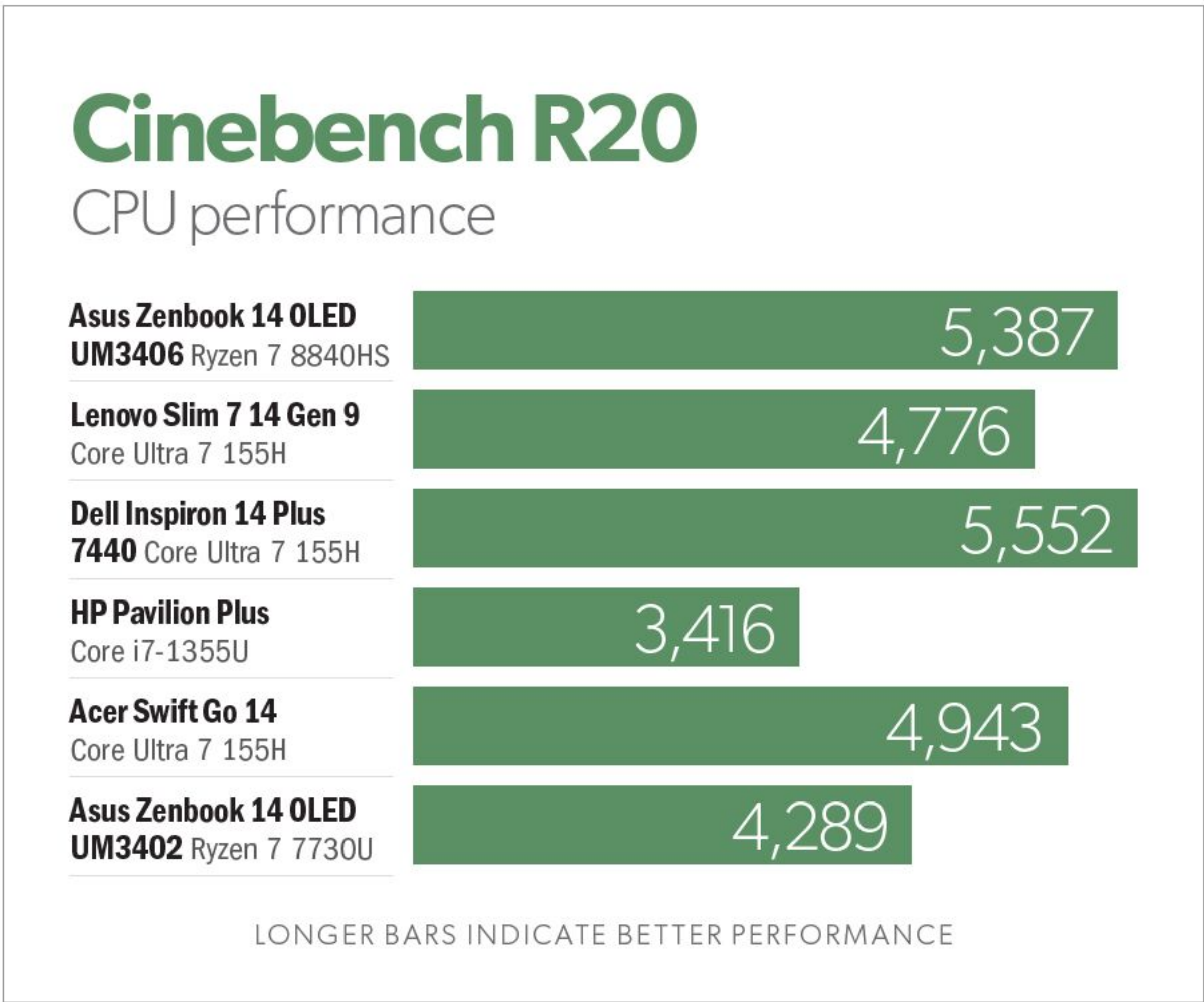
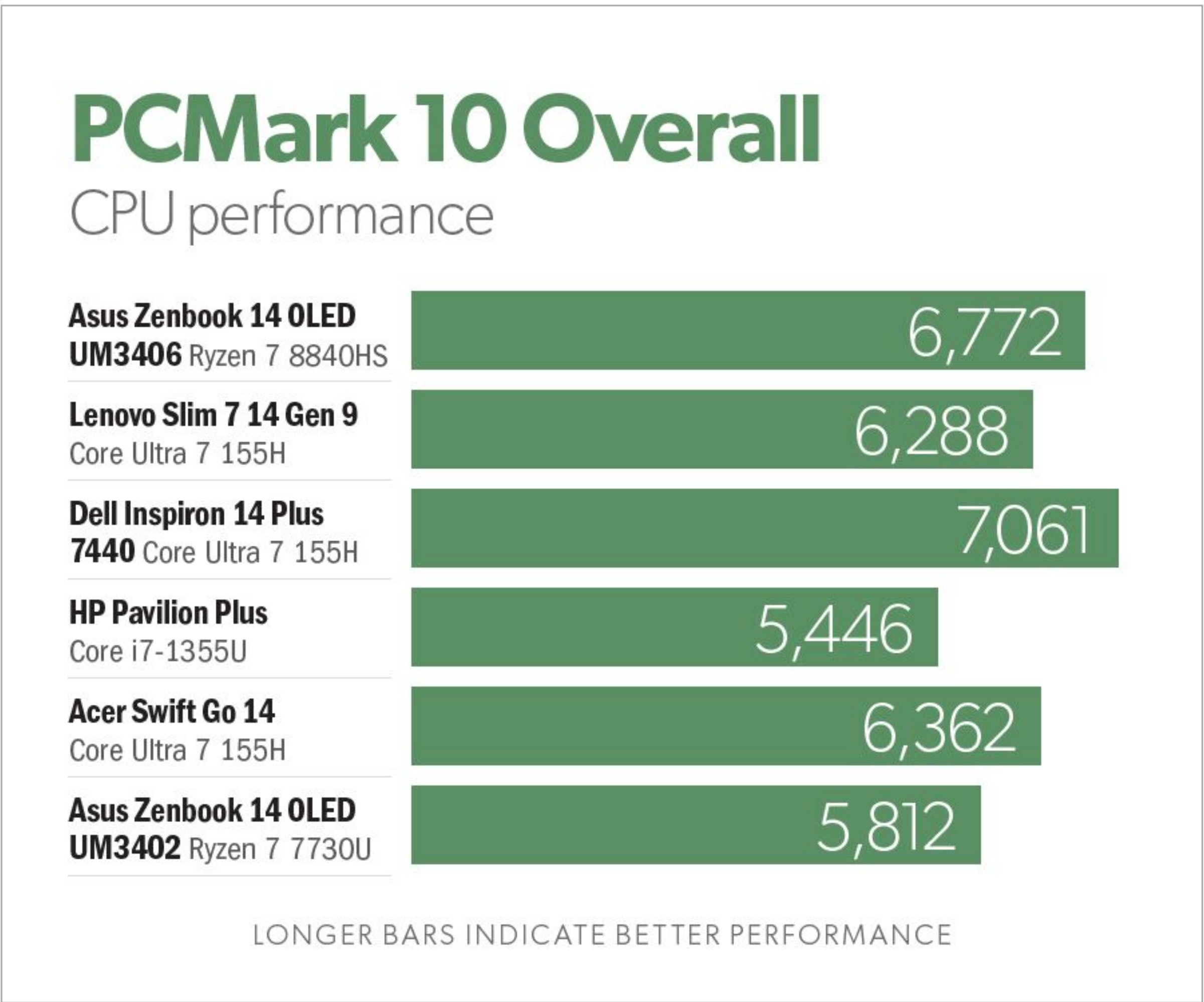
The Zenbook 14 OLED’s performance is noteworthy due to its AMD Ryzen 7 8840HS processor. This new chip from AMD features eight cores and 16 threads, and is manufactured using TSMC’s relatively new 4-nanometer process. The processor also integrates AMD Radeon RX 780M graphics with 12 compute units, which is the most

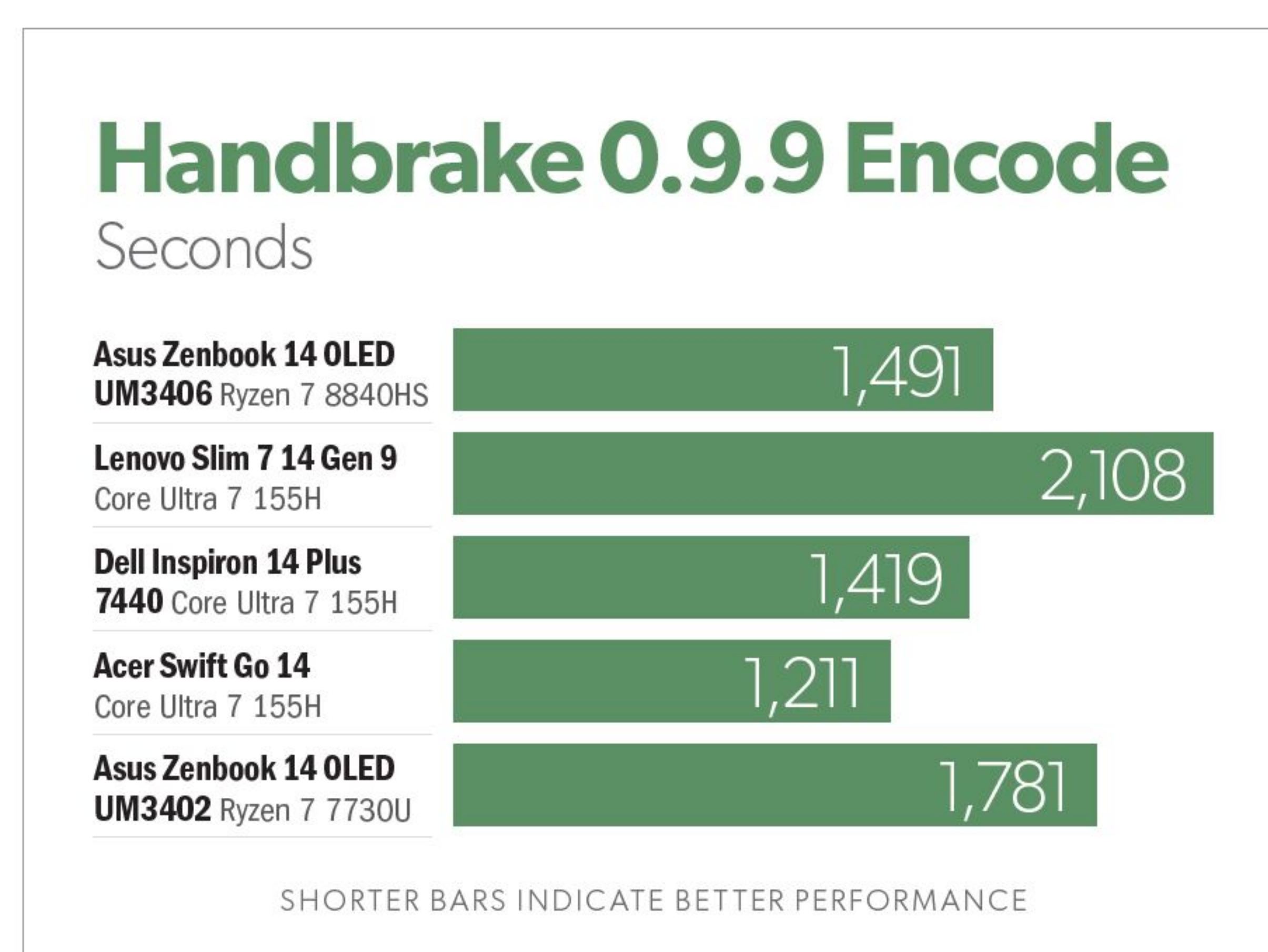
capable version of Radeon integrated graphics available today.

The Zenbook gets off to an excellent start in PCMark 10 with a score of 6,772. That is higher than most comparable laptops, except for the Dell Inspiron 14 7440, which squeezes out a win by a margin of a few hundred points. Asus’ victories over the Lenovo Slim 7 14 and Acer Swift Go 14 are notable since they are direct, similarly priced competitors.

Cinebench R20, which is a short-duration, heavily multithreaded CPU benchmark, produces a result similar to PCMark 10. Once again, the Zenbook is a tad behind the Dell Inspiron 14 Plus, but it defeats other recently tested laptops with an Intel Core Ultra 7 155H processor. The new Zenbook enjoys a significant improvement over the older Ryzen 7 7730U, which we tested in last year’s Zenbook 14 OLED (fave.co/3SjDWSm).

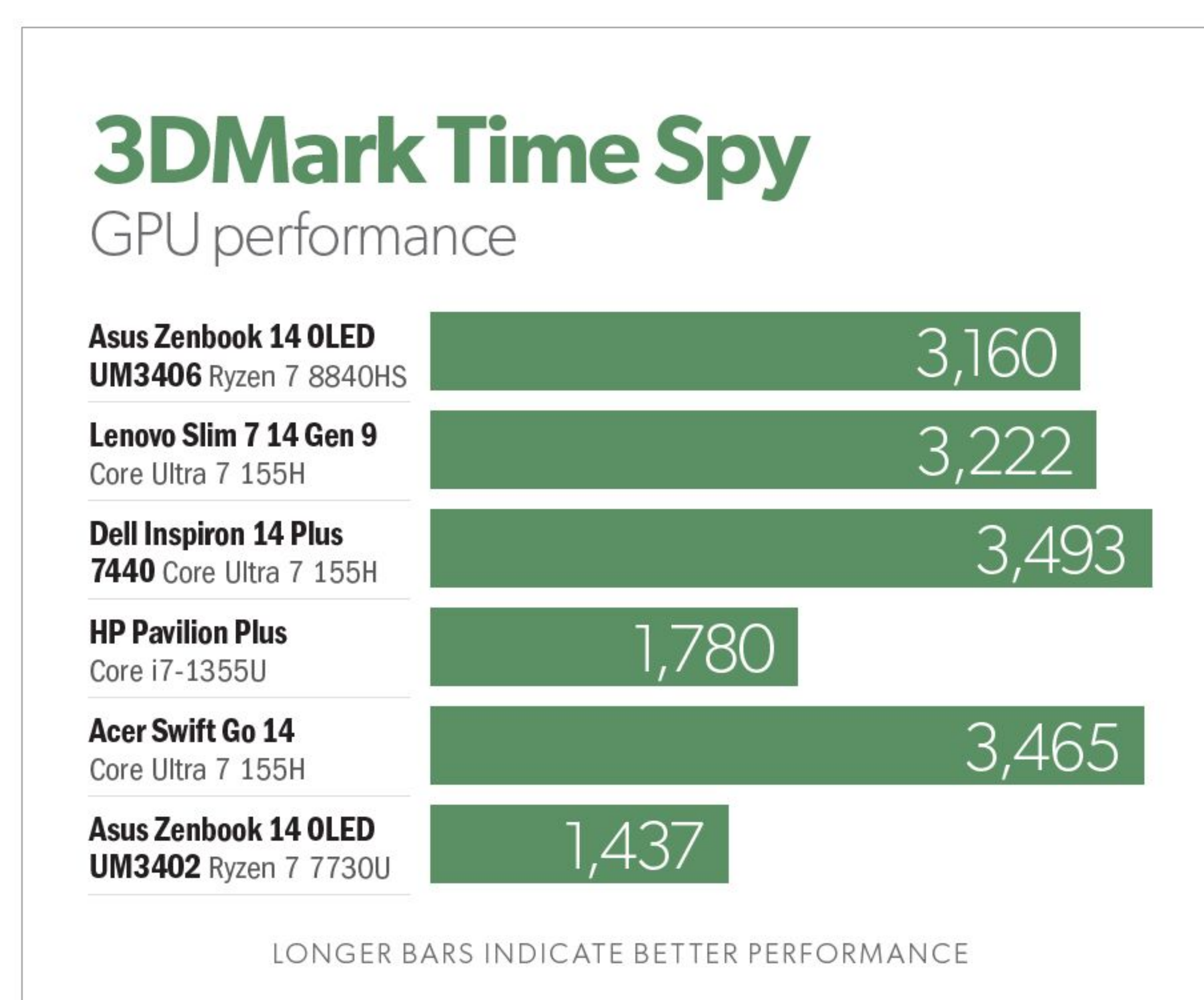
Handbrake shakes up the rankings a bit. This is a long, duration, heavily multi threaded





CPU benchmark, so it provides more room for a laptops cooling solution to better define it's performance as many laptops will be encountering thermal limits in this test. Still, the Zenbook result is quite respectable and lands in the middle of recently tested budget and mid-range laptops.

Next up is 3DMark Time Spy, which we use to test laptops with integrated graphics. The new Zenbook posts a healthy, yet mediocre result of 3,160. On the plus side,



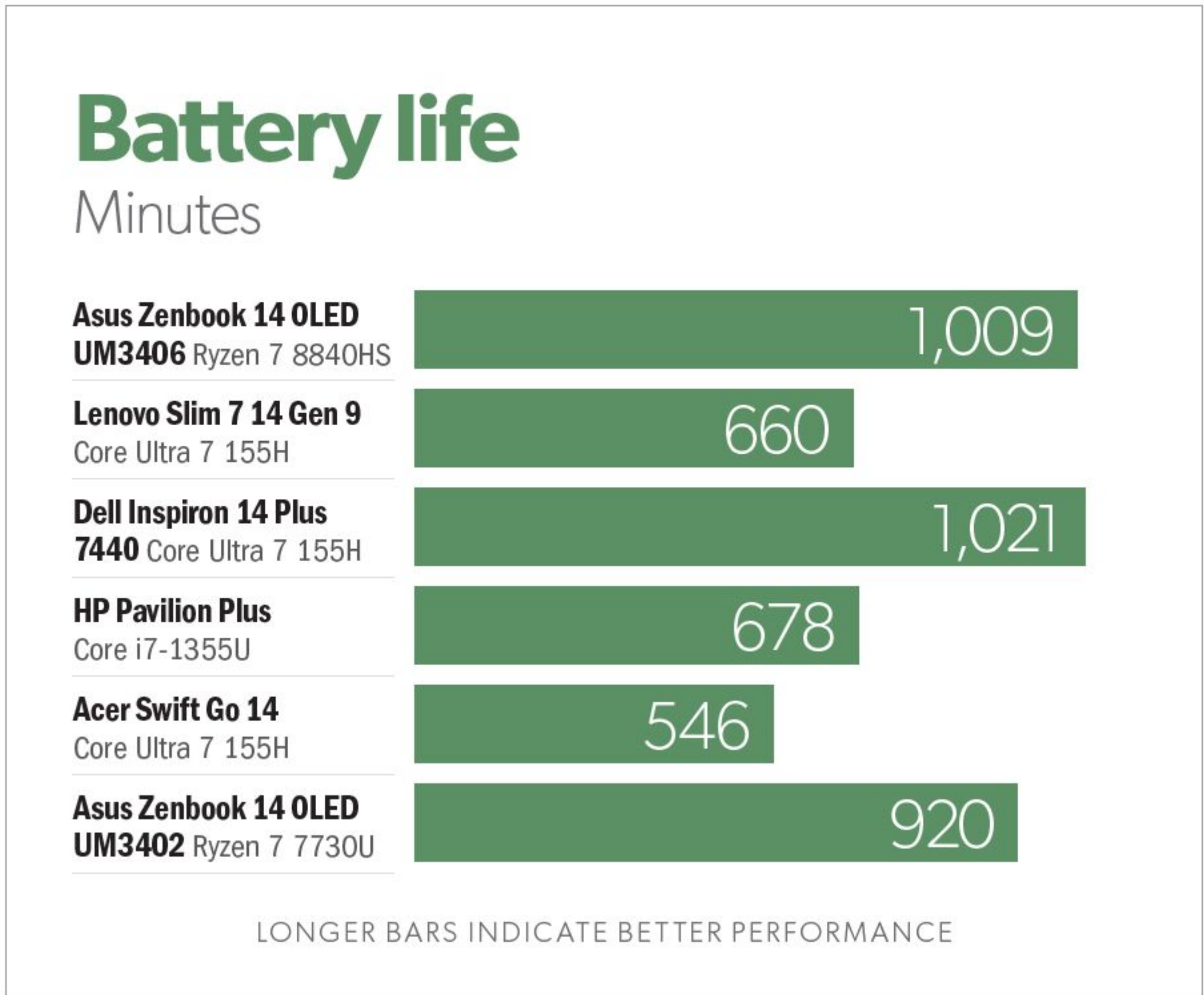
this is quite a strong score for integrated graphics, and it's a huge upgrade over the prior AMD Ryzen-powered Zenbook 14 OLED. However, this result does land a little bit shy of Intel's Arc integrated graphics. The difference isn't enough to come across in real-world gameplay, but it's there.

The Zenbook 14 OLED is not a gaming laptop, and it won't perform well in cutting-edge AAA games that target current-generation game consoles like PlayStation 5 and Xbox Series X. However, it can handle most games from the prior console generation, albeit in some cases at low to medium settings.

It's clear AMD has a winner on its hands with the Ryzen 7 8840HS, and that works in the Zenbook's favor. Its performance matches or slightly exceeds that of laptops equipped with Intel's Core Ultra 7 155H, which is popular in this price bracket. I also noticed that the Zenbook was quiet, with the fans only becoming noticeable during the most demanding benchmarks. It's a great choice for anyone who wants a reasonably quick yet affordable machine.

BATTERY LIFE

A 75 watt-hour battery provides the Zenbook 14 OLED with its juice when away from a power socket. That's not an unusually large battery for a 14-inch laptop, but it's bigger than average, as most competitors have a battery with around 65 watt-hours.



The large battery, alongside the power-efficient AMD Ryzen processor, results in excellent battery life.

I saw over 16 hours of battery life in our standard battery test, which loops a 4K file of the short film *Tears of Steel*. That result is well ahead of many competitors and in some cases about 50 percent better than the results recorded from alternatives, such as the Acer Swift Go 14 and Lenovo Slim 7 14.

Real-world battery life was similarly excellent in my day-to-day experience. Using the laptop constantly for my usual daily workflow, which involves plenty of writing, some web browsing, and a bit of photo editing, drains roughly 15 percent of the battery every two hours. I typically use a laptop for half my workday, so I only had to charge the laptop once every three days.

It’s important to note the battery could, in theory, be drained much more quickly in a

heavy and sustained workload (like 3D gaming or encoding a lengthy video), which is true of all modern laptops. But the battery life is impressive in typical use.

BOTTOM LINE

The Asus Zenbook 14 OLED UM3406 is an exceptional budget laptop. Though it’s not much to look at, it provides great performance across a wide variety of benchmarks, long battery life, solid build quality, an excellent OLED screen, strong speakers, and a quality webcam. Even the laptop’s weaknesses, such as its keyboard and connectivity, are average for the price and competitive with alternatives. This is not a performance or gaming laptop, so it has its limits—but if you’re looking for an excellent all-around Windows laptop at a respectable price, it’s hard to beat. 🔌

Asus Zenbook 14 OLED



PROS

- Robust build quality.
- Attractive OLED touchscreen.
- Good CPU and integrated GPU performance.
- Outstanding battery life.

CONS

- Design is dull.
- Keyboard isn’t memorable.
- Mediocre connectivity.

BOTTOM LINE

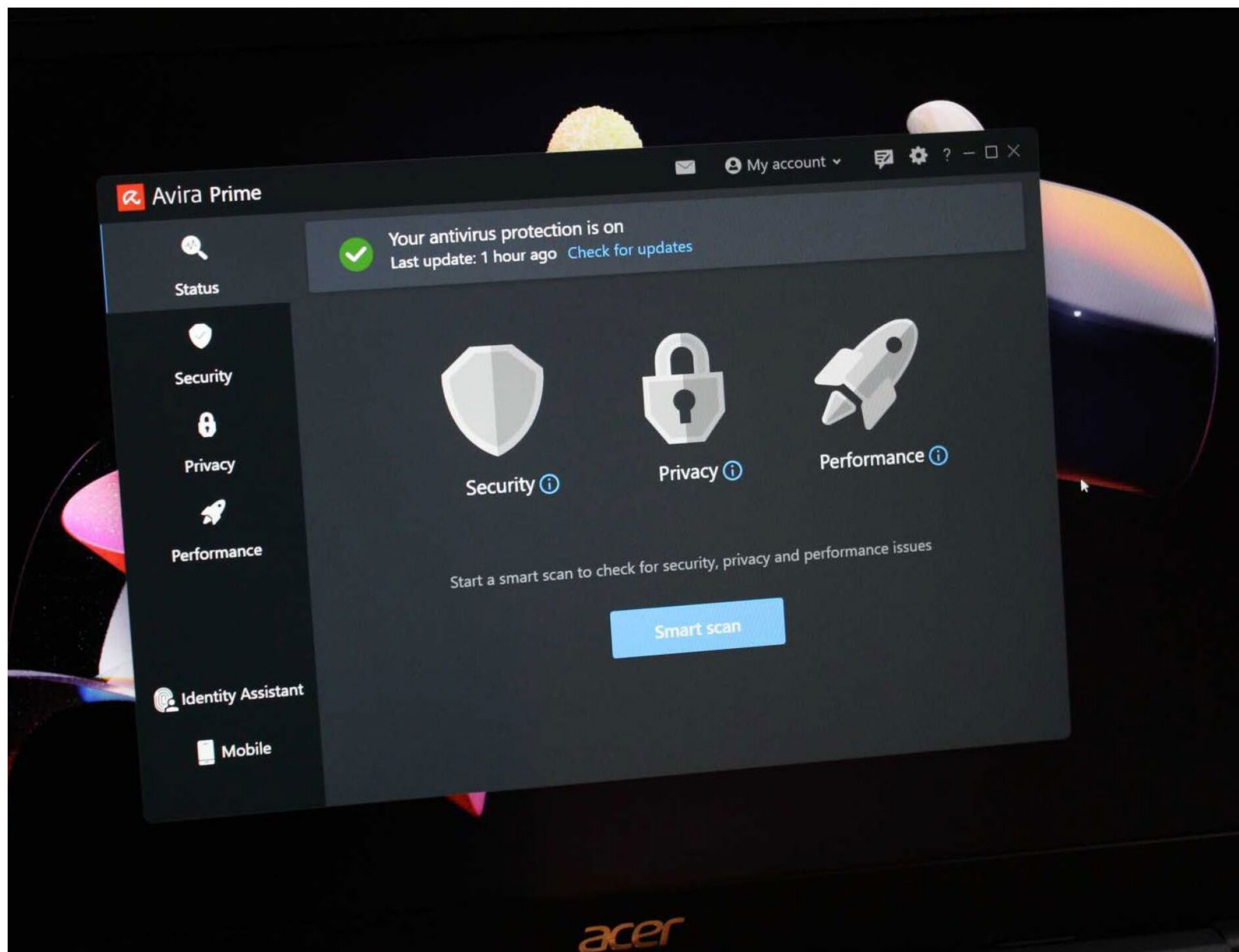
AMD’s Ryzen 7 8840HS powers the new Zenbook 14 OLED to strong benchmark results and long battery life.

From \$849

Avira Prime: Comprehensive, user-friendly antivirus

Dig into this dead-simple antivirus suite and you'll find a sophisticated set of PC utilities.

BY ALAINA YEE



PCWorld
EDITORS'
CHOICE

Tucked within Windows are different utilities to protect and manage your PC — but not all are easily found, much less in one spot or in an immediately understandable format.

Independent antivirus software suites try to capitalize on this weakness, but Avira Prime stands out in the field for its approach. Rivals usually go with either a simplified or advanced approach to controls and utilities. Meanwhile Avira combined an extremely

pared-down, newbie-friendly interface with a boatload of PC utilities that go startlingly deep.

Not all these tools work out quite as well as advertised, but if you want to have PC maintenance demystified for you, Avira Prime can get you started — while still providing strong threat protection.

WHAT DOES AVIRA PRIME INCLUDE?

At the core of this security suite are its malware, network, and web defenses. The antivirus engine scans continuously for real-time threats, including ransomware, shady websites, and malicious downloads. Meanwhile, the firewall blocks potential network intrusions and suspicious app traffic. The subscription also comes with two services that protect against online dangers: a password manager and an unlimited VPN. Rounding out the safeguards is dark web monitoring, which keeps watch for your information in data leaks and breaches.

Avira Prime includes PC performance tools as well, but unlike other antivirus suites, it’s unique in how many it offers. You get utilities to speed up your computer, save your laptop’s battery life, keep your apps and drivers up to date, boost game performance, find duplicate files hogging

	AVIRA ANTIVIRUS PRO	AVIRA PRIME	AVIRA INTERNET SECURITY
	<div><div><div><div></div><div>ANTIVIRUS PRO</div></div><div>\$44.99 / Year (-40%) \$26.99 / First Year</div><div>Buy now</div><div>Automatically renews at \$44.99 / year, unless the renewal is cancelled. Savings compared to the renewal price. Subscription details below.*</div><div>1 PC / 1 Year</div></div></div>	<div><div><div><div></div><div>AVIRA PRIME</div></div><div>\$104.99 / Year (-43%) \$59.99 / First Year</div><div>Buy now</div><div>Automatically renews at \$104.99 / year, unless the renewal is cancelled. Savings compared to the renewal price. Subscription details below.*</div><div>5 Devices / 1 Year</div></div></div>	<div><div><div><div></div><div>INTERNET SECURITY</div></div><div>\$57.99 / Year (-40%) \$34.99 / First Year</div><div>Buy now</div><div>Automatically renews at \$57.99 / year, unless the renewal is cancelled. Savings compared to the renewal price. Subscription details below.*</div><div>1 PC / 1 Year</div></div></div>
ANTIVIRUS PROTECTION	✓	✓	✓
FIREWALL	✓	✓	✓
SOFTWARE UPDATER	✗	✓	✓
PASSWORD MANAGER	✗	✓	✓
PC SPEED & TUNE-UP TOOLS	✗	✓	✗
VIRTUAL PRIVATE NETWORK (VPN) WITH NO DATA LIMITS	✗	✓	✗
	<div><div><div><div></div><div>ANTIVIRUS PRO</div></div><div>\$44.99 / Year (-40%) \$26.99 / First Year</div><div>Buy now</div><div>Automatically renews at \$44.99 / year, unless the renewal is cancelled. Savings compared to the renewal price. Subscription details below.*</div><div>1 PC / 1 Year</div></div></div>	<div><div><div><div></div><div>AVIRA PRIME</div></div><div>\$104.99 / Year (-43%) \$59.99 / First Year</div><div>Buy now</div><div>Automatically renews at \$104.99 / year, unless the renewal is cancelled. Savings compared to the renewal price. Subscription details below.*</div><div>5 Devices / 1 Year</div></div></div>	<div><div><div><div></div><div>INTERNET SECURITY</div></div><div>\$57.99 / Year (-40%) \$34.99 / First Year</div><div>Buy now</div><div>Automatically renews at \$57.99 / year, unless the renewal is cancelled. Savings compared to the renewal price. Subscription details below.*</div><div>1 PC / 1 Year</div></div></div>

Avira Prime is the company’s top antivirus plan, but it competes with mid-tier offerings from other antivirus vendors.

storage, and shred sensitive data. Avira Prime also has a wealth of backup options that go beyond just files—you can back up and restore your Windows registry and master boot record, too.

Surprisingly, Avira Prime does not contain any parental controls — in fact, the Avira website points users to Windows’ own set of content filters, app controls, and time limits.

PRICE

If you buy from Avira directly, the Avira Prime subscription costs \$60 for the first year, then increases to \$105 afterward. A free 60-day trial exists, though you must put down

payment info at sign-up.

Plans come with a separate 60-day money-back guarantee (fave.co/3VYyHKf) for annual plans, and a 14-day refund window for monthly plans. Avira automatically enrolls subscribers into auto-renewal at sign-up.

Avira Prime (5-devices)

\$60 for the first year

\$105 per year thereafter

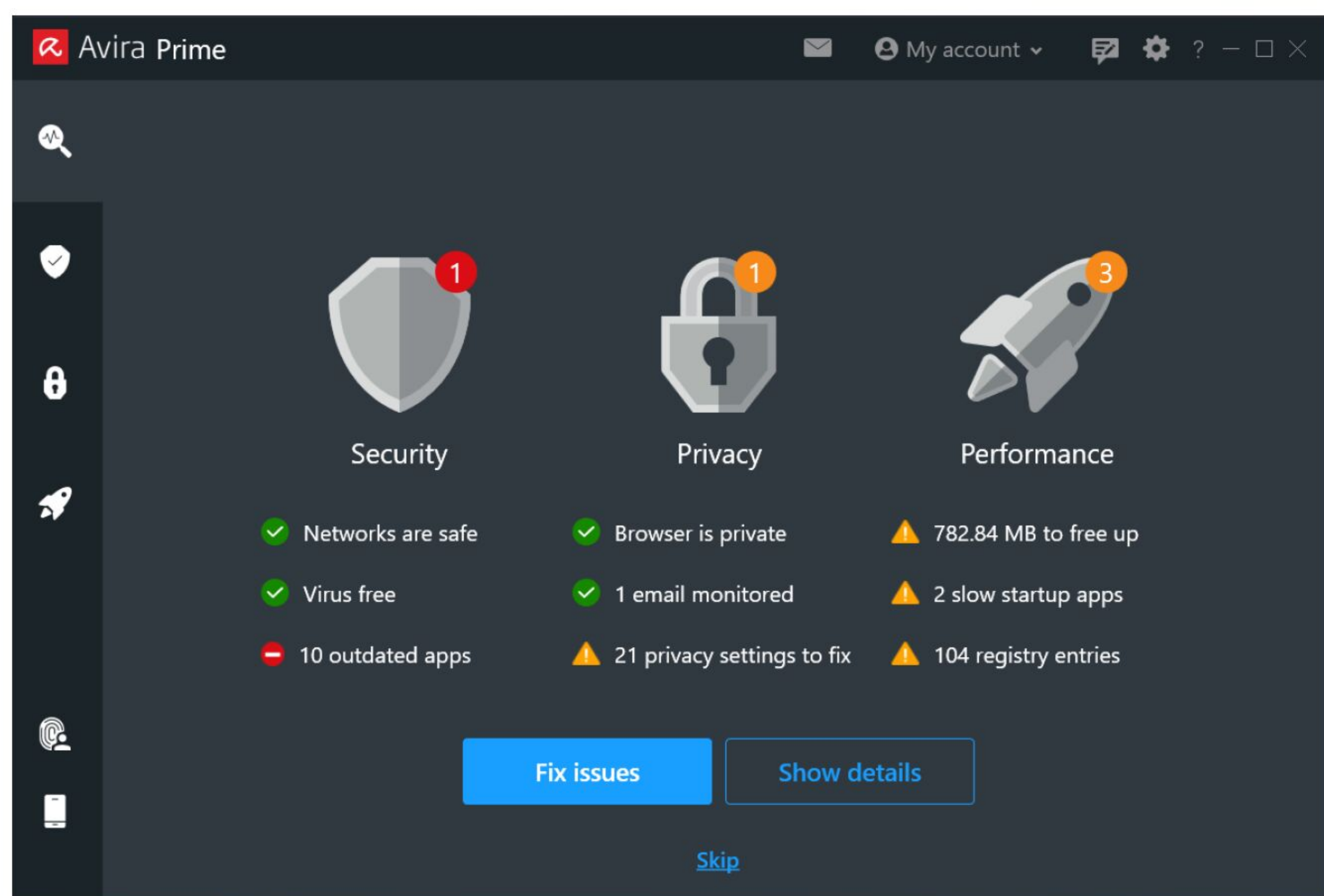
The default plan for Avira Prime includes five devices, but if you need more, you can upgrade to the 25-device plan for \$130 per year. Your device limit can be shared as you see fit, and across Windows, macOS, Android, and iOS. However, unlike a true family plan (which lets you share across separate accounts), you'll have to use your one account to log into each device.

Unlike with more popular antivirus suites, you can't buy Avira Prime subscription codes at a discount from third-party retailers.

KEY FEATURES

Installation and user interface

Upon installation, Avira Prime shows a prompt to start a smart scan — which you can proceed with or choose to be reminded



The Avira app's status screen, right after the initial smart scan.

about later. (It's advised to perform the scan.)

The app has an easy-to-navigate interface, with a dark gray-and-black theme as the default. (You can switch it to a light theme by going into the settings.) Like many other antivirus programs, the layout is split between a left navigation bar and a main panel. Avira's take on this standard feels cleaner and more modern, though — in part due to the simplicity of its features and settings.

The left navbar has just four main options. At the top is Status, which shows the status screen you'll see whenever reopening the program. However, instead of serving as a dashboard, you can only run a smart scan or see Avira's latest assessment of your PC. To run other scans you must head to the Security tab, which has options for full, quick, or custom virus scans. The security tab also gives

access to protection settings, quarantine, the software updater tool, and the firewall.

Additional safeguards like the password manager and VPN live under Privacy, along with the file shredder, privacy settings, and links to the Avira Safe Shopping browser extension, Avira secure browser, and dark web monitoring in the Avira web portal.

As for the many PC utilities bundled with Avira Prime, you can find those in Performance, which either pops you over to built-in Windows tools or to the Avira System Speedup Pro app.

If you need help with Avira, want to look up info in your account, or change the software's settings (including tweaks to how scans run), you'll find these options as small icons at the top right of the app. It can feel a little cluttered (and I've more than once minimized the window when aiming for the help options), but it's clear enough.

Virus, malware, and threat protection

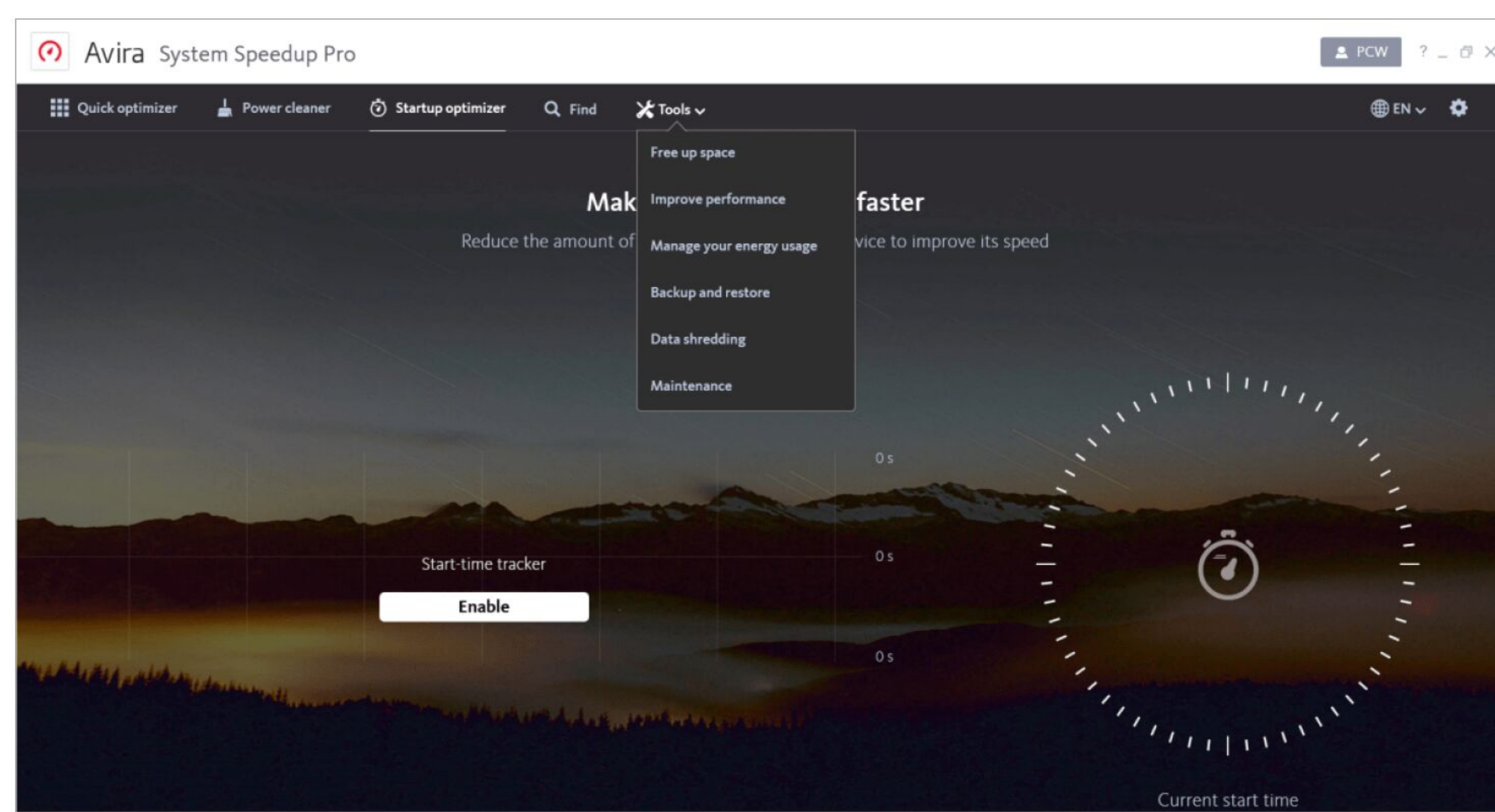
Real-time protection

Generally, Avira Prime monitors for real-time threats to your PC, both online and offline. On the web, it watches for websites containing phishing links and malware, and also checks the traffic going to and from your computer for suspicious activity. You can customize what sites are automatically blocked or allowed in the app's settings.

On your PC, Avira examines files you open or add, as well as downloaded emails and attached drives (including network drives). However, the software does not check archive files (e.g., zipped files) as part of real-time scanning — you'll have to flip that on in the settings if so desired. The app also doesn't lock down specific folders as part of its ransomware protections. Instead, it relies

solely on its detection capabilities to stop such attacks from happening.

Dark web monitoring is also included with Avira Prime, though it's stingier than most rival plans. It only watches just one email



The Avira System Speedup Pro app centralizes a wealth of PC utilities meant to optimize and maintain your PC.

address (the one associated with your account) when new data leaks and breaches appear on the shady side of the internet.

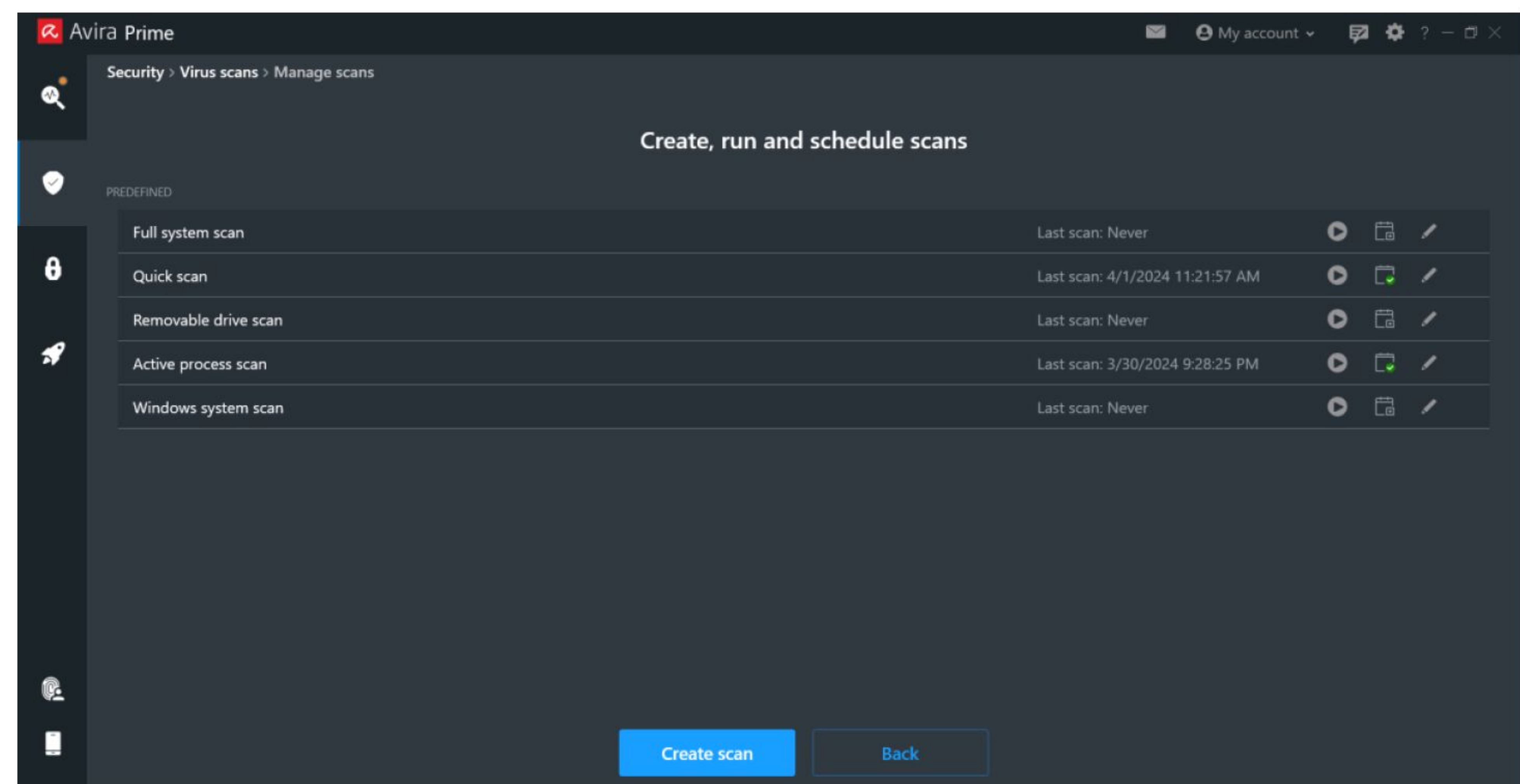
Scheduled and manual scans

For scheduled scans, two of them are automatically

set up during installation. A quick scan will be performed once per week, and an active process scan happens daily.

You can also schedule your own custom scans, or add a schedule to the other preconfigured scans (Full, Removable Drive, and Windows System). You'll do this from Security > Virus scans > Manage scans. When creating a schedule, you can choose only daily, weekly, or monthly intervals. If you want more sophisticated timing, you'll need to go with an entirely different antivirus suite all together (e.g., ESET Home Security Premium, fave.co/3xzEko3).

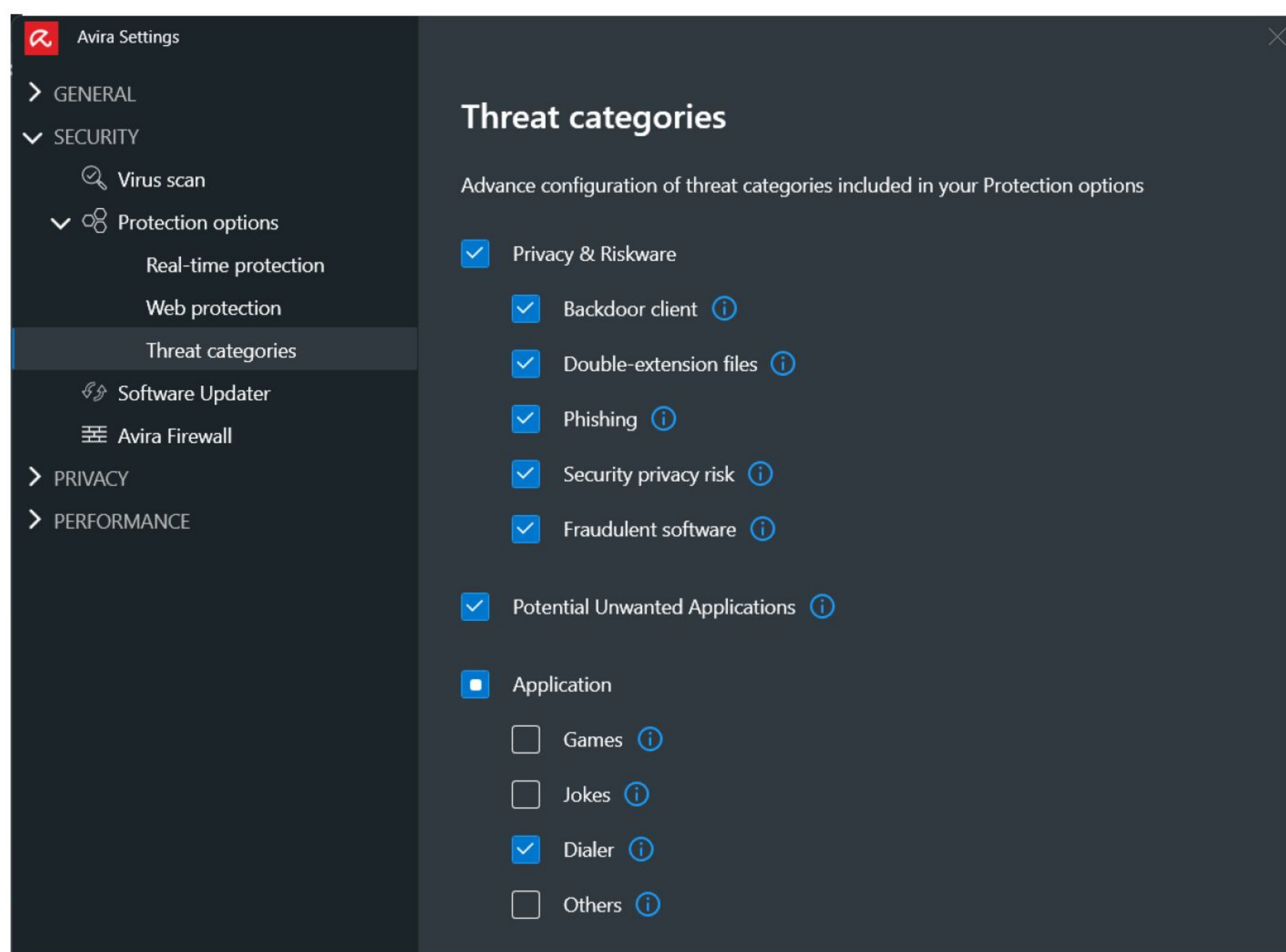
For manual scans, you can choose Smart Scan on the Status screen, or pick between a Full Scan and Quick Scan on the Security > Virus Scans screen. A Smart Scan combines together a check for malware, privacy, and performance issues, while a quick scan looks



Only two scans are preconfigured to run on a schedule, but you can add a recurring schedule to the other defaults as well.

for malware in commonly targeted areas of your computer. A full scan is the most thorough (and what we suggest you schedule at least once a month) — it combs through your system files, active processes in Windows, local drives, and removable drives. You can create simple custom scans as well, which let you focus on specific drives and/or folders, and then also choose a frequency for scheduling if so desired and the handling of suspicious files.

Scheduled and manual scans only check over recommended file types, and don't scan files again unless they've changed since last marked as clean. You can adjust the protection settings so that all file types get looked over, however. And you can lightly tweak what threats get flagged during scans. The defaults cover most bases, but those who have riskier online habits may want to activate a higher level of screening.



Avira's advanced settings let you tweak what types of threats to watch for.

Firewall

Avira Prime takes over for Windows' default protection, screening all traffic going to and from your computer. It has a very straightforward and simple interface, with a layout that's easy to understand and feels less intimidating. App permissions are displayed in a simple list, letting you quickly tell which Windows programs and services are online and also change how deeply Avira should trust them. More advanced users can adjust what IP addresses are allowed to connect to your PC, too.

Generally the default settings work well — most people shouldn't need to adjust them.

Additional features

Avira Password Manager Pro

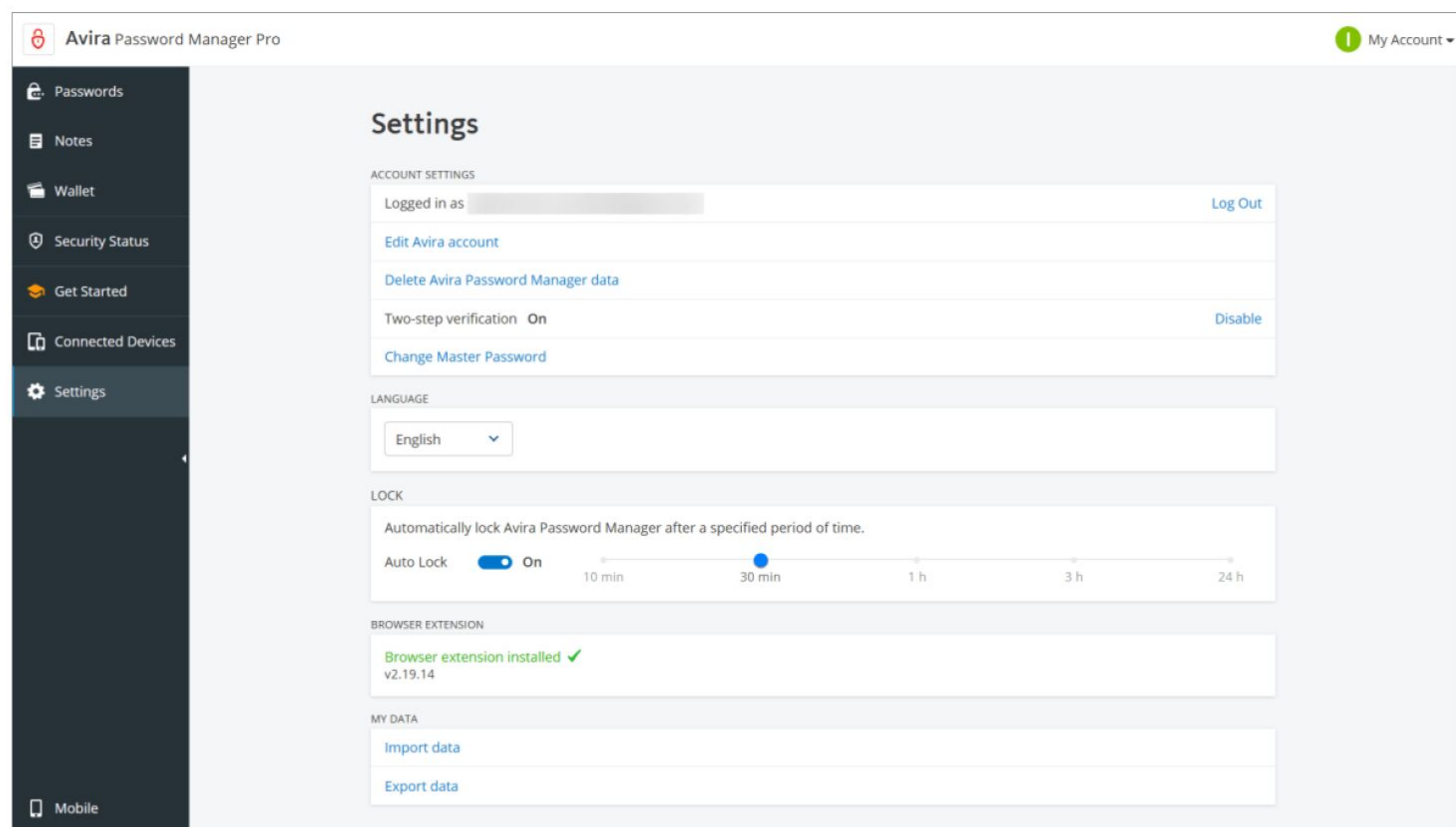
Avira Prime includes a password manager, albeit one that feels a little bare-bones. On PC, the browser extension gets automatically installed, and it's the only way to access the service — there's

no separate dedicated website.

Setup is relatively easy. While logged into your Avira account, you'll create a master password to safeguard your vault. You absolutely cannot forget this primary password; if you forget it, you won't be able to recover your account.

The interface is clean but basic, with the ability to only add passwords, notes, and credit card entries to your vault. The amount of info you can add to each entry type is limited, too, though Avira does let you color code and tag them for better organization.

When testing the password manager, I found that the extension picks up new login information well, and also provides a



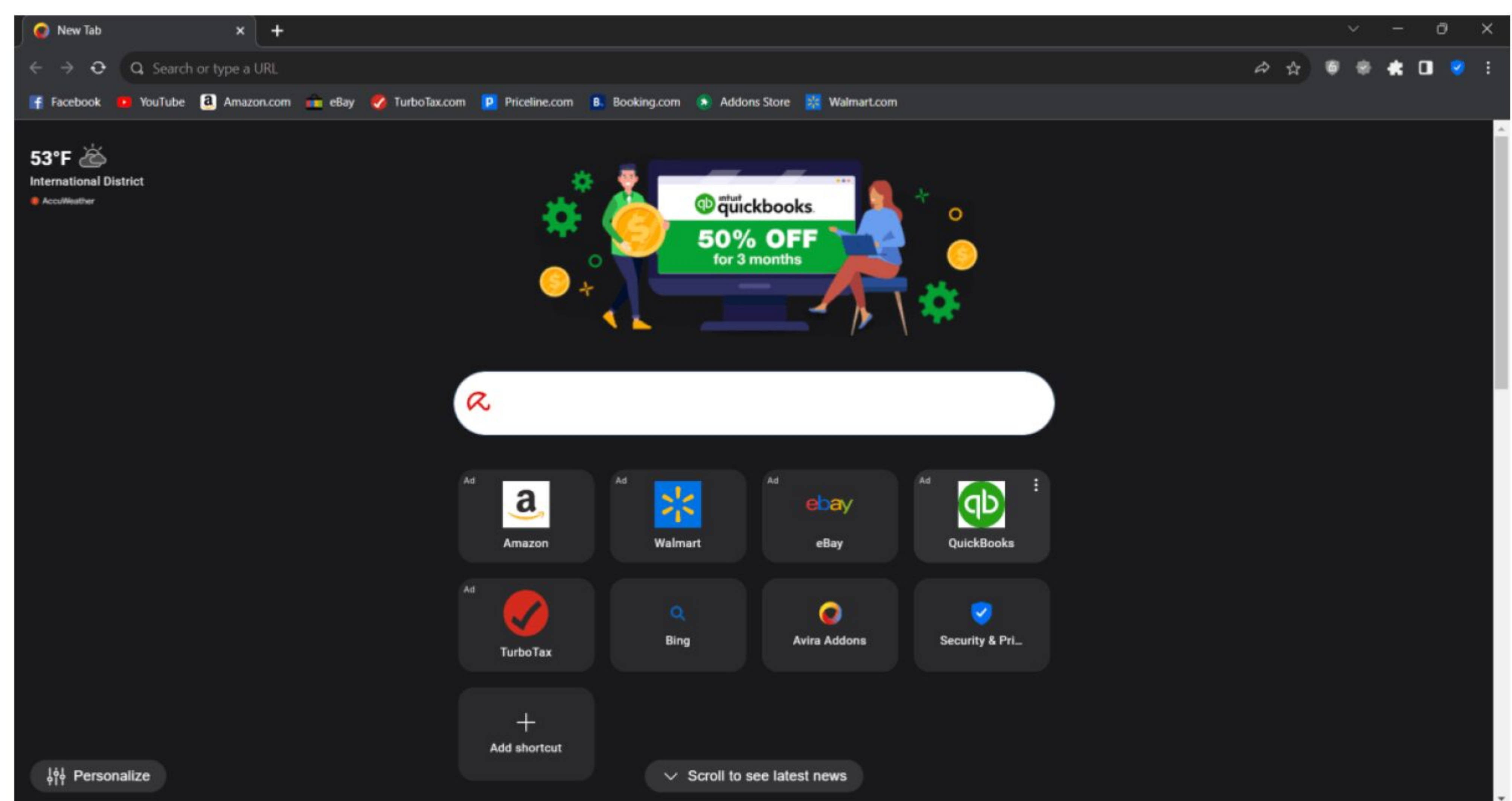
Avira Password Manager Pro's interface is clean but basic, with the ability to only add passwords, notes, and credit card entries to your vault.

seamless way to pick a new password for an account signup. For anyone needing a password manager (aka everyone), this included browser is a good, unintimidating start. In a nice touch, Avira cross-checks any vault entries against Have I Been Pwned's data breach database (fave.co/3EMeE7P) for any of your login info, so that you can be alerted and quickly update an entry if need be.

The only

drawback to using this included password manager is its settings are also simplified. Two-factor authentication is limited to just SMS codes, and you can't set a passcode to make access to the vault faster

and easier. Nor can you set it to automatically clear the clipboard when copying login info. For these kinds of features, you'll need to choose a different password manager (fave.co/3IRkfRz).



If you want a browser with a strong focus on security and privacy, DuckDuckGo and Brave feel like better alternatives.

Avira Secure Browser

If you don't trust Chrome, Edge, and Firefox to be secure (or don't want to configure them to be so), the Avira Secure Browser is an alternative you can install. Like Google's browser, it's based on Chromium, but much more locked down.

The preconfigured settings make Avira's own search engine the default, and automatically adds an extension that blocks trackers and advertisements. Oddly, Avira's password manager extension is not preinstalled, though you can download it on your own. But you do get a coupon extension as part of the browser, which feels like a conflict with protecting user privacy.

Generally, this optional browser feels like a customized version of Chrome. But while seemingly more limited, it doesn't prevent downloads of extensions that could compromise your security. But it works fine, so long as you want Avira's guiding hand upon your software.

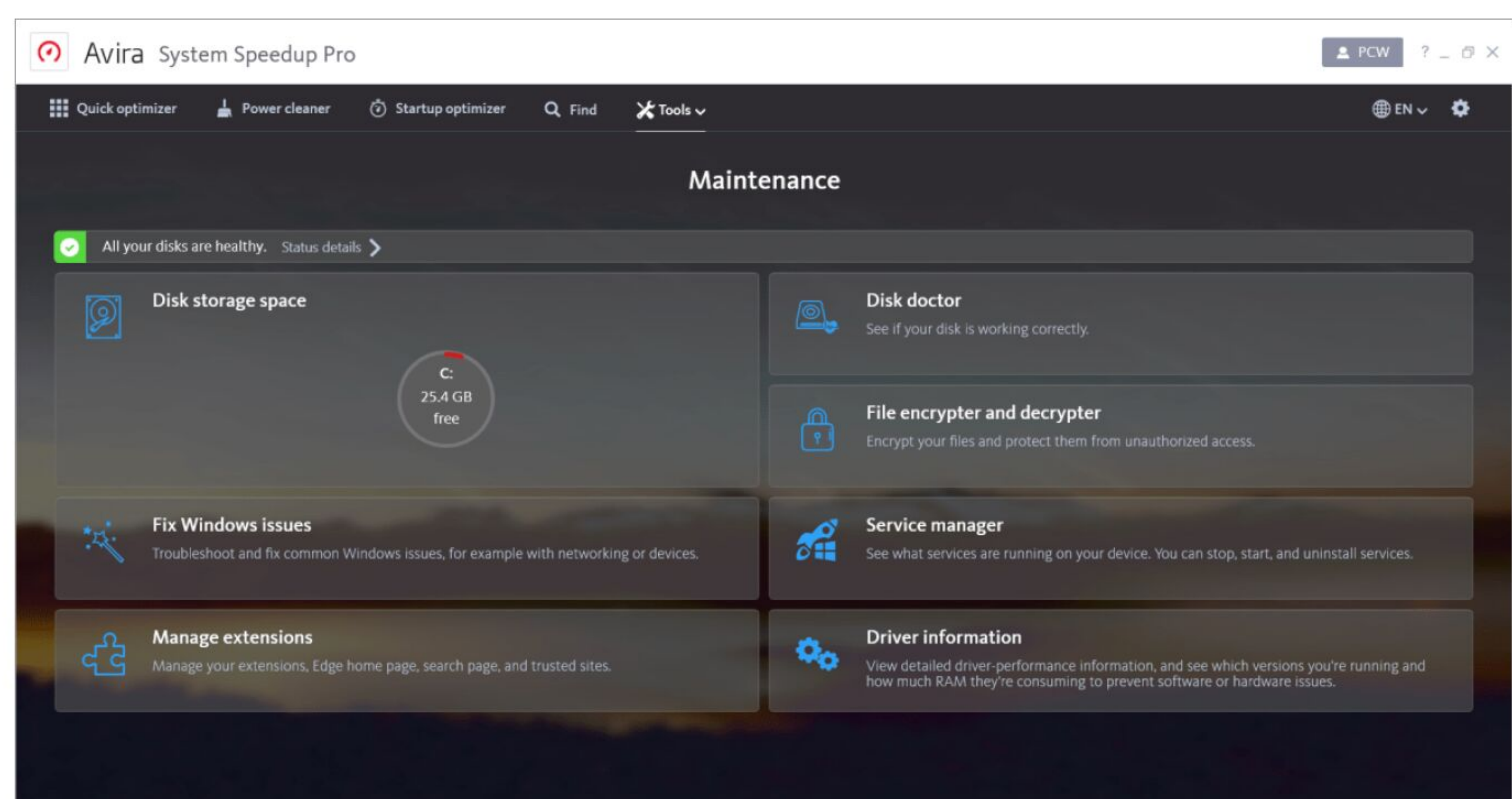
Avira System Speedup Pro

Buried within Avira Prime are several sub-programs — secondary apps that only appear if you start

them from within the Avira software. Avira System Speedup Pro is one that packs in multiple PC utilities.

Arguably, this collection of tools is what set Avira Prime apart from its competition. Rival security software usually includes just a few utilities for your computer, and rarely complex. Avira Prime goes the extra mile by imitating or linking directly to what you can already do within Windows, and then wrapping it in a friendlier interface. It doesn't just help identify storage space you can reclaim and performance improvements. It goes beyond battery optimization, too. Dig into System Speedup and you can get a comprehensive overview of what's happening with your PC.

Need to fix Windows issues? You get a shortcut that jumps you to the Windows settings menu for that. Suspect something's

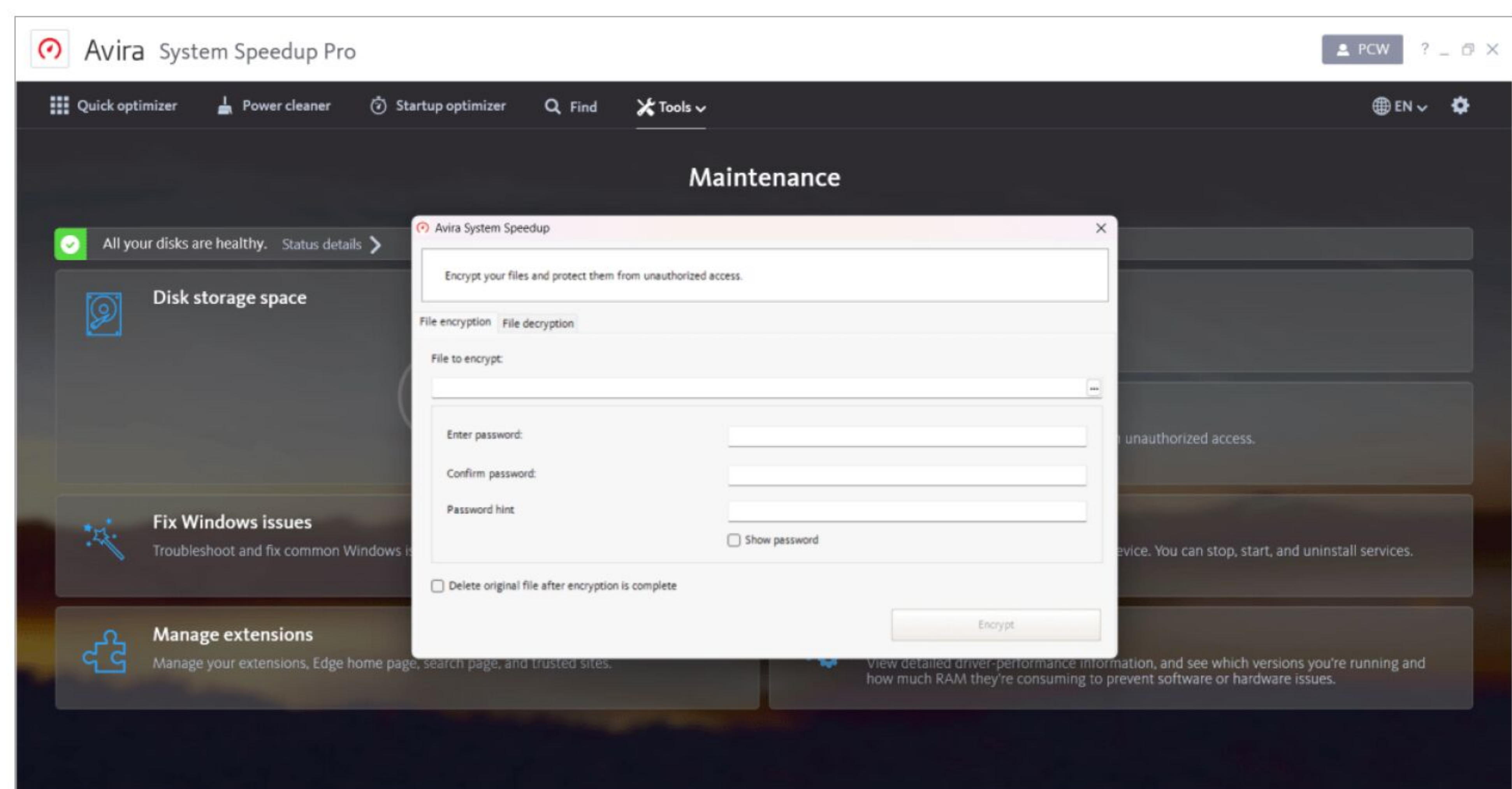


The tricky part about this set of PC utilities is that the app doesn't make clear how important each tool is. Several qualify as "nice for power users, but not necessary for most people."

wrong with one of your drives? You can run Avira's disk doctor scan. Not sure what services are running on your PC, or what drivers are installed? You can open lists that clearly show those details.

If anything, the one drawback to the tool is how much it covers. The contrast with the main Avira app's simplicity may be too much of a jump for users seeking ultra ease of use, but yet still wanting more than the recommendations made by the smart scan. For example, Avira's backup and restore options include backing up the Windows registry and the master boot record. The vast majority of people will never (and should never) touch their registry or MBR, so specific backups aren't fully necessary.

For most users, the two best utilities will likely be the file shredder (a secure delete tool for your files) and the file encryption/decryption tool (which helps you more tightly guard specific files from prying eyes). However, both are extremely simple in their interface, which may end up feeling too limited if you want more control over settings. A third utility, the duplicate file finder, can be



The encryption tool is a bit buried in System Speedup Pro, but it's worth finding, since it can help strengthen your security.

partially helpful in tracking down redundant files, but it's not sophisticated enough to pick out files identical in data but not in name.

Browser extensions

When installed on the PCWorld test laptop, Avira Prime automatically added the Avira Safe Shopping (fave.co/3UhkSFe) browser extension to Microsoft Edge. It serves a dual function, acting as an extra set of defenses against online threats while also hunting for shopping deals on the web.

At least it does for Edge, Opera, and Firefox. On Chrome, Avira Safe Shopping only offers the shopping assistance. But Chrome users aren't actually left out — they can also install the Avira Browser Safety (fave.co/49Ct5rW) extension, which handles those online protections.

No matter which browser you use, the

extension’s utility feels limited. Its primary benefit is the addition of visual badges to signal safe links in search results — but that feature only works when using Bing. It does also block ads and trackers, so long as you go into the settings and switch it on. However, other excellent extensions (like uBlock Origin) can handle those jobs as well, and do so automatically.

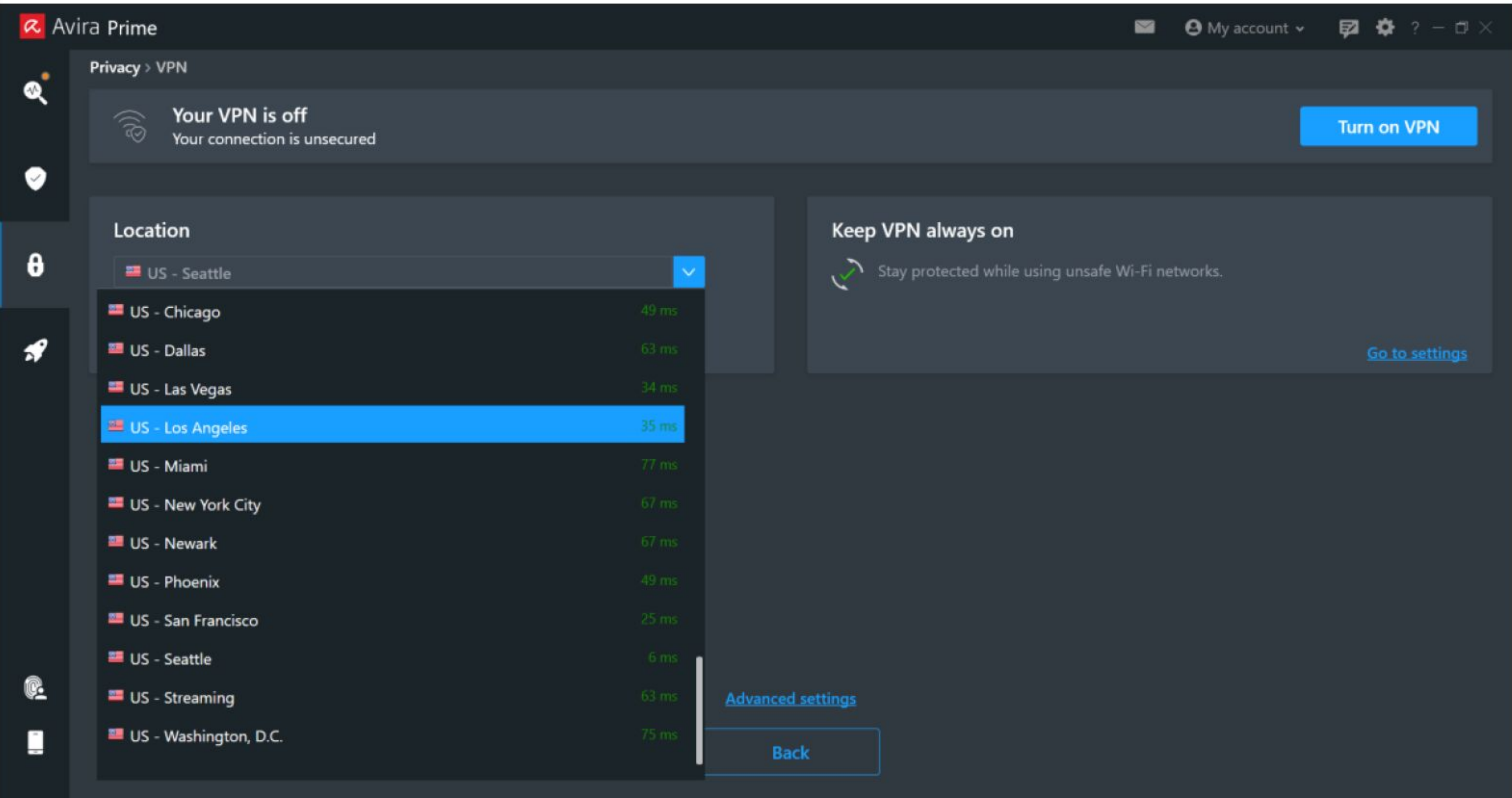
VPN

Accessing the VPN through the Avira app is a little less convenient than other antivirus suites. To get started, you must navigate to Privacy > VPN. There you can start the VPN with basic settings, or open Avira Phantom VPN Pro companion app by clicking on the Advanced settings link.

The Avira Phantom VPN Pro app is the only way to adjust those advanced settings. You can activate automatic internet shut-off when the VPN connection drops,

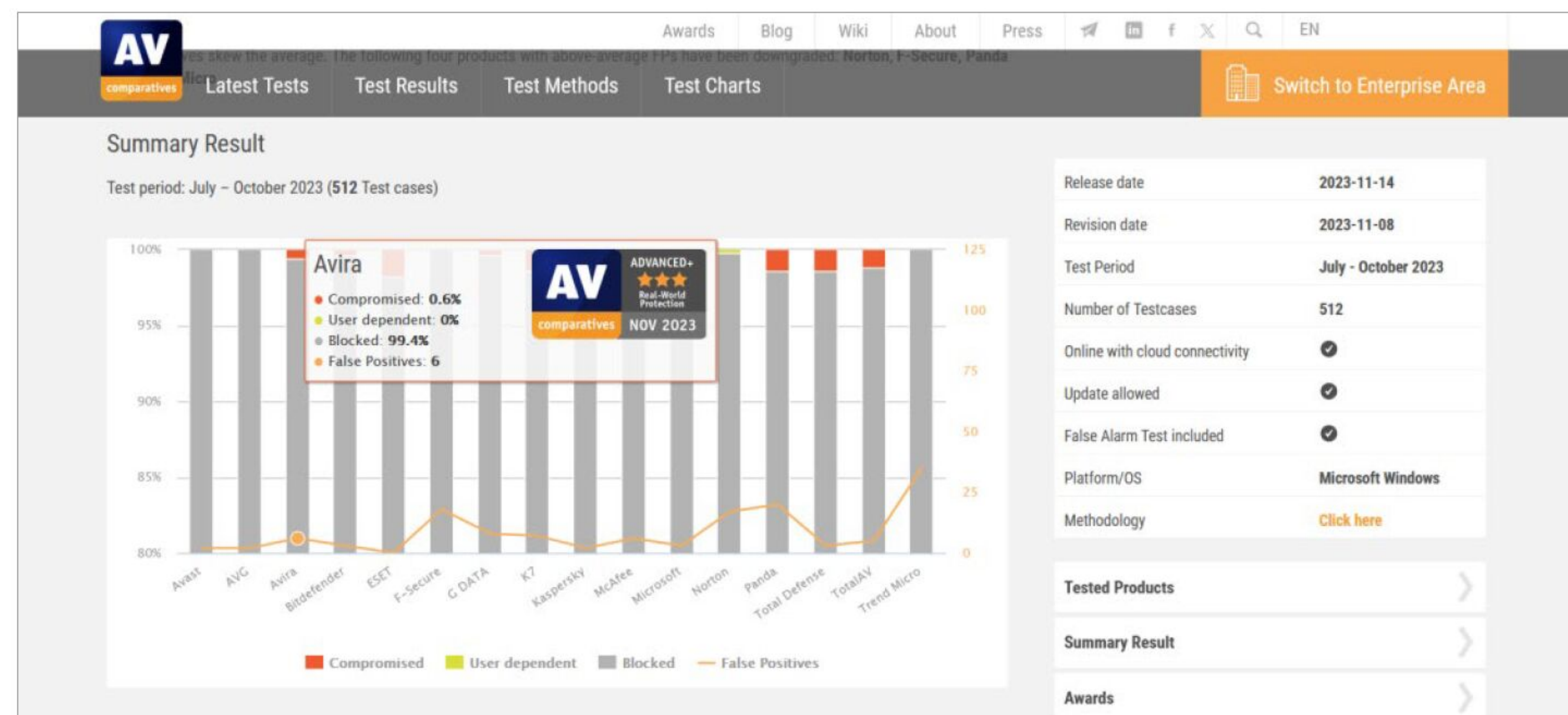
auto-connect when on Wi-Fi, launch at Windows startup, and the blocking of malicious sites and content. None of these settings are on by default. Selecting a location and connecting to it are easy in both Avira Prime and Avira Phantom VPN Pro, but I preferred the Avira Prime app since you can maximize the window and see more of the available servers at one time.

For servers, you get a choice of 35 countries, with three English-language countries offering specific cities for selection: Australia (Perth, Sydney), Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Czech Republic, Denmark, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Isle of Man, Israel, Italy, Japan, Mexico, Moldova, Netherlands, New Zealand, Norway, Poland, Romania, Serbia, Singapore, Slovenia, Spain, Sweden, Switzerland, United Kingdom (London,



Avira’s VPN lets you choose specific cities for some countries, like the US.

Manchester),
United States
(Atlanta, Chicago,
Dallas, Las Vegas,
Los Angeles,
Miami, New York
City, Newark,
Phoenix, San
Francisco, Seattle,
Streaming,
Washington DC).



Avira performed almost as well in AV-Comparatives' real-world protection test for July through October 2023.

CUSTOMER SUPPORT

For help with Avira Prime, you can lean on the company's knowledge base, community forums, or support team — but finding each can be a little circuitous. The easiest way to find all three is by clicking the question mark icon in the upper-right of the Avira app, then choosing Contact support. The support page on the Avira web portal will open, which has links to all forms of assistance, including chat, email, and phone support. However, I did run into authentication issues with the community forums in Microsoft Edge on a secondary PC, which was only fixed by deleting cookies and logging into the portal again.

UPDATES & MAINTENANCE

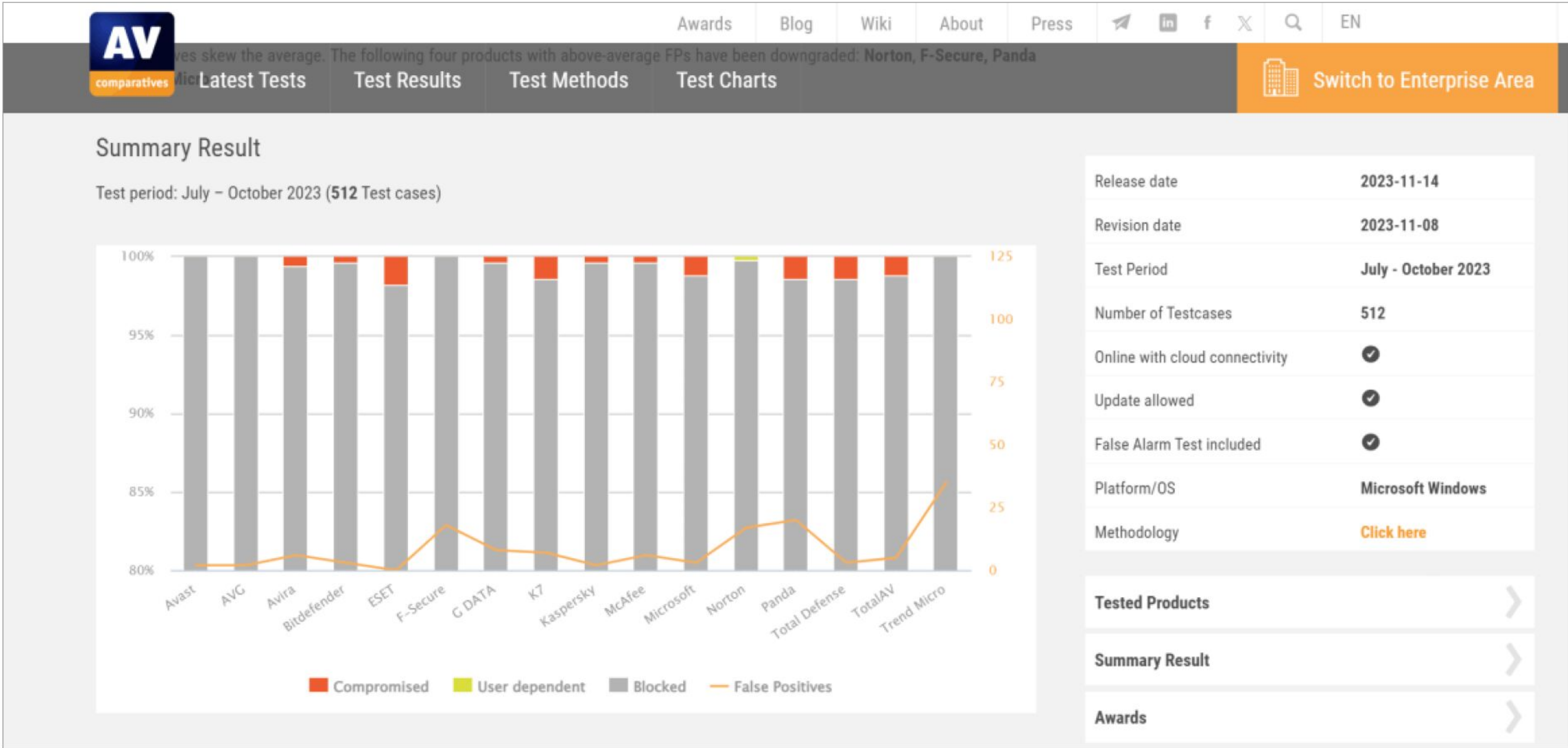
By default, Avira Prime automatically checks for virus and app updates every two hours, though you can adjust this time interval to be more or less frequent (as often as 30 minutes or as delayed as 12 hours). You can also run a

manual update, which is buried in the help menu. To access the option, you must click on the question mark icon in the upper-right corner of the app, then chose About.

PERFORMANCE

Avira's antivirus engine generally provides great protection against malware, though it's edged out in performance by the top suites in tests conducted by leading security research institutions. In AV-Test's zero-day attack and malware evaluation for November and December 2023, fave.co/3xC5udM (the most current as of this article's publishing), it caught 100 percent of the threats. It blocked all 11,859 samples for recently discovered and widespread malware and 210 samples for zero-day attacks.

Avira performed almost as well in AV-Comparatives' real-world protection test for July through October 2023 (fave.co/48RHPDy), which evaluates how well an antivirus suite



Avira Prime blocked 99.4 percent of the 512 test cases, with six false positives.

catches malware during typical online activities (e.g., web browsing). It blocked 99.4 percent of the 512 test cases, with six false positives. When faced with AV-Comparatives’ September 2023 malware protection test (fave.co/3SDzNsW), which checks antivirus software’s ability to stop malware from spreading off network, USB, or local drives, Avira Prime posted similarly strong results. It had a 99.97 percent online protection, 99.1 percent online detection rate, and a respectable 92.5 percent offline detection rate. While that offline detection rate comes in a little below the top performers, it’s still much higher than the mid- and bottom-tier suites — for example, Trend Micro sits at the bottom with a 57.1 percent offline detection rate.

When up against AV-Comparison’s test for sophisticated, targeted threats, Avira fell

behind the rest of the pack — it spotted just 8 of the 15 test cases in AV-Comparatives’ November 2023 Advanced Threat Protection Test (fave.co/4b1LeBj), which imitates zero-day attacks and involves threats like malicious scripts and fileless exploits. However, Avira’s higher-performing rivals still missed test cases, suggesting that antivirus vendors are still hardening their defenses in this area.

During most typical tasks on a PC, Avira Prime should have a mild effect on system performance when hanging out in the background. Scores in PCMark 10’s Extended benchmark (fave.co/3SFGue1), which simulates web browsing, video chatting, gaming, and image and document editing in free, open-source apps, didn’t budge after installing Avira Prime. Results also barely

changed when running our Handbrake encoding test, which converts a large uncompressed video into a smaller version. Avira goes more on the offensive when Microsoft Office apps are active; in UL Procyon's Office Productivity benchmark (fave.co/3QXmyRj), which involves Microsoft Word, Excel, and other document use, the real-time scanning caused an almost 9 percent decrease in results.

However, when Avira Prime is fully active and running a comprehensive scan, it can hammer a PC's system resources hard. On our test laptop, which is a budget model, a full scan that investigated all files made benchmark scores plummet. PCMark 10 results dropped by almost 30 percent, while Procyon and Handbrake scores nosedived by nearly 50 percent.

In the real world, your PC likely won't suffer this hard — or at least, it won't need to. Our full-scan test is more of a torture test; it simulates the biggest impact an antivirus suite could have on your PC. Most people will use default settings that skip over files marked safe in previous scans and file types that aren't of concern, which lightens the load on a computer. Typically, if you run full scans during off-hours (like when you're asleep), they won't interfere with normal everyday tasks and document editing. You'll instead see a performance effect more similar to Avira's real-time scanning state. But if you regularly change, add, or

edit files to your system in bulk, it'll affect your PC proportionately.

BOTTOM LINE

Avira Prime is one of the more user-friendly apps available, and arguably the most beginner-friendly at that. Its interface reduces how intimidating digital security can be, especially when trying to keep everything straight, and its feature set amply covers not just PC protection, but also maintenance, too. This software's only real weakness is not helping better close the gap between the simple presentation and the experience needed to know when to use a particular feature (if at all) — but for the willing, a few internet searches can solve that issue fast. 🔌

Avira Prime



PROS

- Strong security with a reasonable subscription price.
- Well designed and user-friendly.

CONS

- No subscription option for fewer than five devices.
- Simplicity of app feels slightly at odds with the depth of the PC tools.

BOTTOM LINE

With its clean, pared-down interface, Avira Prime is one of the better newbie-friendly antivirus suites we've seen, especially with its strong online protection. Its features include a password manager and VPN access, along with a generous helping of PC utilities to tune up your computer. However, with how advanced some of those PC tools are, Avira Prime will likely feel best to users who want to start simple but grow into more active, complex PC management.

From \$59



Lexar SL500 USB SSD: 20Gbps storage cut thin to win

This super-svelte USB 20Gbps SSD features performance that belies its small profile. **BY JON JACOBI**



Physically, Lexar's SL500 (fave.co/3xA6hff) portable USB 3.2×2 SSD makes its SL600 (fave.co/4aEXabR) and SL660 (fave.co/3VU2iV3) stablemates look like chunky monkeys. Actually, measuring a mere 0.3-inches thick (less than 0.2 at the edges), by 2.1-inches wide, by 3.3-inches long, the

SL500 make nearly all external SSDs appear chunky. As it's also attractively styled, and weighs a mere 1.5 ounces, let's just say the SL500 is a super model among external SSDs.

FEATURES

The SL500 is a super-slim, USB 3.2×2 (20Gbps) external SSD that comes in 2TB,

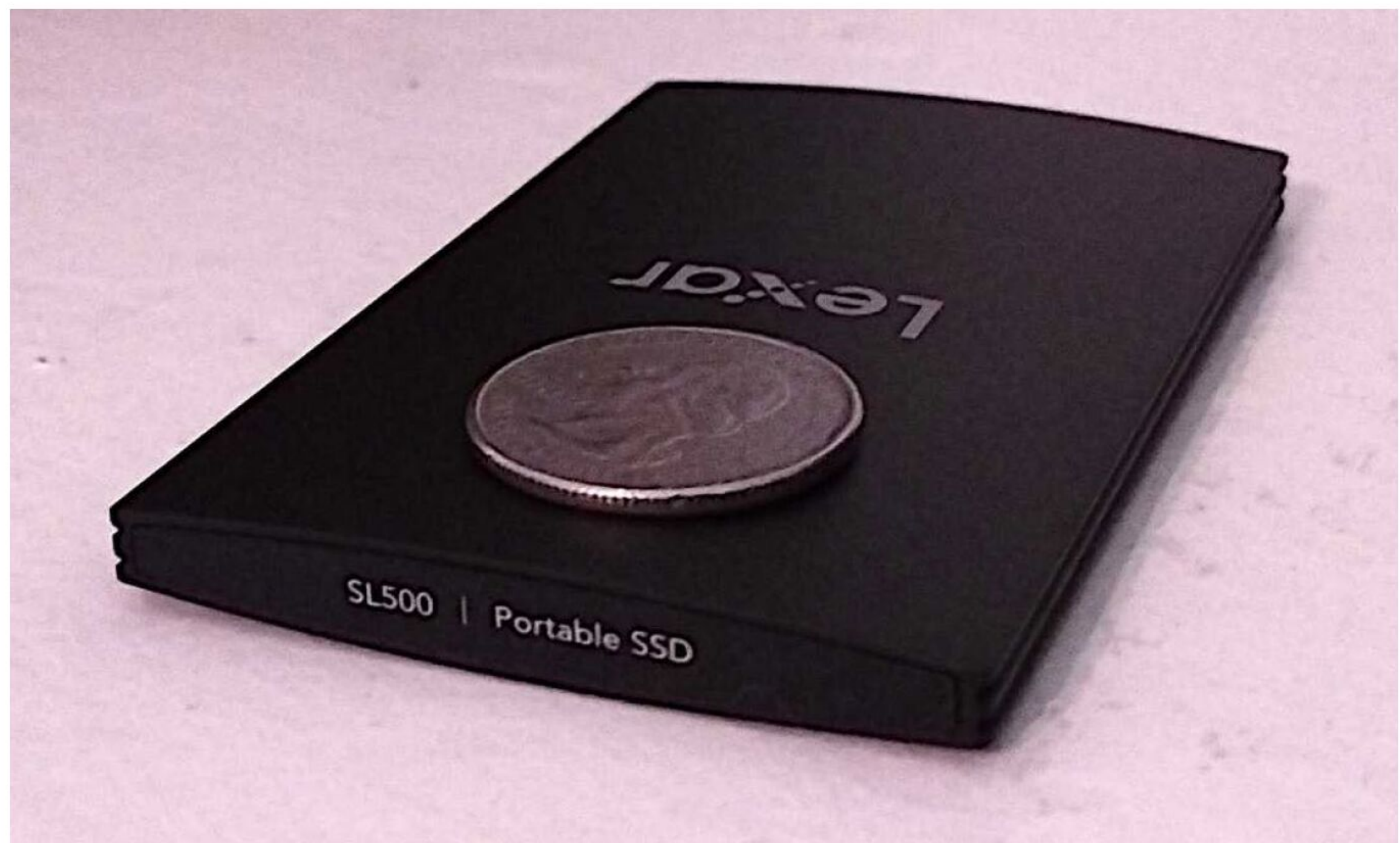
and soon, 4TB flavors. It ships with a short Type-C to Type-C cable and is warrantied for five years. That's a limited warranty that no doubt assumes that you won't hit it with a sledgehammer, or write several petabytes of data to it.

The drive ships formatted to exFAT, so it's readable and writable on both Windows and macOS (Linux too, of course) right out of the box.

Lexar includes its DataShield software for both operating systems, which allows you to secure the SL500 with a password. If you opt to use a password, you'll need to install the app on any computer you want to access the secured drive from.

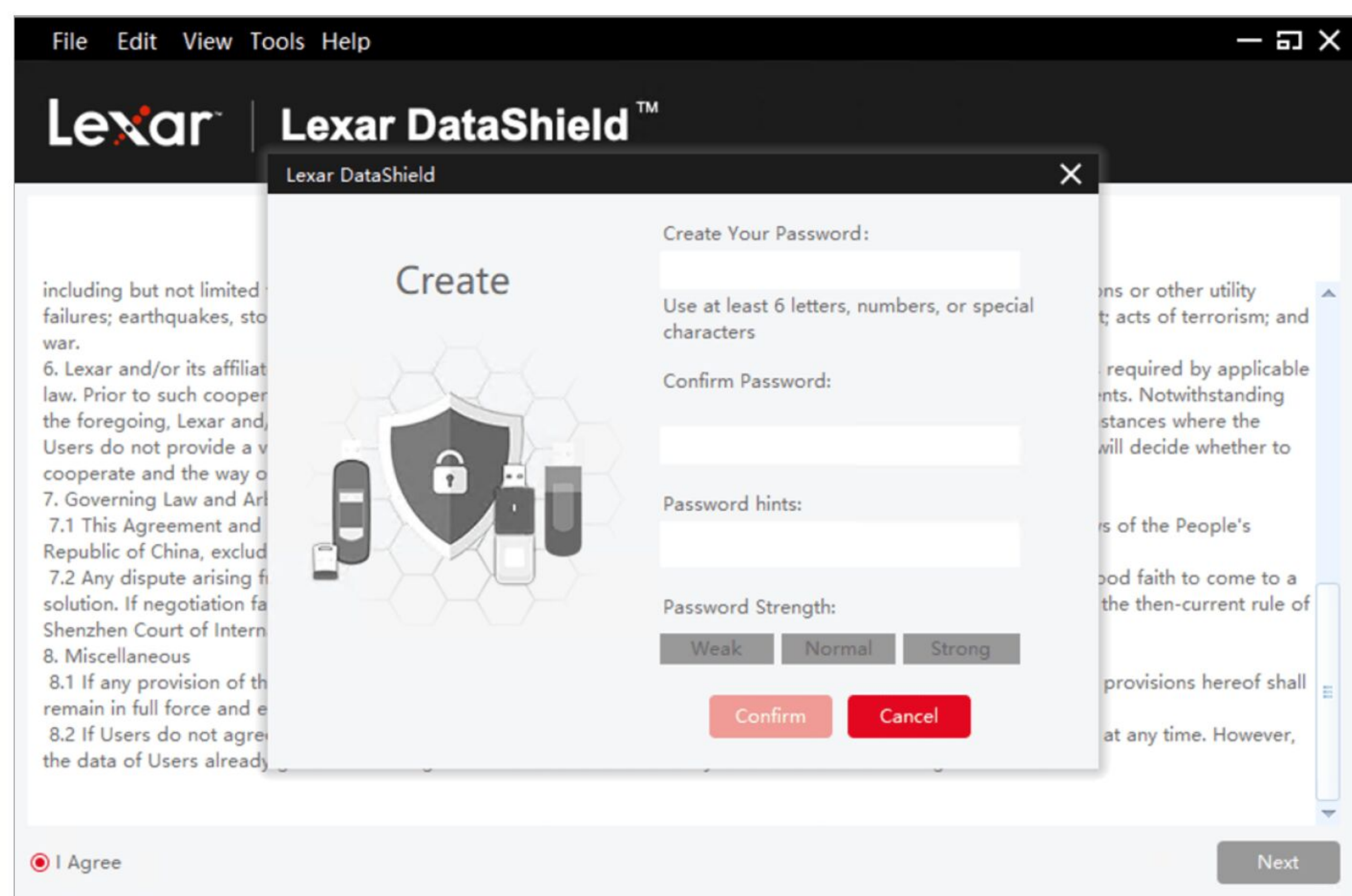
PRICE

The 2TB version of the SL500 is being released on March 20 at a list price of \$230. That's roughly par for the course for a name-brand USB



The SL500 with a quarter on top for a size comparison.

3.2x2 20Gbps unit, though you can get name-brand 10Gbps 2TB SSDs and no-name 20Gbps 2TB SSDs for quite a bit less. (Our favorite 10Gbps external SSD, the Crucial X9 Pro (fave.co/4aSzWd), for example, costs

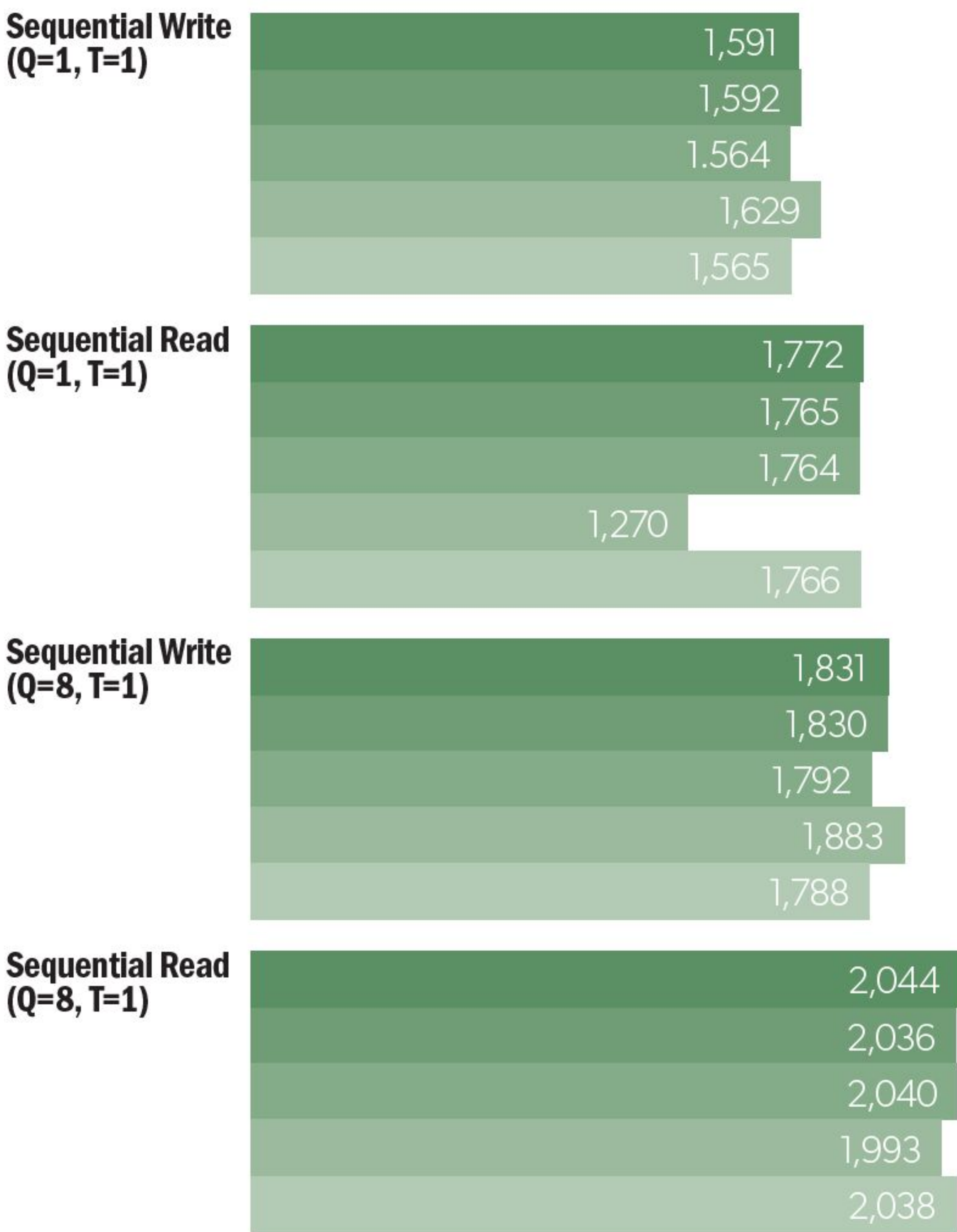


Lexar's DataShield software lets you secure the SL500 with a password.

CrystalDiskMark 8 Sequential Performance

MBps

Lexar SL500 Lexar SL600 LaCie Rugged Mini SSD
Samsung T9 Crucial X10 Pro



LONGER BARS INDICATE BETTER PERFORMANCE

By the narrowest of margins, the SL500 turned in the best CrystalDiskMark 8 sequential tests of any USB 3.2×2 SSD we’ve tested. Only the USB4 OWC 1M2 has proven faster at 20Gbps.

just \$95 for 2TB, fave.co/3vRYtFc.) A 4TB version of the SL500 will be available later in the year at an undisclosed price.

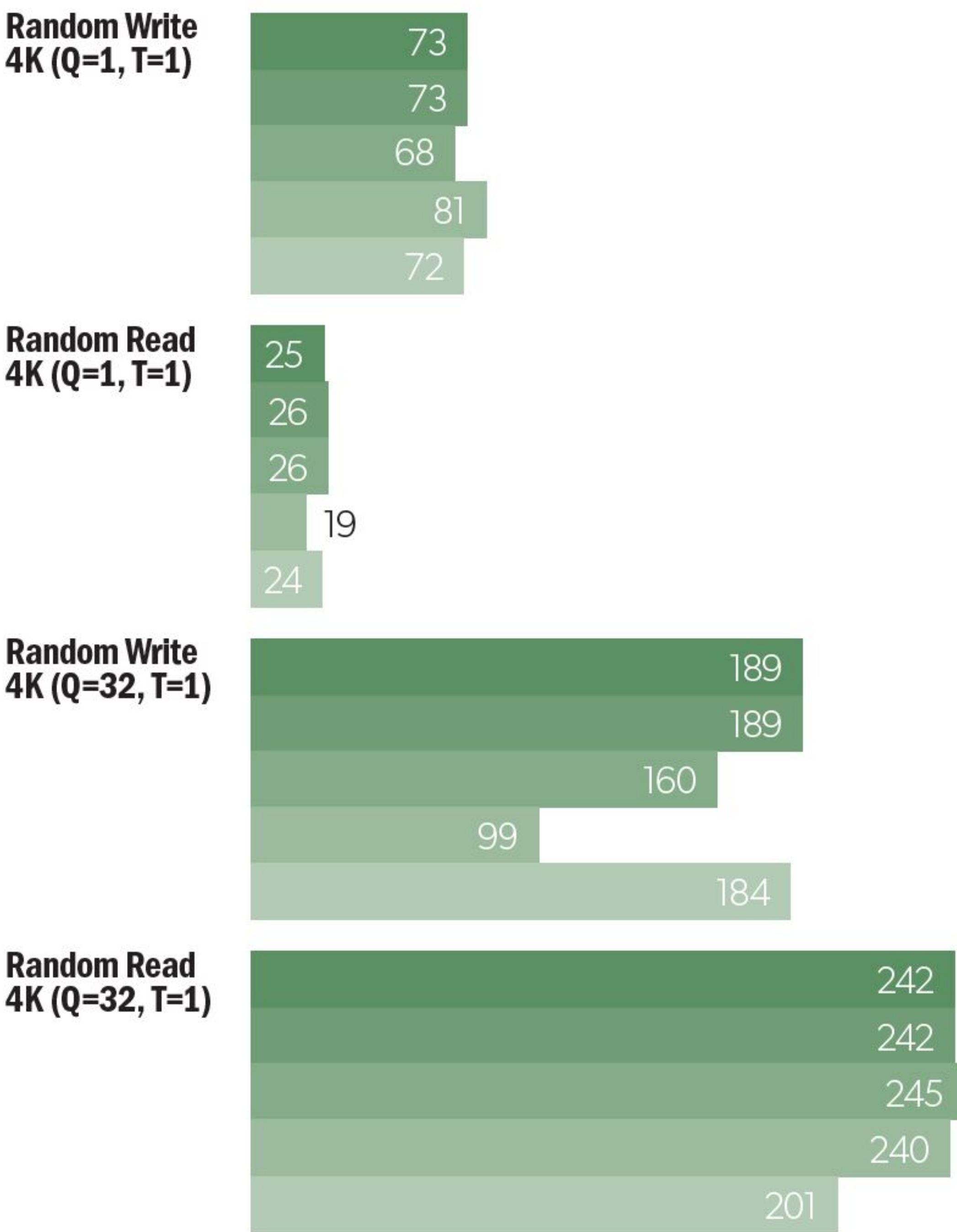
PERFORMANCE

The 2TB SL500 we tested fared quite well against the likes of the Samsung T9 (fave.co/43pwPeU) and Crucial X10 Pro (fave.co/48mS7fC).

CrystalDiskMark 8 Random Performance

MBps

Lexar SL500 Lexar SL600 LaCie Rugged Mini SSD
Samsung T9 Crucial X10 Pro



LONGER BARS INDICATE BETTER PERFORMANCE

The Lexar SL500 turned in excellent scores in CrystalDiskMark 8’s 4K tests. Note that they are almost identical to the SL600.

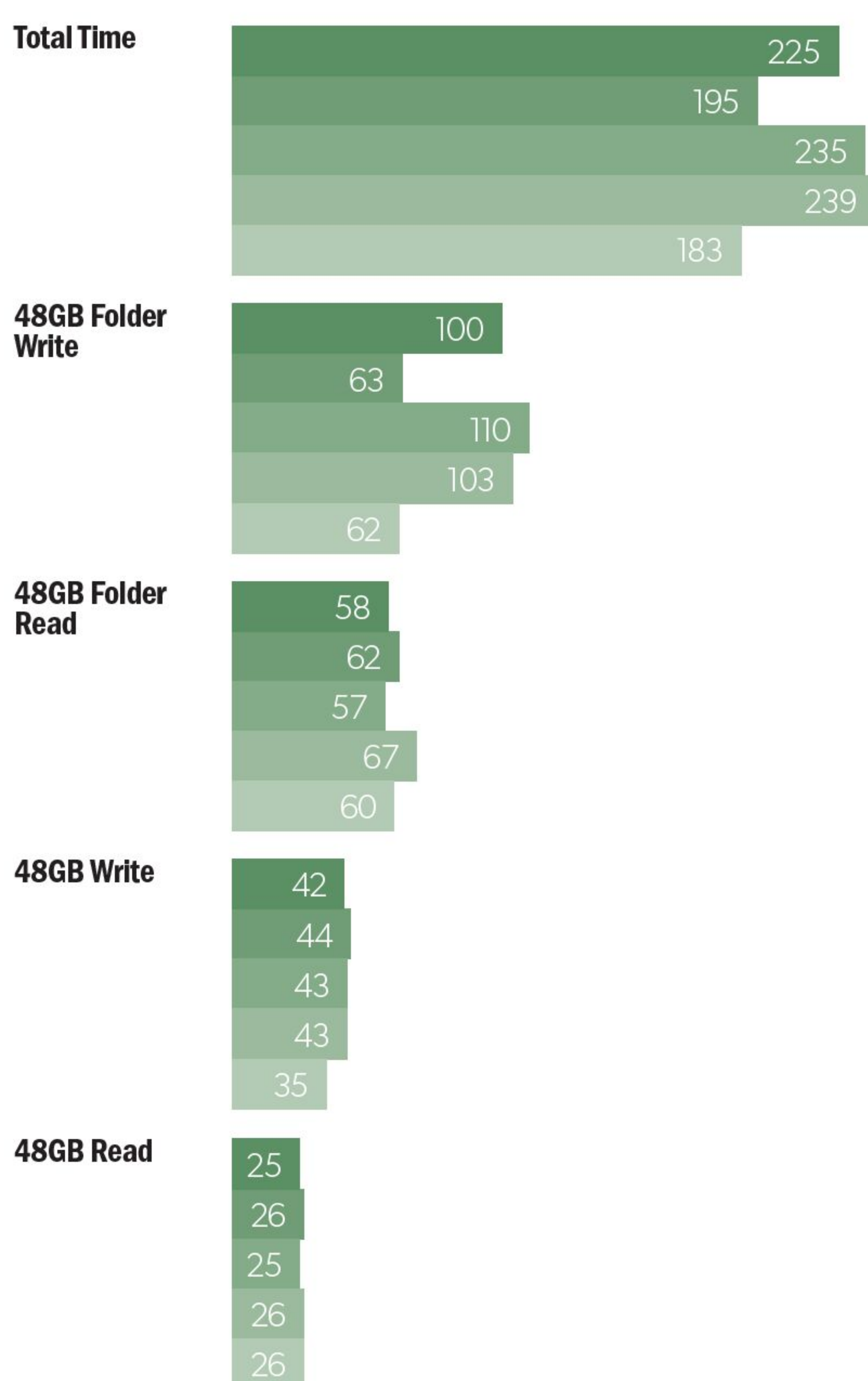
co/48mS7fC). Its synthetic benchmark results were so close (slightly better) to the previously reviewed SL600 (fave.co/4aEXabR), I double-checked to see that I hadn’t grabbed the wrong file. I hadn’t.

The results were well within statistical variance and the fraternal victory was so close, it’s likely to be the same controller and NAND

48GB Copies

Seconds

■ Lexar SL500 ■ Lexar SL600 ■ LaCie Rugged Mini SSD
■ Samsung T9 ■ Crucial X10 Pro



SHORTER BARS INDICATE BETTER PERFORMANCE

in a different form factor.

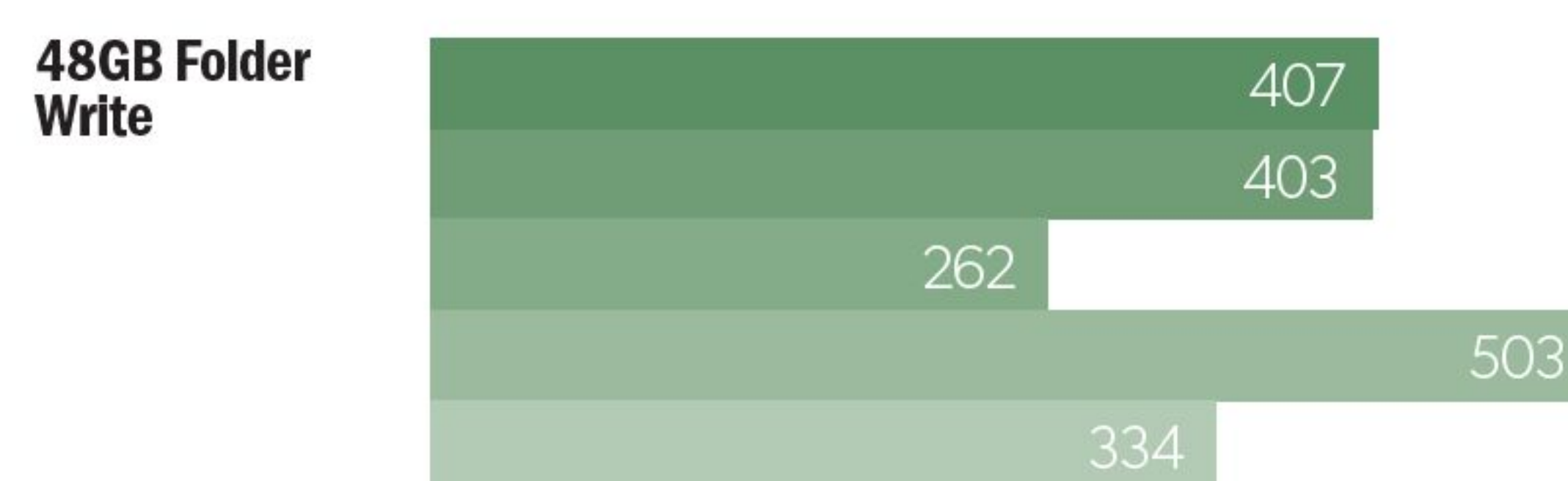
Random 4K writes in CrystalDiskMark 8 were again outstanding, and nearly identical to the SL600.

Our real-world 48GB transfers were a different story, and a slow folder write dropped the SL500 two places behind the SL600. A bit of a mystery if we're calling it the

450GB Write

Seconds

■ Lexar SL500 ■ Lexar SL600 ■ LaCie Rugged Mini SSD
■ Samsung T9 ■ Crucial X10 Pro



SHORTER BARS INDICATE BETTER PERFORMANCE

The SL500 turned in a time almost identical to the SL600. Not the fastest, but decent in the grand scheme.

same drive. That makes it the fourth fastest out of 10 USB 3.2×2 SSDs we've tested, though adding the USB4 OWC 1M2 in 20Gbps mode drops the SL500 to fifth.

Also, be sure to use the shorter cable that ships with the SL500 or one certified for 20Gbps USB. A copy routine actually crashed using a longer plain-Jane Type-C cable — a happenstance we've rarely seen but one we can't blame on the drive.

Back to normal, the SL500 posted an almost identical time as the SL600 writing our large 450GB file. This makes the 48GB performance disparity all the more puzzling.

BOTTOM LINE

The super-slim form factor of the SL500 renders it uniquely portable as well as suitable for auxiliary storage to your phone or other small device. It's not quite as fast writing as



The super-slim form factor of the SL500 means it's suitable for auxiliary storage when you're on the road.

some, but it's fast enough that we'll consider the SL500 a good thing in a small package.


HOW WE TEST

Drive tests currently utilize Windows 11 (22H2) 64-bit running on an X790 (PCIe 5.0) motherboard/i5-12400 CPU combo with two Kingston Fury 32GB DDR5 modules (64GB of memory total). Intel integrated graphics are used. The 48GB transfer tests utilize an ImDisk RAM disk taking up 58GB of the 64GB total memory. The 450GB file is transferred from a Samsung 990 Pro 2TB, which also contains the operating system.

Each test is performed on a newly NTFS-formatted and TRIM'd drive so the results are optimal. Note that as any drive fills up,

performance will decrease due to less NAND for secondary caching, and other factors.

The performance numbers shown apply only to the drive we were shipped as well as the capacity tested. SSD performance can vary with capacity due to more or fewer chips to read/write across and the amount of NAND available for secondary caching (writing TLC/QLC as SLC). Vendors also occasionally swap components. If you ever

notice a large discrepancy between the performance you experience and that which we report (systems being roughly equal), by all means—let us know. 

Lexar SL500



PROS

- Excellent 20Gbps performance.
- Super-slim, trim profile.
- 5-year warranty.

CONS

- 4x slower writing 48GB of files and folders than its SL600 cousin.

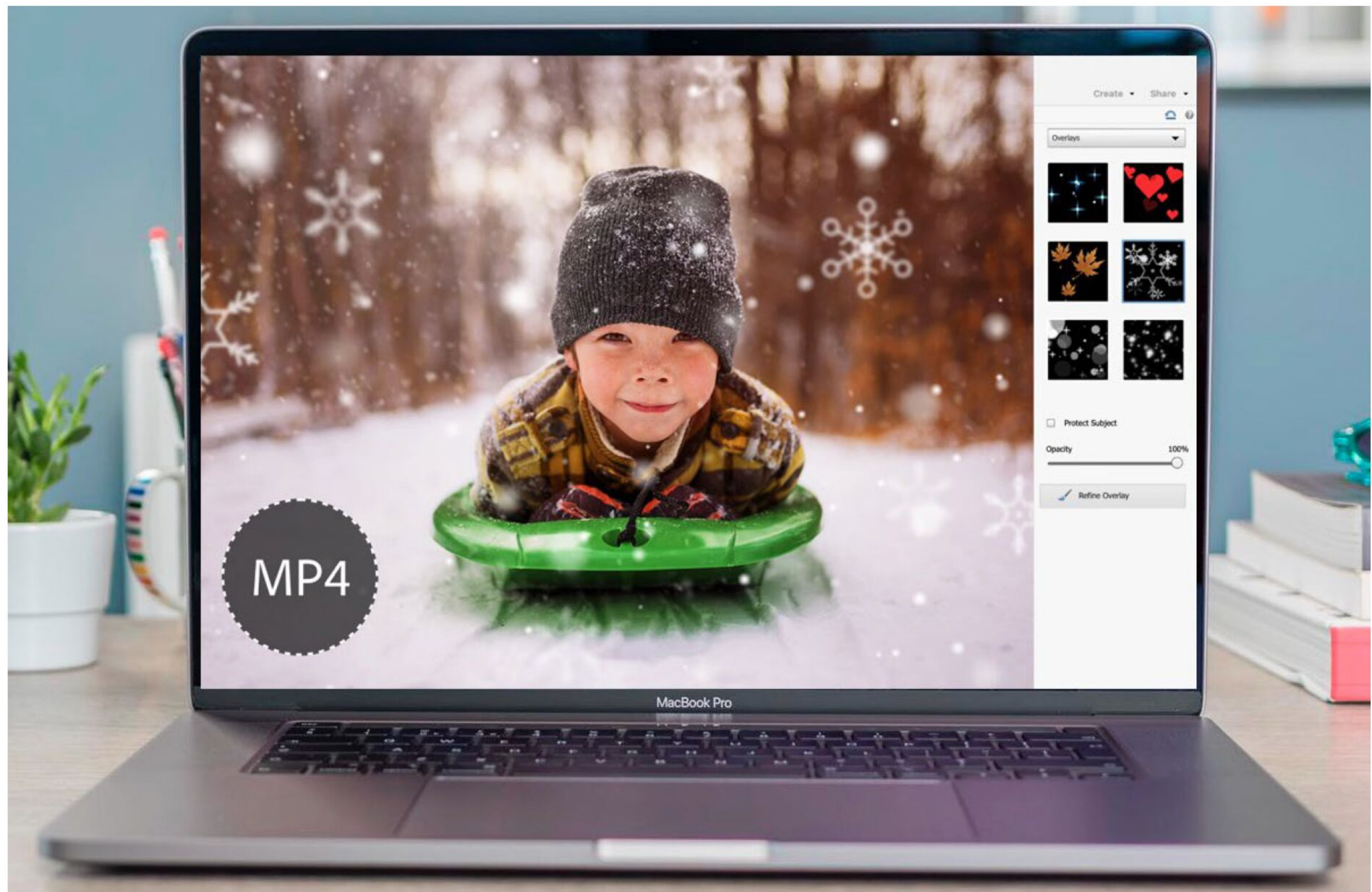
BOTTOM LINE

If what you seek is a fast, good-looking USB SSD that slides into your pocket almost imperceptibly, or mounts easily to the back of your mobile device, then Lexar's SL500 is likely what you're looking for.

From \$230

Adobe Photoshop Elements 2024: Still one of the best

With a redesigned interface and new AI features, Photoshop Elements is still one of the best photo-editors for amateur photographers. **BY CLIFF JOSEPH**



Photoshop Elements (fave.co/3TYHqt6) isn't the cheapest photo editor available, costing \$99.99, but it's still great value for money as it's able to use technology from the professional version of Photoshop to provide some really powerful tools for editing your photos and adding creative effects. Adobe also sells a bundle that includes both

Photoshop Elements and Premiere Elements for video editing for \$149.99, which can save you even more money. (Read our review of Premiere Elements, fave.co/4aWgalP.)

The key to Photoshop Elements' success is that it manages to combine powerful editing tools with a user-friendly interface that makes it easy for amateur photographers to achieve impressive results. Adobe's 2022

version introduced new AI techniques – which Adobe refers to as Sensei – which could automatically perform editing tasks that might normally require hours of work.

The app has always had a selection of filter effects that could make photos look like paintings, using media such as oil paints or watercolors, but Sensei introduced a new set of Artistic effects that aim to mimic a variety of popular artistic styles, such as cubist and post-impressionist. These aren't always entirely successful – I suspect Vincent Van Gogh is spinning in his grave right now – but they're fun to experiment with. One nice touch here is that you can apply the artistic effect to the entire photo, or just to the subject or background, which is a nice way of emphasizing particular aspects of a photo. If your artistic ambitions are a little more modest you can apply some simple animated effects – known as Overlays – such as falling snowflakes or flickering flames, to your photos

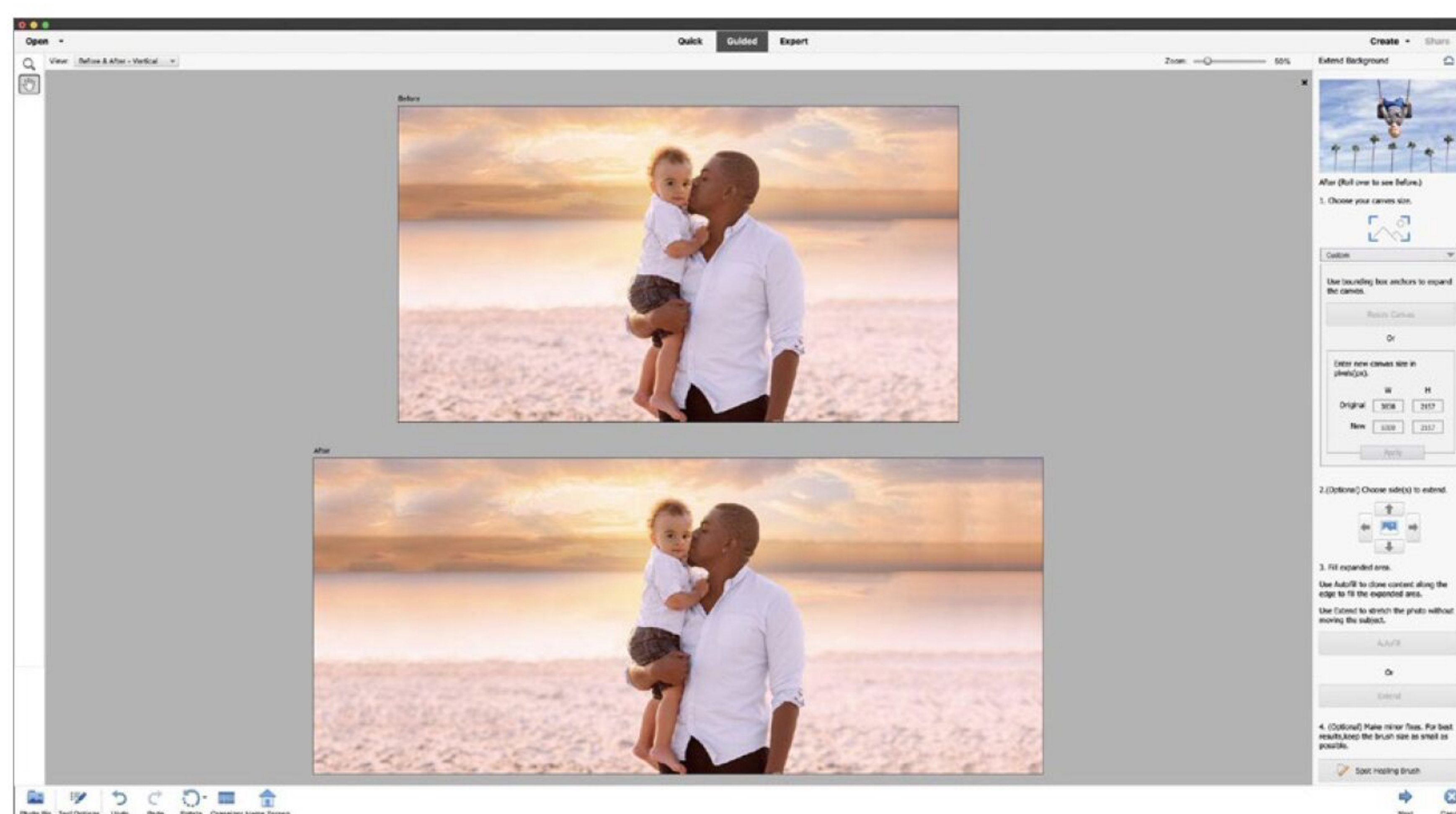
and then save your work as a short video clip that you can upload to social media.

One of the things that sets Photoshop Elements apart from many of its rivals is its use of Guided Edits, which give you step-by-step help in using some of the app's most powerful tools. One really powerful Guided Edit that was introduced in 2021's update is the ability to alter the aspect ratio of a photo by extending the background of a photo. If you've got a photo with an attractive background, such as a beach, then you can clone part of the background and use it to extend the background further – perhaps to extend a sunny blue sky upwards for an upright portrait shot that you can use on social media.

And, of course, no social media account is complete without some cute pet pics, so Photoshop Elements includes a Guided Edit specifically for enhancing photos of animals. You can adjust the lighting and color in a

photo, focusing either on your pet or the background, or add a subtle vignette effect. There's also an option to remove blemishes, such as mud or dirt, and to remove glare from the pet's eyes.

The use of Sensei AI continued with Photoshop Elements

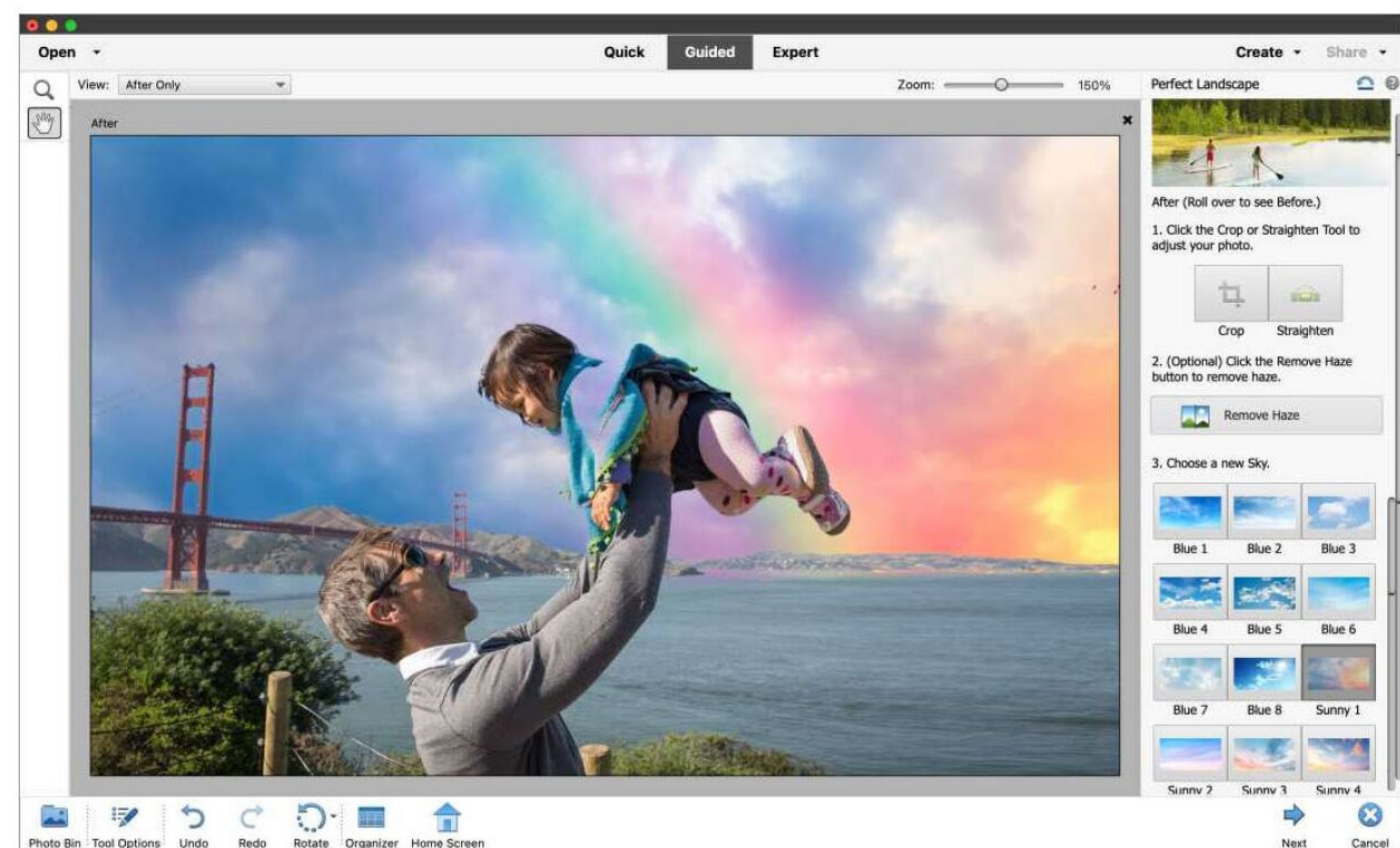


Guided Edits give you step-by-step help in using some of the app's tools.

2023. As well as applying animated overlays to an entire photo, this feature allows you to create moving elements that animate just one specific section within a photo. You could select part of an image, such as a waterfall or the flowing mane of a horse, and animate your selection to make the image look more dynamic and eye-catching. The program's selection tools can help you to select either the background of an image, or elements in the foreground, and you can simply draw a line to indicate the direction of movement (so the waterfall flows down, rather than upwards). You can also adjust settings such as the speed of movement, and preview the animation effect before exporting the animated image file as an MP4 video clip or as an animated-GIF.

The Guided Edits section of the program also gained new tools for adding overlays, new background images, or enhancing the appearance of the sky in your photos. And, with so many Guided Edits now available, we were pleased to see that this update added a new Search tool that helps you to quickly locate the Guided Edits you need by searching for keywords such as 'crop' or 'sky'.

For Mac users, the most important feature in Photoshop Elements 2023 was its native



The Guided Edits section of the program has also gained new tools for adding overlays, new background images, or enhancing the appearance of the sky in your photos.

support for Apple Silicon, with Adobe claiming that the program will now run 45 percent faster on Macs that have M1 or M2 processors. And if that wasn't enough to persuade you to upgrade, then this year's new Photoshop Elements 2024 proves to be one of the biggest updates the program has received in quite a few years.

As you might expect, there are a number of new AI features, but the program's interface and layout have also been "refreshed and redesigned" too. Like the full version of Photoshop, the Elements version now has both Light and Dark modes, as many experienced photographers prefer working in Dark mode, while other people simply find it easier on the eyes. The various fonts and icons used in the main interface have also been updated to improve visibility too. These interface changes are more than just

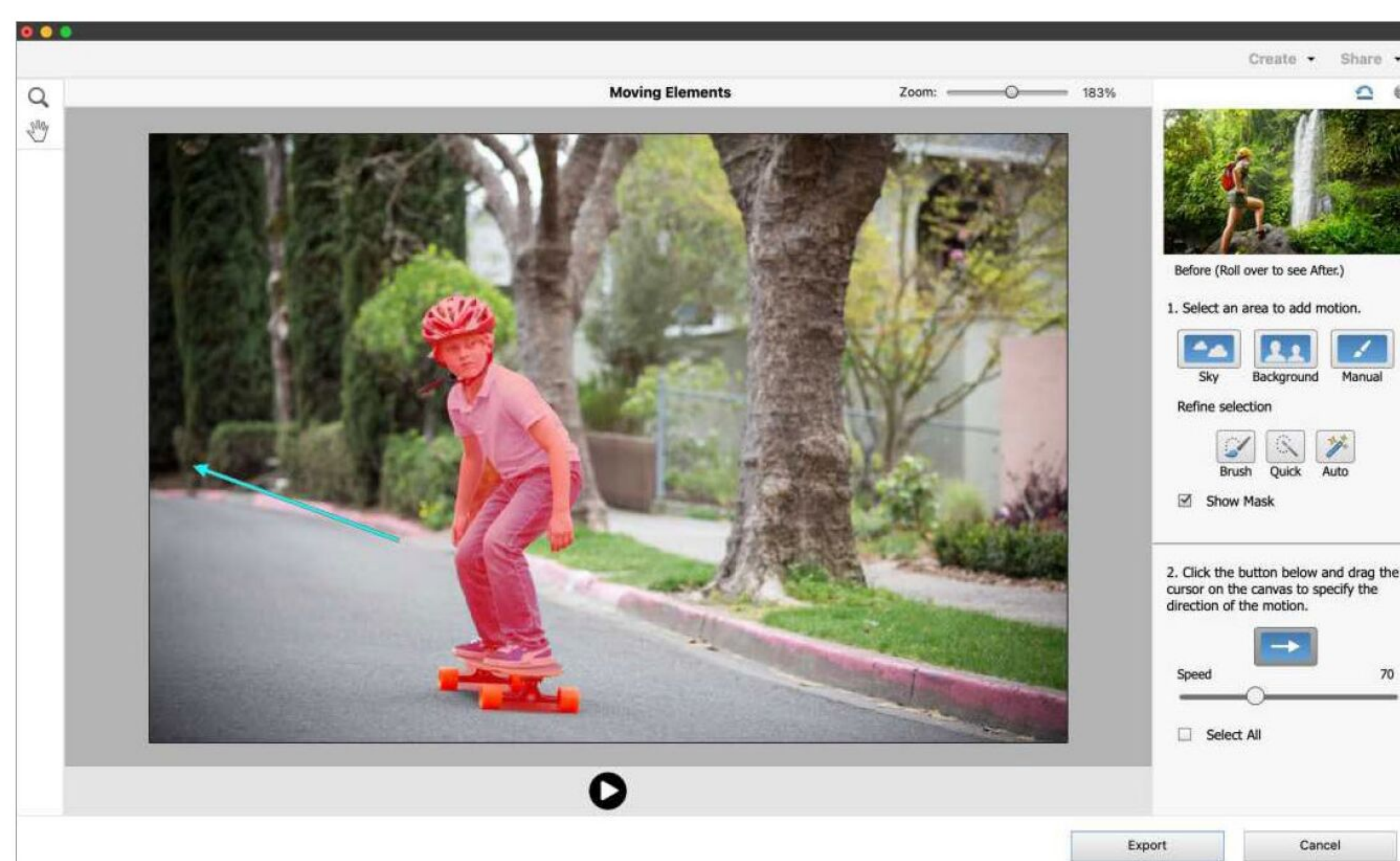
cosmetic, though, with other useful features such as the new Quick Actions panel, which is now available within the program's Quick editing mode. The Quick Actions panel gathers together a number of existing editing tools, but also gains new AI features, such as the ability to quickly select or change the background or sky in an image, or to smooth out fuzzy artefacts in compressed JPG files.

One of the headline features in Photoshop Elements 2024 is Match Color, which is available within the FX panel in both Quick mode and the Advanced mode for experienced users. In Quick mode you can simply choose a number of presets that allow you to quickly change the colours and tonal balance within a photo, while Advanced mode also allows you to import your own photos and copy the colour settings from one

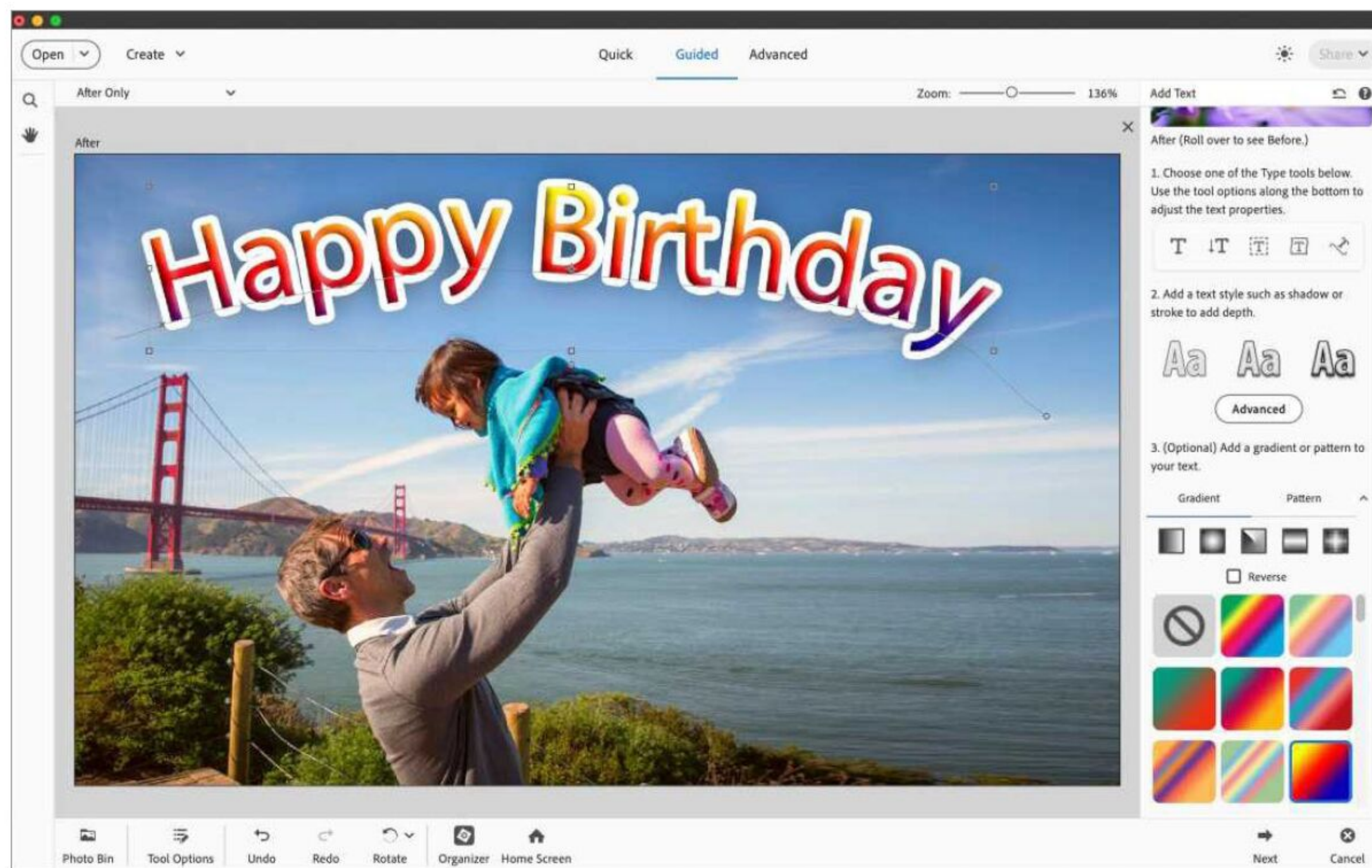
photo to another. And, when you're working in Advanced mode, you can use a new Search tool to browse through Adobe's library of free stock photography to find images that you can use in your own work.

This year's update also gains a new Guided Edit called Add Text, which makes it easier to use the program's text tools and effects. You can quickly add horizontal or vertical text, apply text to a selection, or make text follow a path that you draw with a freehand pen. You can add drop shadows, graduated colours and other effects with a quick click of your mouse, and even change the angle of lighting that you apply to the text. And, for social media mavens, there's a new Photo Reels tool, which is similar to an old-fashioned slide-show that flicks through a series of photos, but is very much focused on social media and provides a

series of templates for use on Instagram, Tiktok and other services. When you create a Photo Reel you see a simple timeline view that allows you to arrange photos in sequence, adjust the size and aspect ratio of each photo. You can also adjust the playback speed of the photo reel, and add text, graphics and filter effects.



You can select part of an image, such as a skater, and animate your selection to make the image look more dynamic and eye-catching.




This year's update also gains a new Guided Edit called Add Text, which makes it easier to use the program's text tools and effects.

Buying the desktop version of Photoshop Elements also gives you access to its companion mobile app for iOS and Android, and a web app that runs in a browser on any device. The mobile app allows you to upload photos and videos from your smartphone or tablet, and also provides you with 2GB of free online storage for your files. You can then quickly import these files into the desktop versions of Photoshop Elements when you're ready to get down to some serious editing work. The web app works in a similar fashion, and also includes some simple tools for quickly creating slideshows and collages without having to use the full version of Photoshop Elements. Just remember that both the mobile and web apps are still in their beta test phase, so make sure you keep backups of your photos and files just in case.

All these new features ensure that

Photoshop Elements 2024 is a much more worthwhile upgrade than some versions in recent years. Pricing is unchanged, at \$99.99 when bought directly from Adobe, but there's a 30-day trial available so that you can experiment for a while before buying.

BOTTOM LINE

In recent years, some of Photoshop Elements' annual upgrades were starting to look as though they were running out of ideas, but the 2024 update breathes new life into the app and is definitely a good upgrade for owners of previous versions. It also confirms Photoshop Elements' position as one of the leading photo editors for non-professional users. 

Adobe Photoshop Elements 2024



PROS

- Now supports Apple Silicon.
- New Guided Edits, with new Search tool.

CONS

- New mobile and web apps still in beta.
- Expensive.

BOTTOM LINE

The 2024 Photoshop Elements update breathes new life into the app and is a good upgrade for owners of previous versions. It also confirms Photoshop Elements' position as one of the leading photo editors for non-professional users.

\$99



Dell Inspiron 14 Plus (2024): This is what a well-rounded machine looks like

It hits all the right marks. **BY MARKA KNAPP**

PCWorld
EDITORS'
CHOICE

There's been a trend of mid-tier laptop lines getting a glow-up. HP, Acer, and Asus have done it, and with the Inspiron 14 Plus 7440, Dell shows it has a knack for this as well. While the Inspiron name might call to mind drab, plastic work machines, the latest iteration breaks free from its roots in all the right ways. A dash of metal here, a more colorful display there, and

unexpectedly strong performance and battery life all behind a \$1,000 price tag make this a highly competitive looking machine. And with a bit of deeper digging, it's clear that Dell has a massive success on its hands.

SPECS AND FEATURES

CPU: Intel Core 7 Ultra 155H

Memory: 16GB LPDDR5X-6400

Graphics/GPU: Intel Arc Graphics

Display: 14-inch, 2240×1400, WVA
Storage: 1TB PCIe NVMe SSD
Webcam: 1080p
Connectivity: 1x Thunderbolt 4, 2x USB-A 3.2 Gen 1, 1x HDMI 1.4 (1080p/60 max), 1x microSD card reader, 1x 3.5mm combo audio
Networking: WiFi 6E, Bluetooth 5.3
Biometrics: Fingerprint reader
Battery capacity: 64 watt-hours
Dimensions: 12.36 x 8.92 x 0.75 inches
Weight: 3.49 pounds
MSRP: \$999 as-tested (\$999 base)

DESIGN & BUILD QUALITY

The Dell Inspiron 14 Plus is a smoother office machine. Aside from the plastic underside, the Dell Inspiron 14 Plus is built with a largely aluminum chassis that feels like a polished stone, offering just the slightest bit of friction and featuring smoothed corners and edges. While there are elements of the design that look a little more slapped together than the polished designs of Apple's MacBooks or Dell's own XPS line — like it's thicker, plastic bezels or basic and wiggly display hinges — the Dell Inspiron 14 Plus still exhibits a sleekness that Inspiron's in the past have lacked.

This improvement to design is likely where the Plus in the name is coming from, though the internals certainly have a role to play as well.

For a compact work machine, the Dell Inspiron 14 Plus makes a show of having lots of cooling. While I'm used to seeing a decent side vent on machines like this, I was surprised to find even more vents on the rear. There even appear to be vents tucked away behind the display hinges. Confoundingly, further inspection reveals much of these vents are just hunky punk plastic grilles made to look like vents. So, while at first glance the Dell Inspiron 14 Plus looks like it might offer better cooling than the Dell XPS 16 (fave.co/3TGFaYz) did, which runs the same CPU, the opposite appears to be true.

The frame has a little sponginess to it around the keyboard and at the center of the display lid, but it feels rigid enough to handle a little abuse. That keyboard deck flex is also hardly noticeable while typing.

Dell didn't manage to make the Inspiron 14 Plus a super svelte machine. It's modestly thick for a standard laptop and weighs 3.49 pounds. It's still reasonably portable with these measurements though.



The largely aluminum chassis feels like a polished stone.

KEYBOARD, TRACKPAD

The keyboard you get is a bit on the basic side. The keycaps are just a bland gray with little to no contour. They have a little pop to them and are thankfully stiffer than some cheaper laptop keyboards, so they don't suffer from as much corner mushiness. The result is a surprisingly quick keyboard. In a matter of minutes I was able to get comfortable enough with the Dell Inspiron 14 Plus keyboard to manage a 129-word-per-minute typing speed at 100 percent accuracy in Monkeytype — a personal best.

A good deal of that typing performance stems not just from the keyboard, which just feels *fine*, but from the comfort of the laptop's surface. Since I don't have to stretch too far over a large surface or let a sharp edge dig into my wrists, I can comfortably anchor my palms for accurate typing. This helps make up for the keys' lack of contouring. Too bad there's not much to make up for the tiny arrow

keys on the Dell Inspiron 14 Plus.

The keyboard includes basic white backlighting, available at two brightness levels, that's enough to get the job done.

The trackpad has modest proportions. It's made with mylar, which glides smoothly and feels like a good match for the texture of the frame. It has a somewhat firm click that doesn't feel overly prone to misclicks nor mushy in any way.

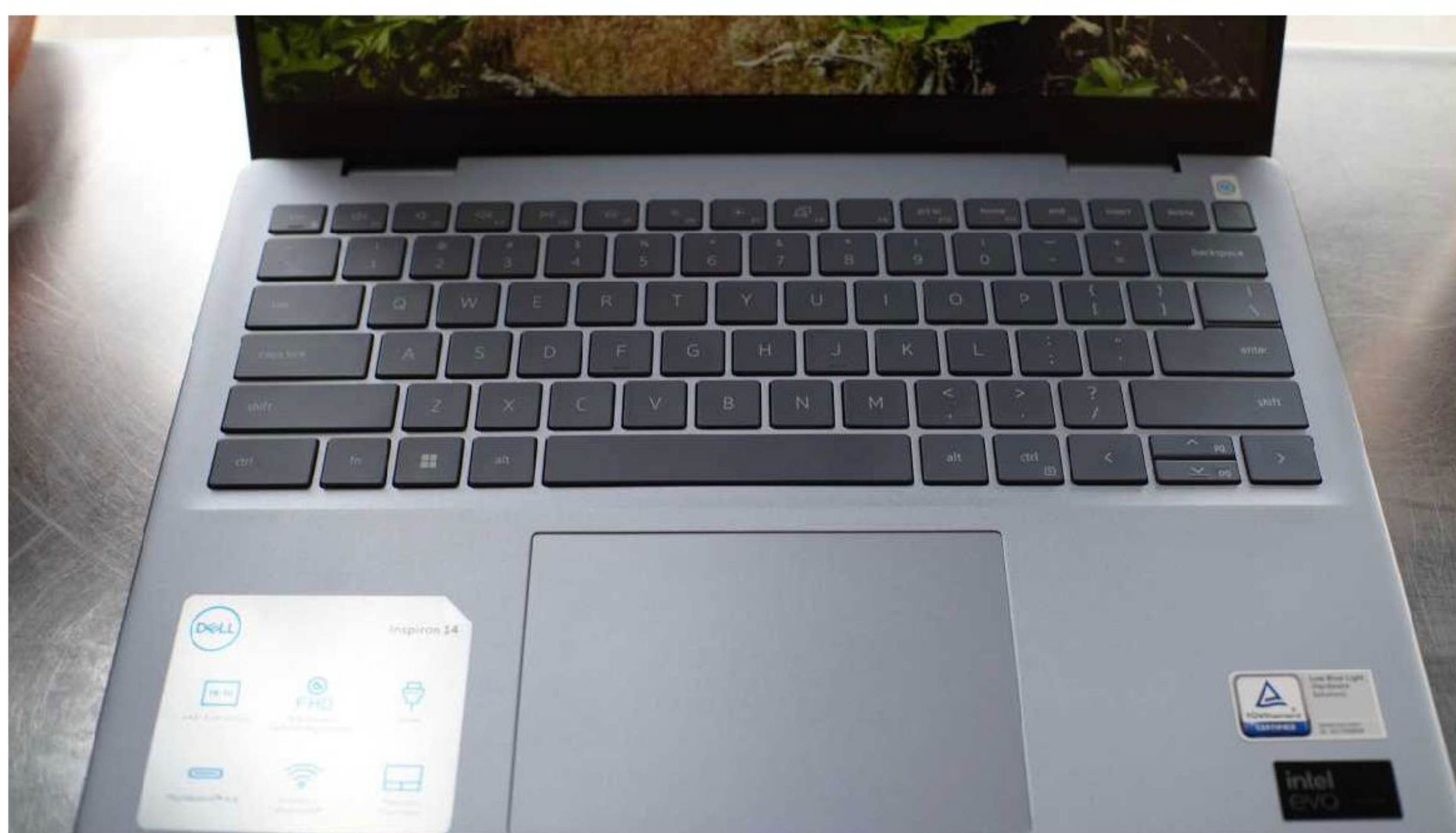
Between the keyboard and trackpad, the Dell Inspiron 14 Plus delivers an altogether good interface that leaves little to be desired.

DISPLAY, AUDIO

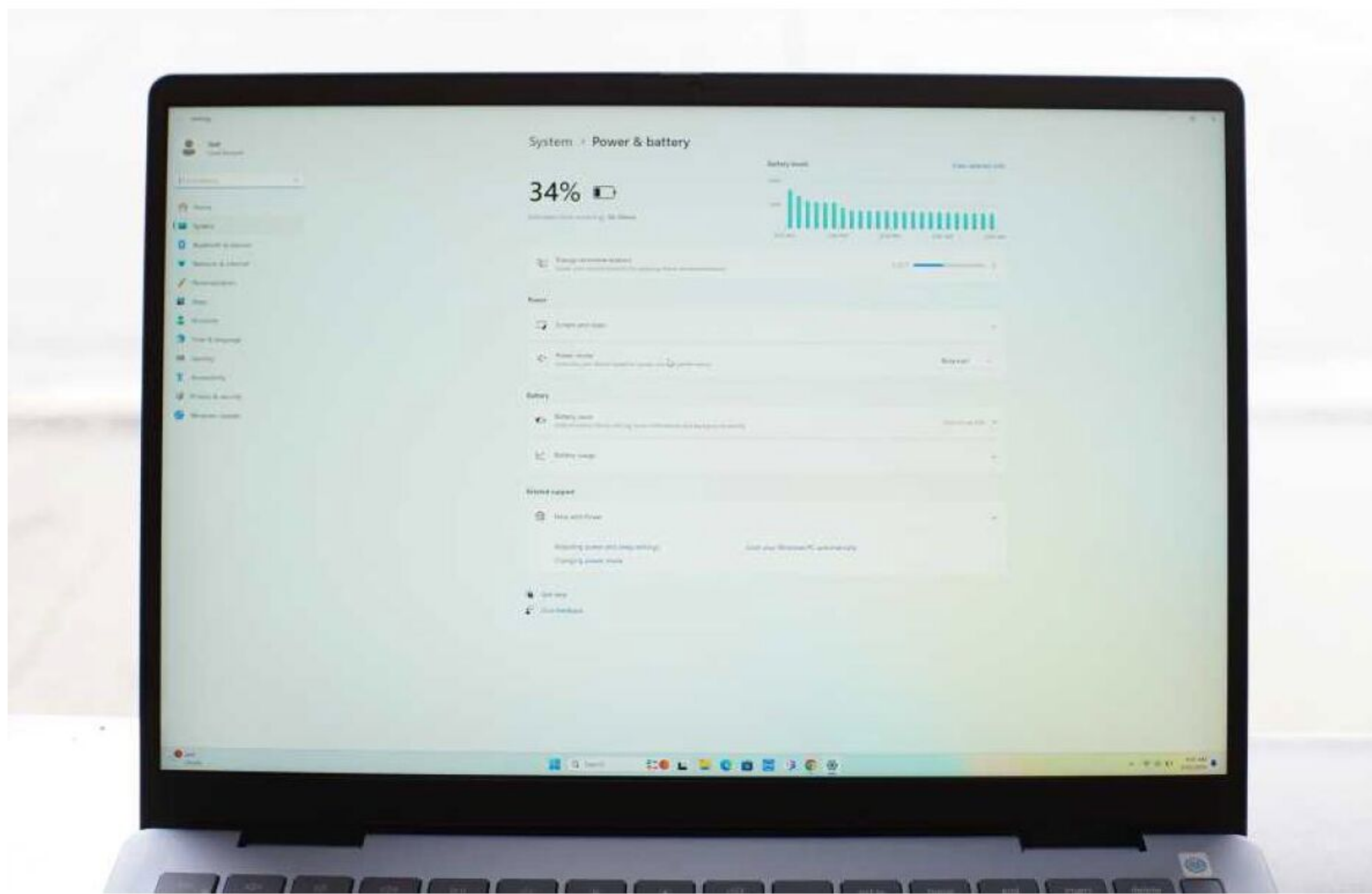
Perhaps one of the most impressive aspects of the Dell Inspiron 14 Plus is its inclusion of an altogether respectable display. This is no dim, drab, low-resolution panel. It's an odd resolution, but the 2240×1400 resolution offers solid clarity on the 14-inch panel. Between the 418-nit peak brightness and effective anti-glare coating of the display, it's

also remarkably easy to see even in unfavorable lighting conditions. Essentially, visibility is wonderfully managed on this display.

Dell has topped that off with nearly 100 percent coverage of the sRGB color space, which doesn't have quite the same vibrant pop as full DCI-P3 coverage but still gives life to visuals across the entire experience compared to the



The keys have a little pop to them and are thankfully stiffer than some cheaper laptop keyboards.



The display is one of this laptop's most impressive aspects.

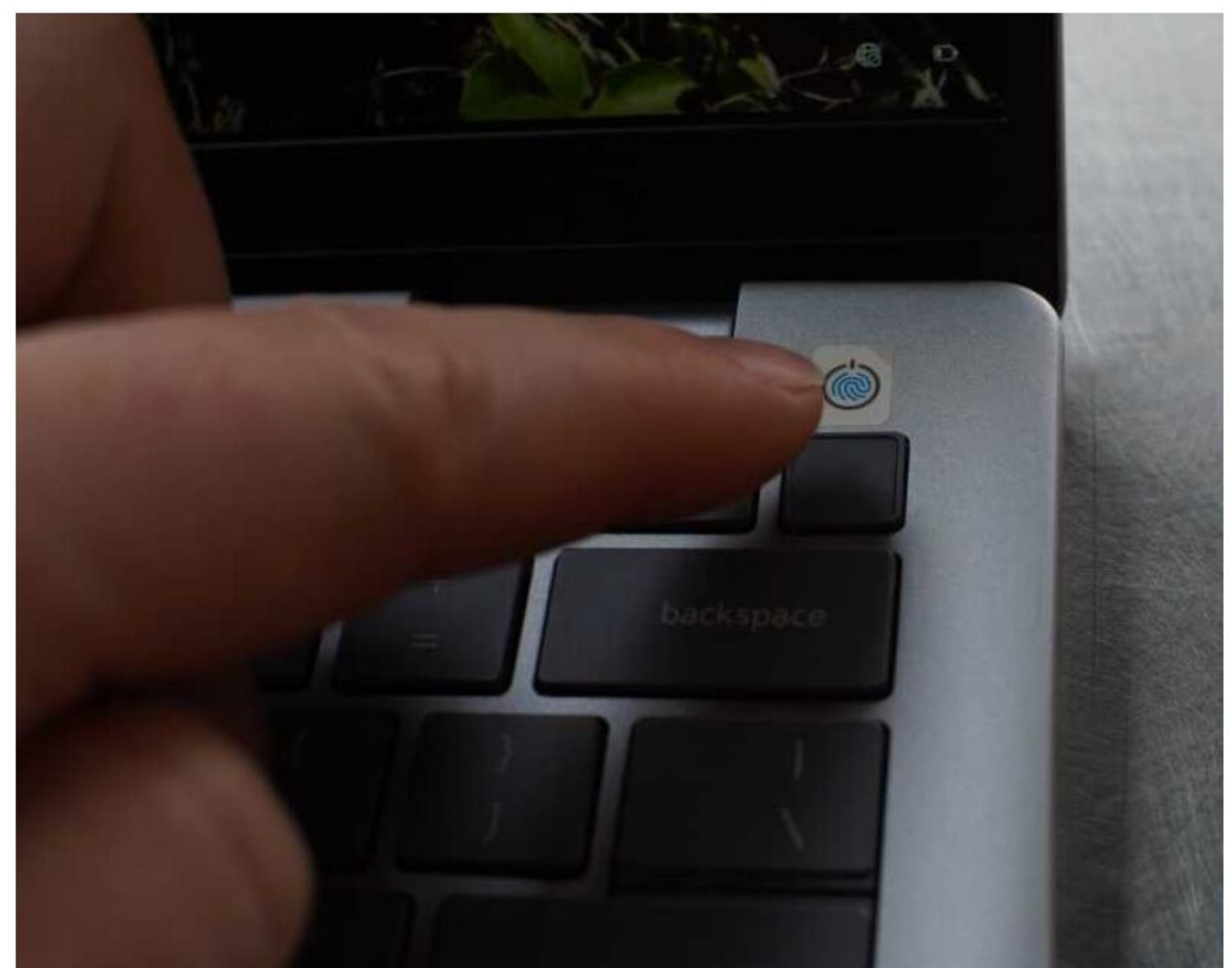
many basic panels available on budget laptops. I measured a high degree of color accuracy as well, with an average dE of 0.81 without any calibration. The visuals are even enhanced slightly by a 1680:1 contrast ratio, which is more than I would have expected from a simple LED panel. Pixel response is a bit slow, leading to some ghosting on moving objects, but this is no gaming machine. The display is exceedingly well suited to office work and static imagery.

The audio experience is similar to the display in that it has some admirable qualities without being exceptional. The speakers blast out audio at an impressive level without infrequent, insubstantial distortion. They can be a little grating at max volume, especially if you're sitting close, but they're crisp and clear. That said, bass is common weakness for machines like this, and there's no denying that it's somewhat lacking. Thankfully, it's not

completely AWOL. Whether in Vulpeck's "Fugue State" or Miike Snow's "My Trigger" the bass is clearly present, but it's thin, with some of the energy sucked out by the higher registers. The bass also has a propensity for distortion.

WEBCAM, MICROPHONE, BIOMETRICS

The webcam on the Dell Inspiron 14 Plus looks OK, offering reasonably smooth video but not at particularly high clarity. Even with a 1080p sensor, it doesn't end up impressively sharp. The quality is more held back by its handling of brightness. It has a tendency to either blow out highlights or appear too dark. Still, there are much worse webcams out there.



The Inspiron 14 Plus has a fingerprint scanner at the top right of the keyboard.



The Dell may be small, but it's not overly sparing on ports.

The mics do a good job picking up my voice even if there's a big of background noise, such as the droning of a fan. Typing on the laptop while recording breaks through the noise suppression though, so it's best avoided during meetings.

While the webcam doesn't offer facial recognition, there is a fingerprint scanner at the top right of the keyboard. This offers a convenient way to sign-in, though it regularly requires a few retries to register the fingerprint.

CONNECTIVITY

The Dell Inspiron 14 Plus may be small, but it's not overly sparing on ports. The right edge offers up a 3.5mm headset jack, a microSD card reader, and a 5Gbps USB-A port. Much of that edge is occupied by venting, so it's nice to see Dell still offer up some ports. The left edge has even more on offer with another 5Gbps USB-A port, a Thunderbolt 4 port, a DC charging port, and a full-size HDMI port. That's only an HDMI 1.4 connection though, topping out at

1080p/60Hz.

Thankfully, Thunderbolt 4 provides a lot more flexibility for external display connections.

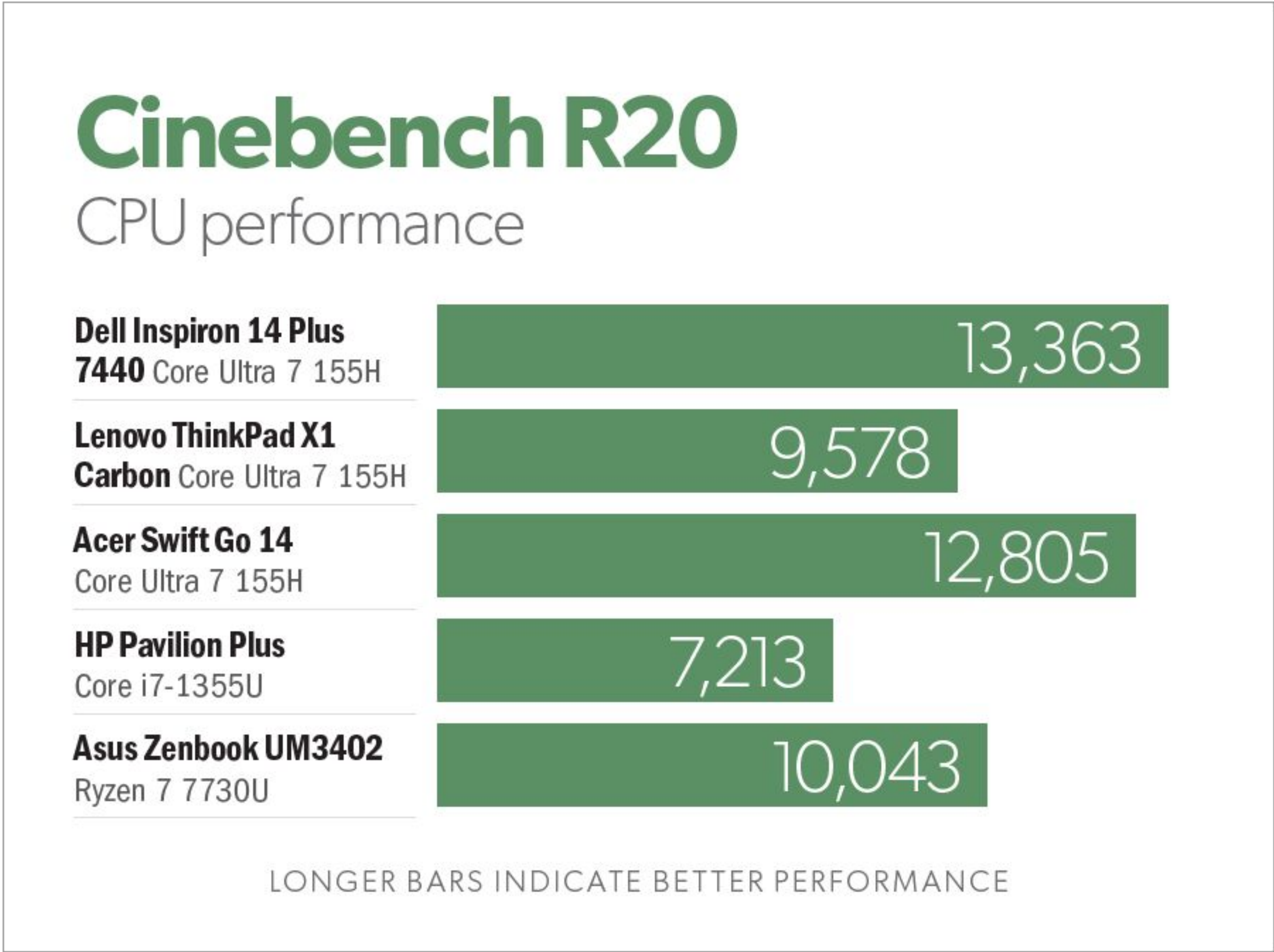
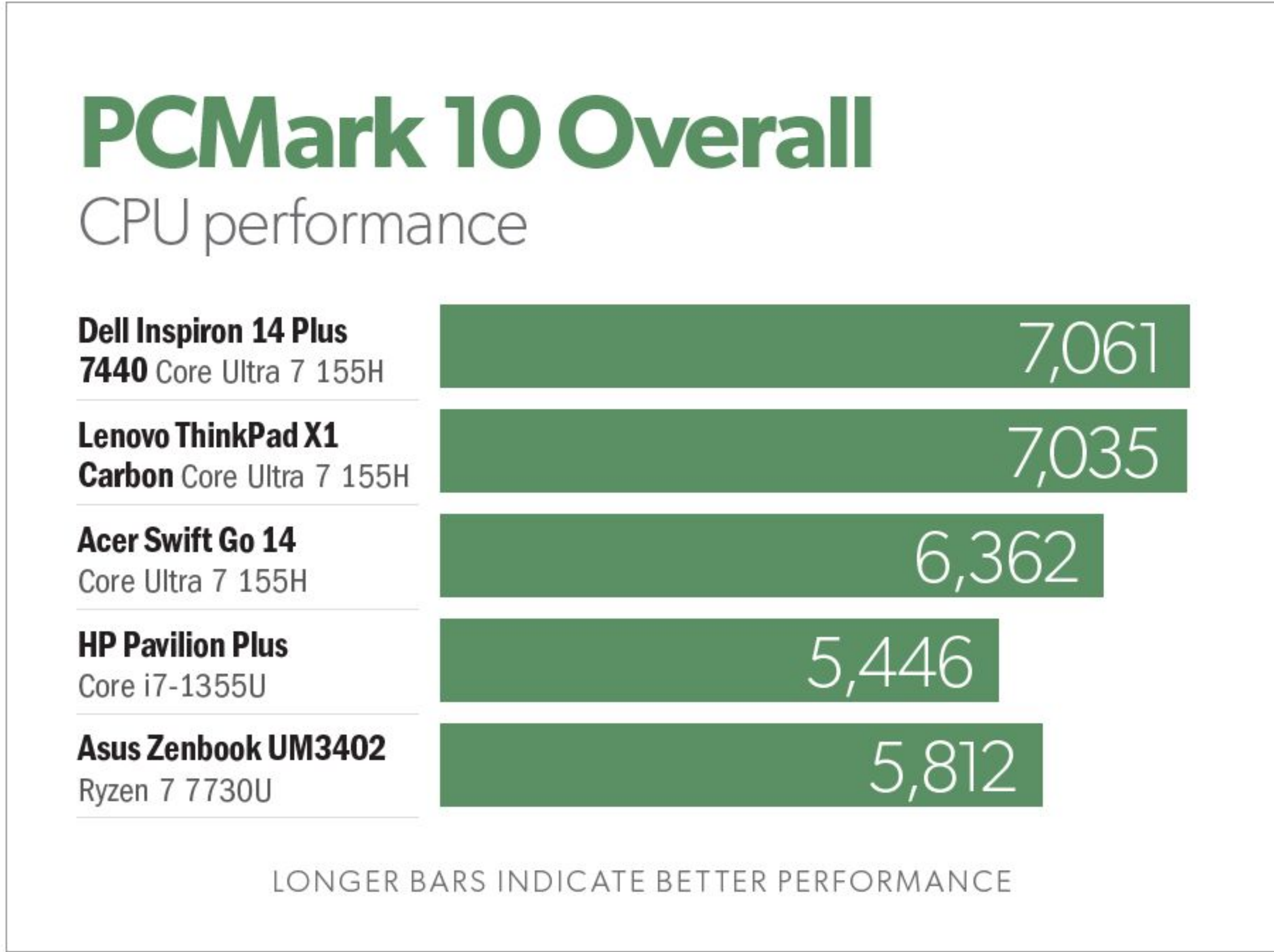
Wireless connectivity has been consistent in my experience with the laptop. Connected to a Wi-Fi 6 router on a

Gigabit connection, I had no issues, even with a few plaster walls blocking the signal. Bluetooth also worked admirably, keeping the laptop piping audio out to my headphones in a busy café for several days without issue.

PERFORMANCE

So far, things are looking pretty bright for the Dell Inspiron 14 Plus, and it largely stays bright in the performance department. That said, Dell's cooling choices do come back to bite it a little bit.

The Dell Inspiron 14 Plus performed exceptionally in PCMark 10's benchmark, which analyzes overall system performance in a variety of office use cases, and that speaks well to the laptop's overall viability. It beats out similar 14-inch laptops, like the Acer Swift Go 14 and even the much pricier Lenovo ThinkPad X1 Carbon, both of which use the same Intel Core i7 155H chip. Impressively, it even beat the Dell XPS 16 I recently tested,



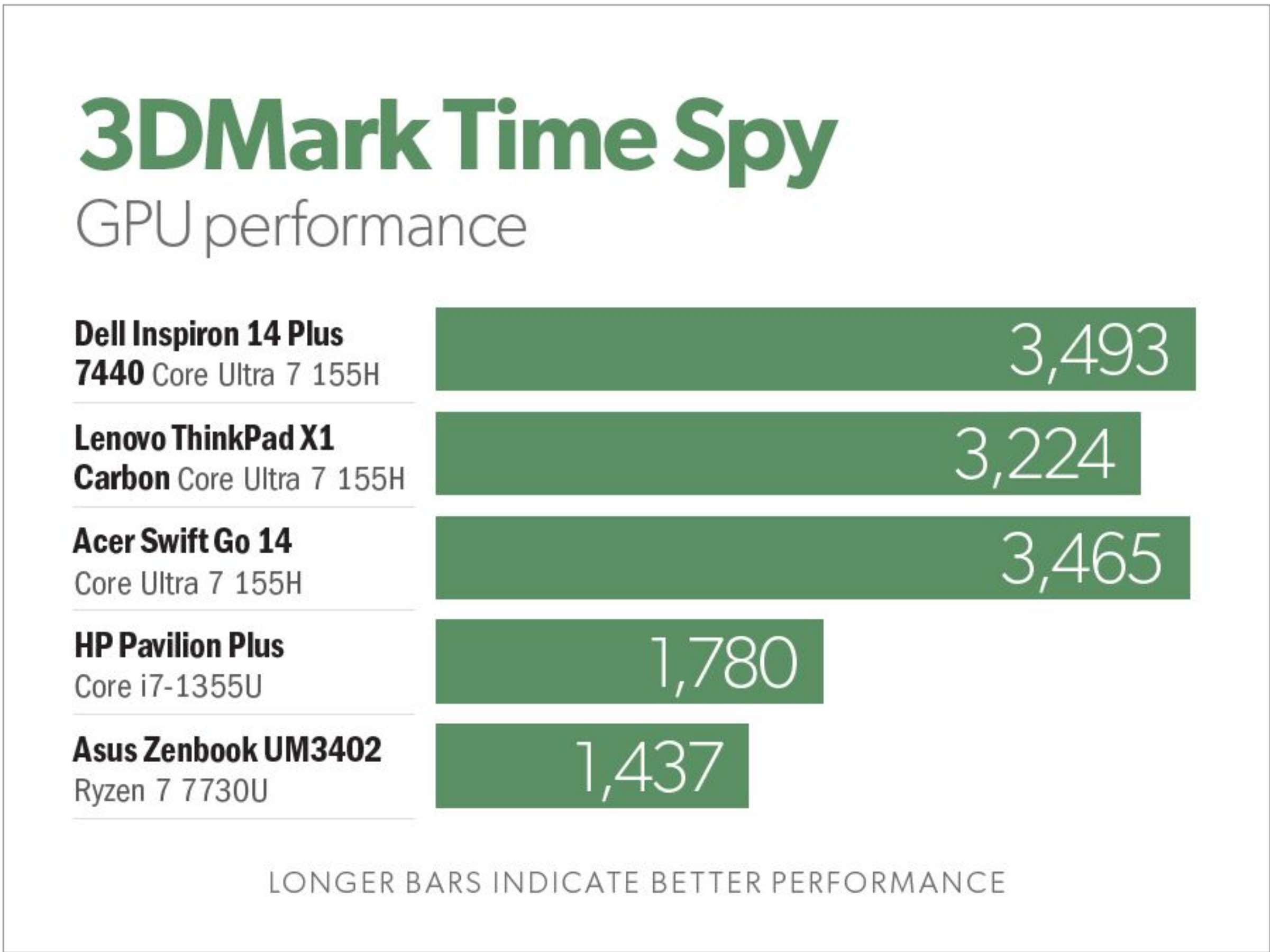
which fell behind with a score of 6,392.

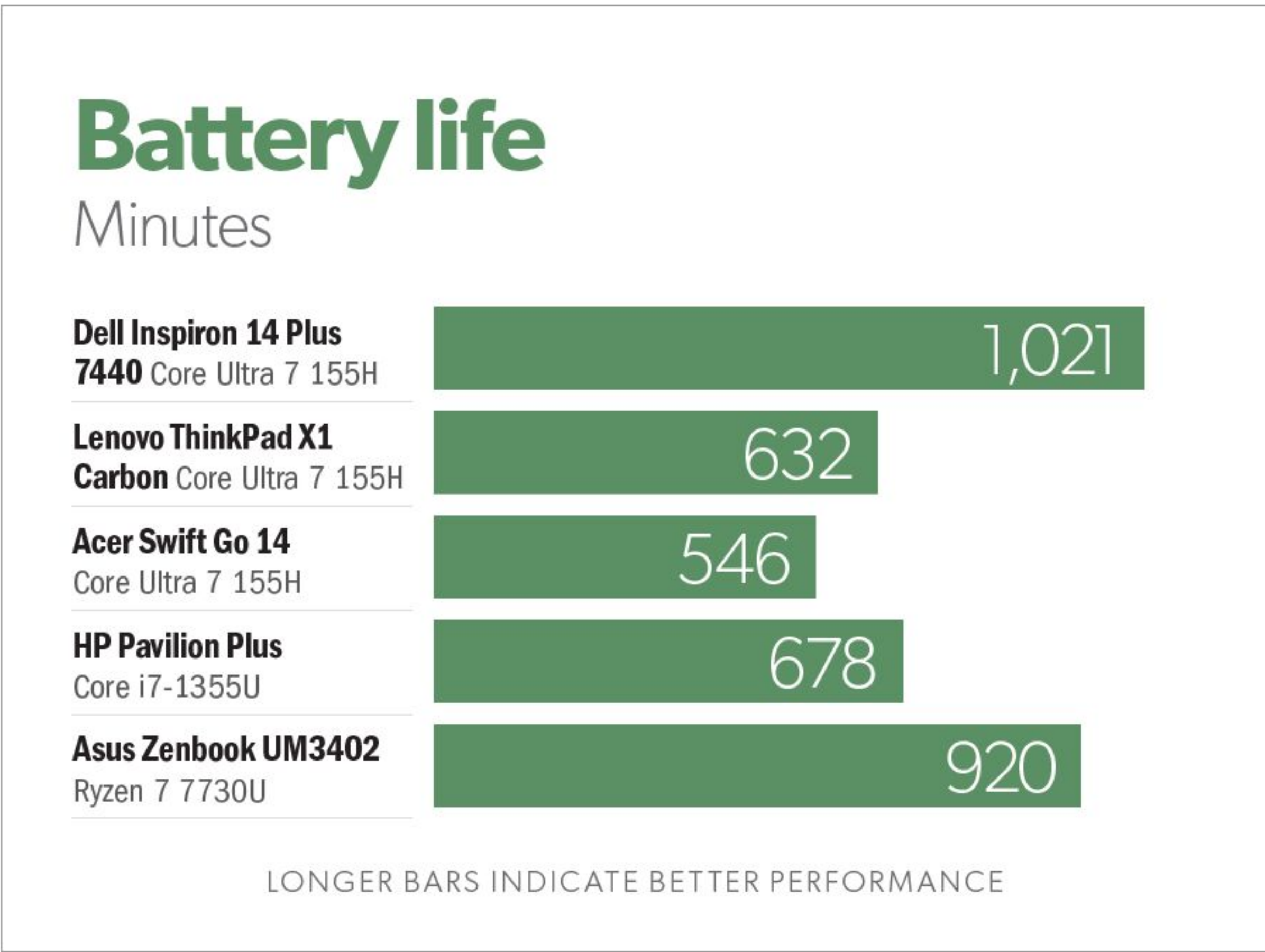
However, when it comes to sustained CPU performance, the Dell Inspiron 14 Plus takes a bit of a hit. It still comes out ahead of its thin-and-light competition here, but doesn't fare nearly as well as it might have if any of the false cooling vents were actually offering cooling. Compared to the Dell XPS 16's 17,641 points in Cinebench R23's multi-threaded test, the Inspiron 14 Plus fell way behind. A quick look at HWInfo64 was all it took to see that the test quickly had CPU core temps spiking to 110 degrees Celsius, resulting in thermal throttling. Back to back tests only saw performance sink lower and lower. To the Dell Inspiron 14 Plus's credit, it still pushed out better performance even with the throttling than its main competition here.

In spite of its thermal issues, the Dell Inspiron 14 Plus refused to cede ground to its closer competitors. It's not in the same ballpark as the Dell XPS 16 after all, nor can it keep up with modern discrete GPUs when it comes to

graphics performance, but the Intel Arc Graphics inside the system still outperformed the integrated graphics in the rest of these rigs.

While these performance results are in part a story of thermal throttling, some of these benchmarks are designed to stress a system a bit more than the everyday tasks. It's fairly remarkable that the Dell Inspiron 14 Plus performs as well as it does, and barring lengthy periods with heavy workloads on the CPU, the Dell Inspiron 14 Plus manages to be exceptionally quick and snappy.





BATTERY LIFE

One thing could have ruined it all for the Inspiron 14 Plus. If it had a weak battery, it would be a much harder sell. As luck would have it, the Dell offers truly remarkable battery life. In our battery test, which plays a 4K video on repeat with the display set between 250 and 260 nits, the Dell Inspiron 14 Plus lasted for a staggering 1,021 minutes (just over 17 hours). This beats the competition easily, and even beat the Dell XPS 16 (which did have the disadvantage of using OLED). I even ran the test both with and without the My Dell software’s intelligent battery extender feature enabled to ensure it wasn’t fudging the results, and in both cases the system ran over 17 hours. This is performance that can rival even Apple’s best MacBooks, which we test at a notably dimmer 150 nits.

BOTTOM LINE

If Dell had added another heat pipe and used the extra rear grille as an actual exhaust port

to keep the CPU thermals in check, this probably would have been the rise of a new king of everyday PCs. Even without that concession, the Dell Inspiron 14 Plus is a remarkably well rounded system. In just about every category, it’s decent at worst. And in most departments, it’s better than the competition. It may not be as pretty as a ZenBook or Pavilion Plus, but it’s faster and lasts longer. And even if it’s no ThinkPad or XPS, it’s so much cheaper. Even with the Acer Swift Go 14 offering a lot of the same aspects, I’d never trade the Dell Inspiron 14 Plus’s keyboard for one from Acer.

The fact that you can get a system this well rounded for \$1,000 (and I’ve even seen it for \$850 already) is a huge boon for PC shoppers looking for a no-nonsense, machine that’s all together excellent. 🔌

Dell Inspiron 14 Plus (2024)



PROS

- Strong performance despite throttling.
- Exceptional battery life.
- An unreasonably good keyboard.

CONS

- Fake vents.
- Throttle under sustained loads.
- No user upgrades.

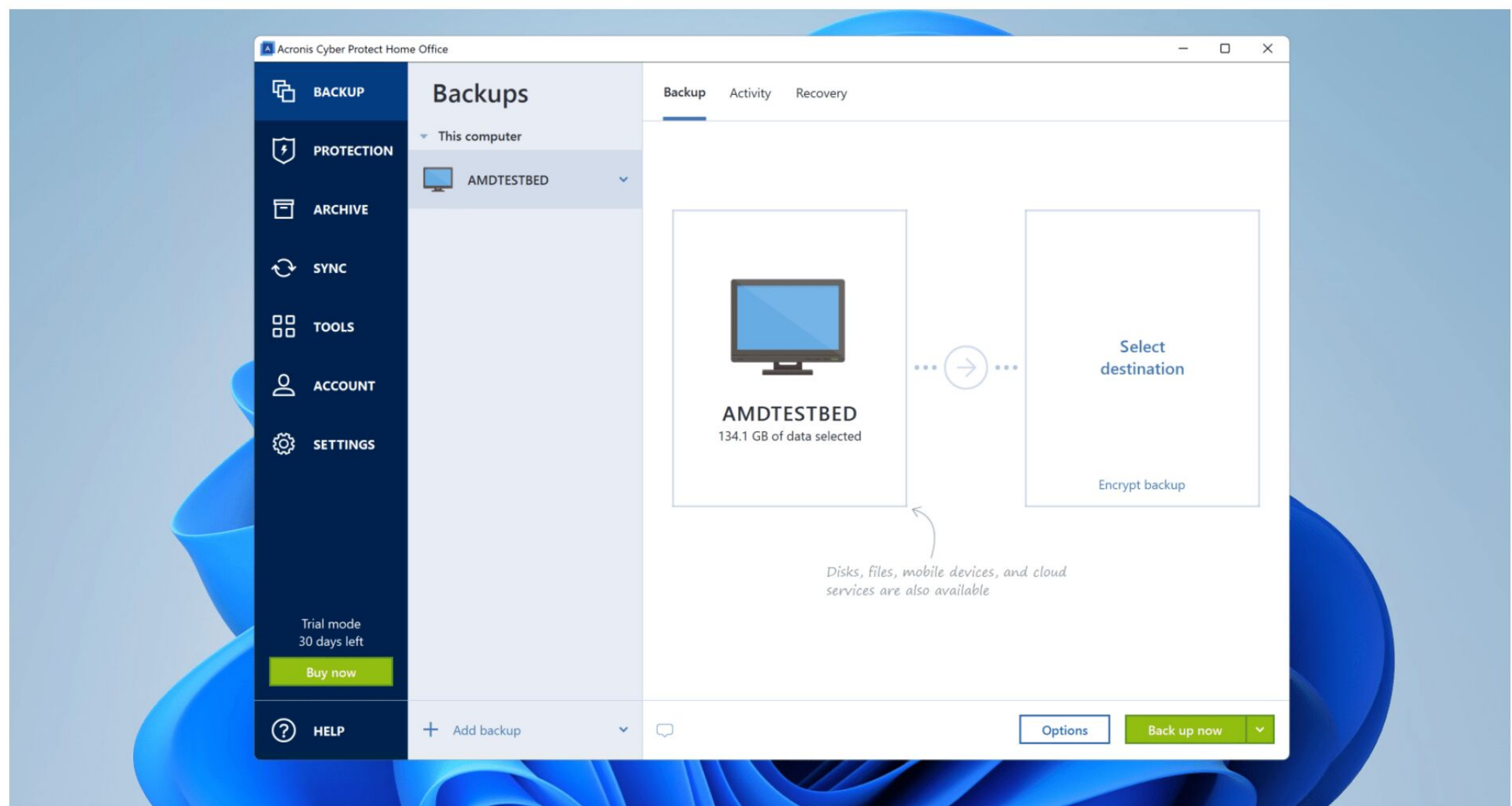
BOTTOM LINE

The Dell Inspiron 14 Plus isn’t perfect, and some of its choices are even a little silly, but it’s all-around performance is impossible to ignore, especially at its price. Any area the Dell comes up lacking, it’s more than made up for in some other way. And with that in mind, it’s hard to see any good reason not to get it.

From \$999

Acronis Cyber Protect Home Office: Top-tier do-it-all PC backup

With backup, disaster recovery, and malware protection under one roof -- Acronis delivers the most comprehensive data-safety solution on the planet. **BY JON JACOBI**



Acronis Cyber Protect Home Office (nee True Image) is without question the most comprehensive suite of utilities

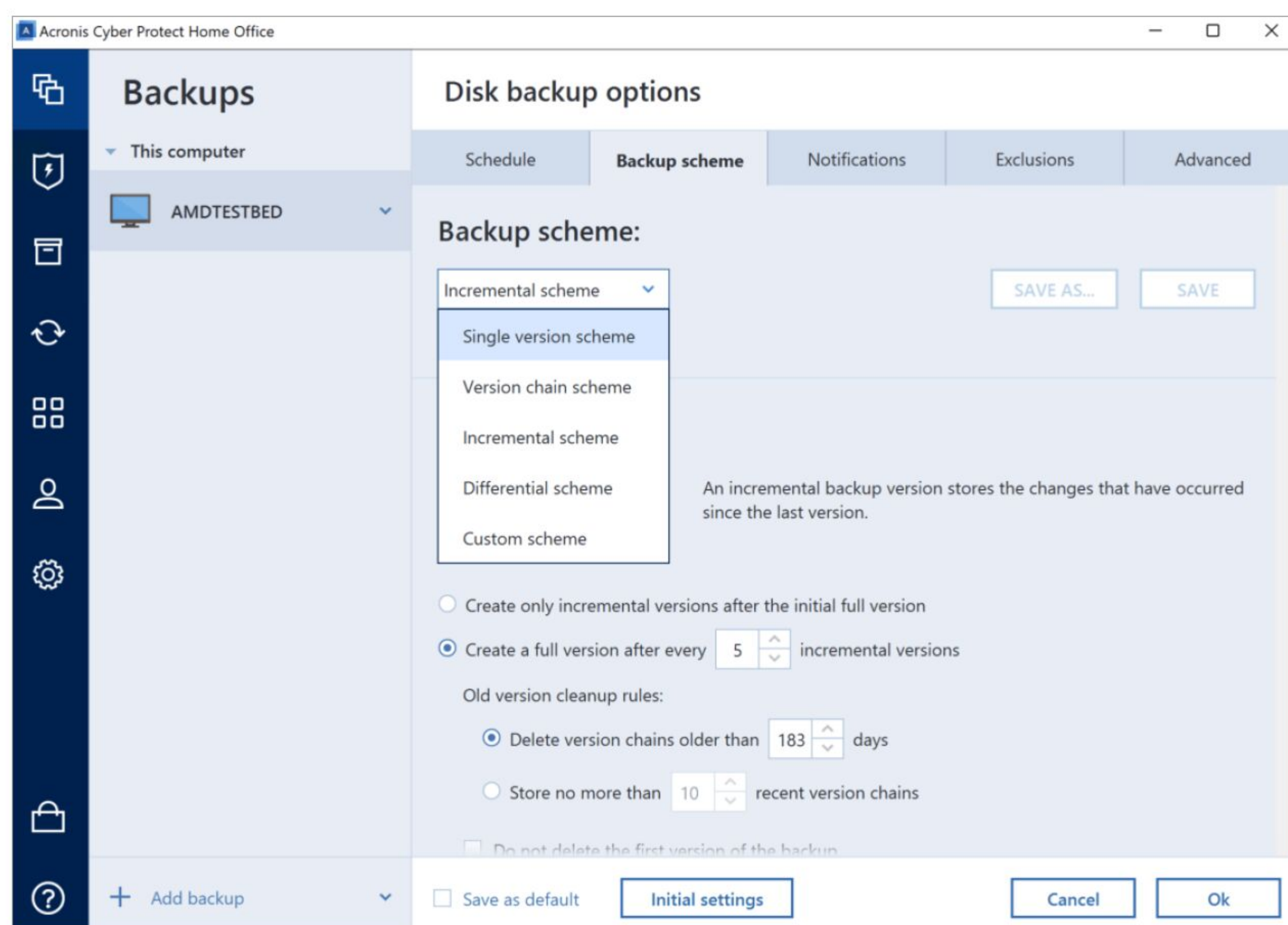
for keeping your computer backed up and secure. It's not even particularly close in fact.

Marrying anti-malware and backup, as Cyber Protect Home Office does, might seem an odd choice at first. However, the ability to fire off a backup or shut off access to previous backups when malware is detected makes a whole lot of sense.

I was a bit skeptical when the company first started down this path, now I'm completely on board.

FEATURES

There's a lot to cover in a program as comprehensive as Cyber Protect Home Office. I'll get to the malware protection in a bit, but first let's talk about backup. The program creates image files from drives or partitions, as well as selected files and folders. These can be full (everything), incremental



Cyber Protect Home Office backs up data from just about any location and offers myriad options.

(everything since the last backup), or differential (everything since the initial backup).

You can also back up files from your phone or files from remote shared-network locations, and employ Blockchain to notarize backed-up files with the premium version.

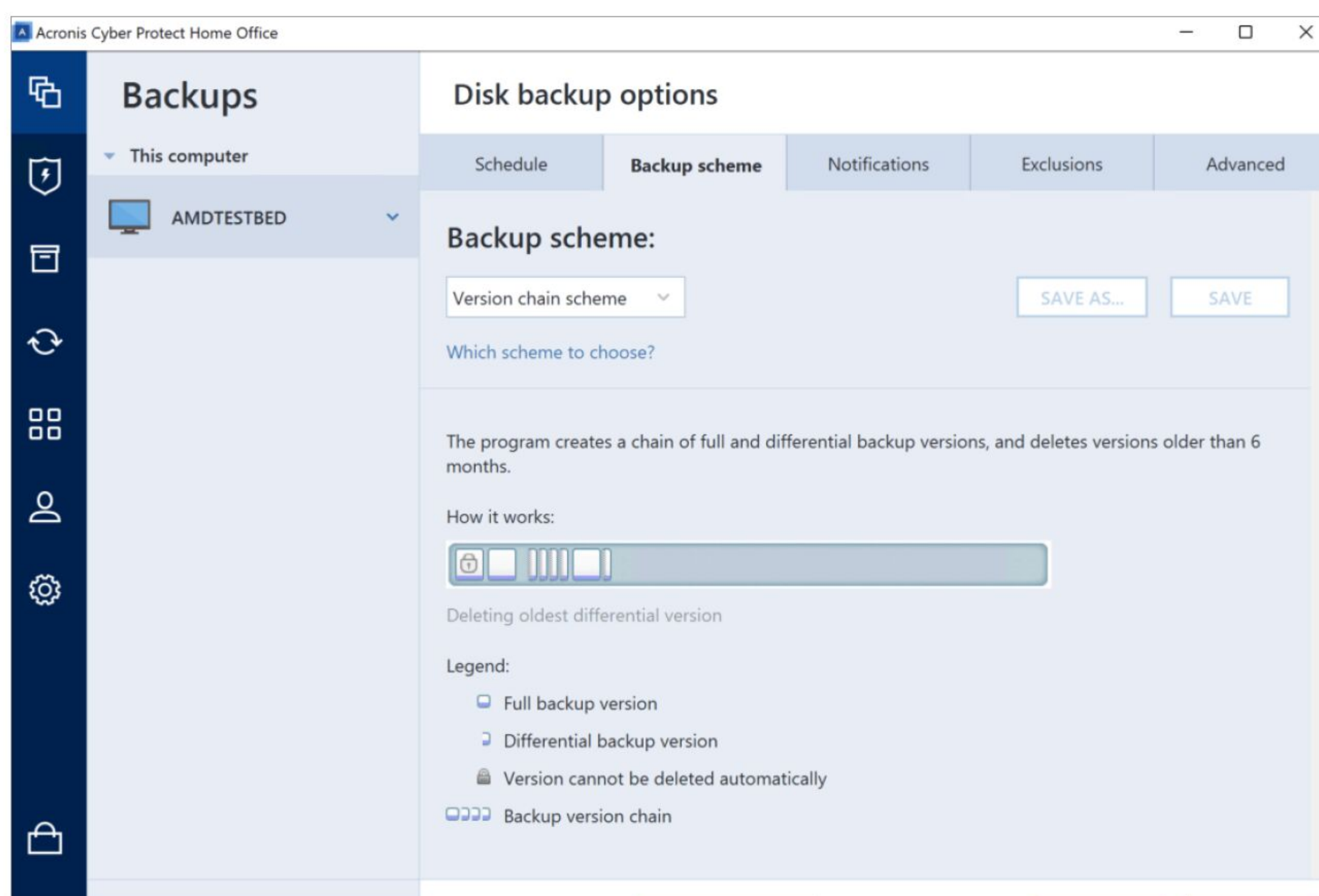
Cyber Protect Home Office lets you save backup jobs and schedule them, automatically (or manually) culls older backups when space runs low, splits backups, copies sector-by-sector or data-only, validates backup post

facto, runs commands pre- and post-operation, and a lot more. In short, just about every option invented by the backup community has been implemented.

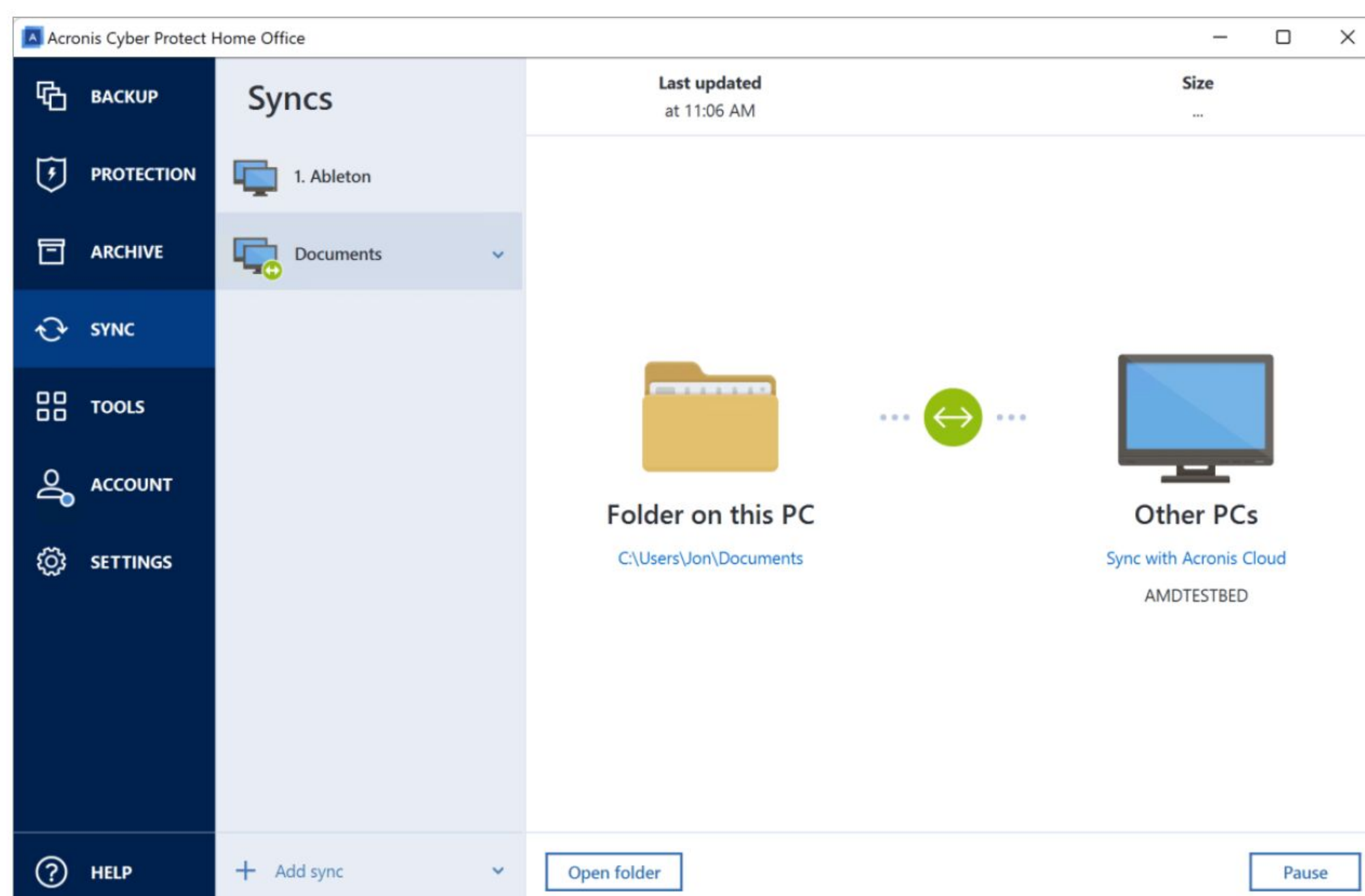
The program also backs up to nearly any type of media or location: local drives, network destinations, the 1TB of cloud storage provided by Acronis with some subscriptions, and even optical — remember CDs and DVDs? They're still in

use! If you're super old-school, sorry, tape is not supported.

Cyber Protect Home Office will optionally place a version of the program on removable



The program offers a variety of pre-cooked backup schemes.



Cyber Protect Home Office will sync as well as back up. This is file-based, not imaging.

media for use during restore (Acronis calls it “recovery”) operations — i.e. create a disaster recovery boot disk.

Many people conflate sync with backup, and while they have similarities, they’re not the same operation. Backups are meant to be immutable, remaining available well into the future so you can retreat to older versions and data. Syncs evolve and generally reflect the current state of your data.

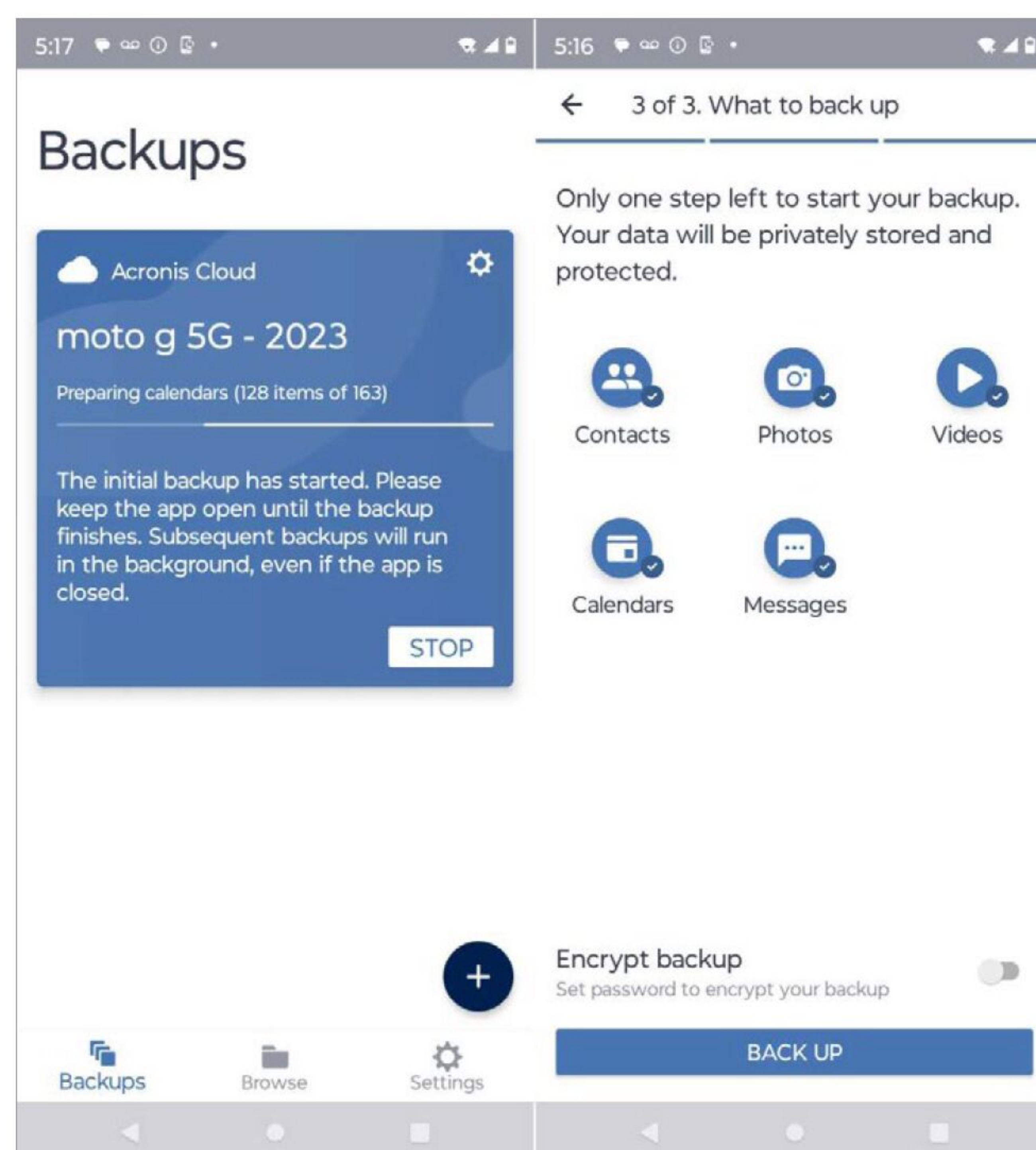
You can futz sync into backup with some programs by implementing versioning — i.e., saving older versions of files rather than deleting them, and not mirroring deletions from the source.

Acronis’s sync is two-way with the only option being whether it’s synced to Acronis Cloud first (if you opted for the

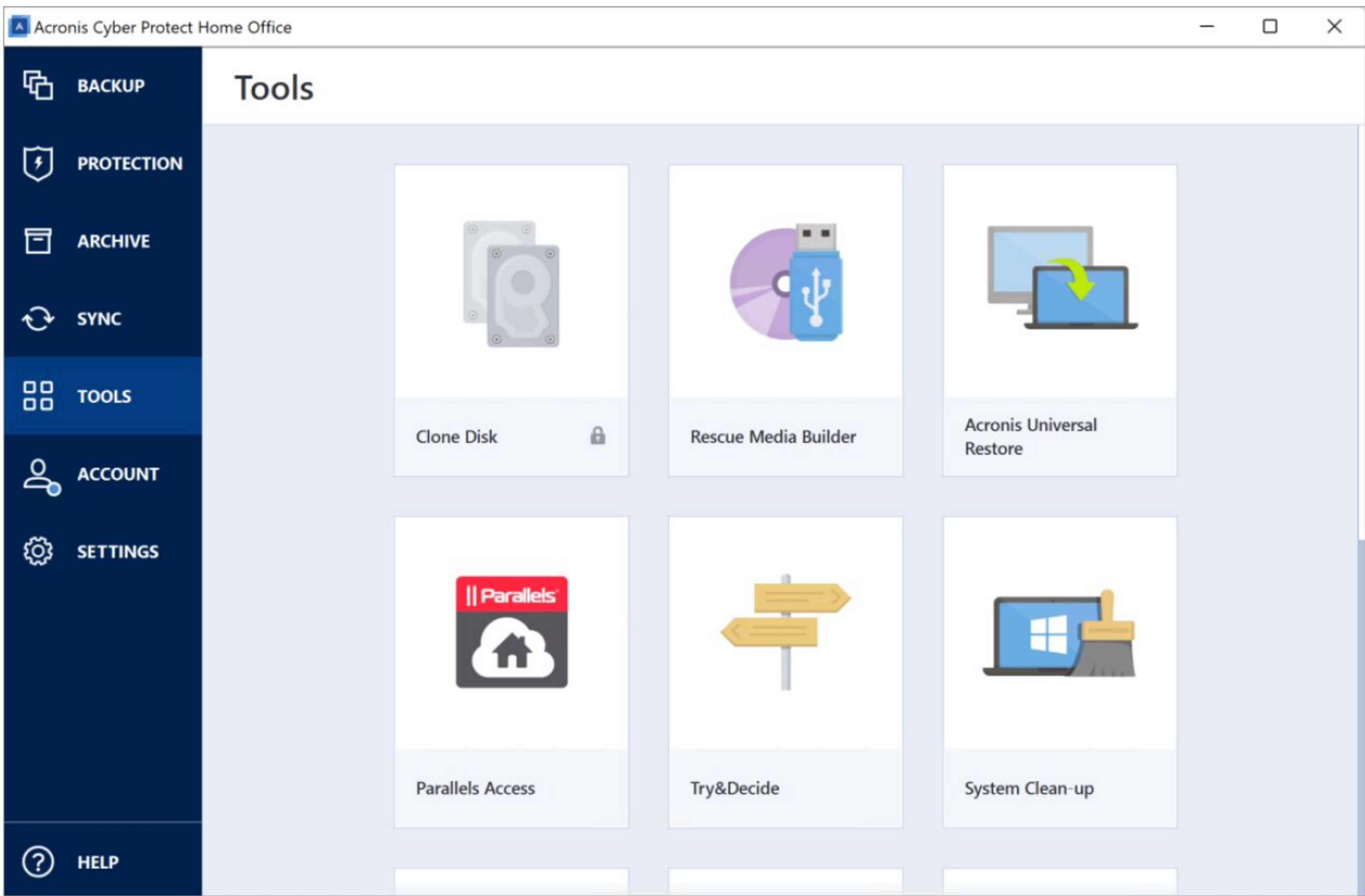
service), rather than the destination, assuming the destination isn’t Acronis Cloud to begin with.

The reason I discussed the difference between sync and backup is because Cyber Protect Home Office features sync jobs as a separate function — as it should be. This allows you to synchronize data between your local PC, Acronis Cloud, and your mobile devices. Yes, as

mentioned, Cyber Protect Home Office offers Android and iOS clients as well. See below.



Screen captures of the Acronis Android app.



Cyber Protect Home Office offers a number of image and backup related utilities.

Other related and tangential features include hardware-independent recovery media (USB/optical), disk cloning, an OEM-like recovery partition (boot time restore of your original OS state from your internal drive) creator, a system cleanup tool (think CCleaner), and a secure-erase utility.

Acronis Cyber Protect Home Office sports a clean, attractive interface, and is easy to use — once you’re accustomed to it. It’s not amazingly intuitive when it comes to organization and operation, but a half hour kicking the tires and you

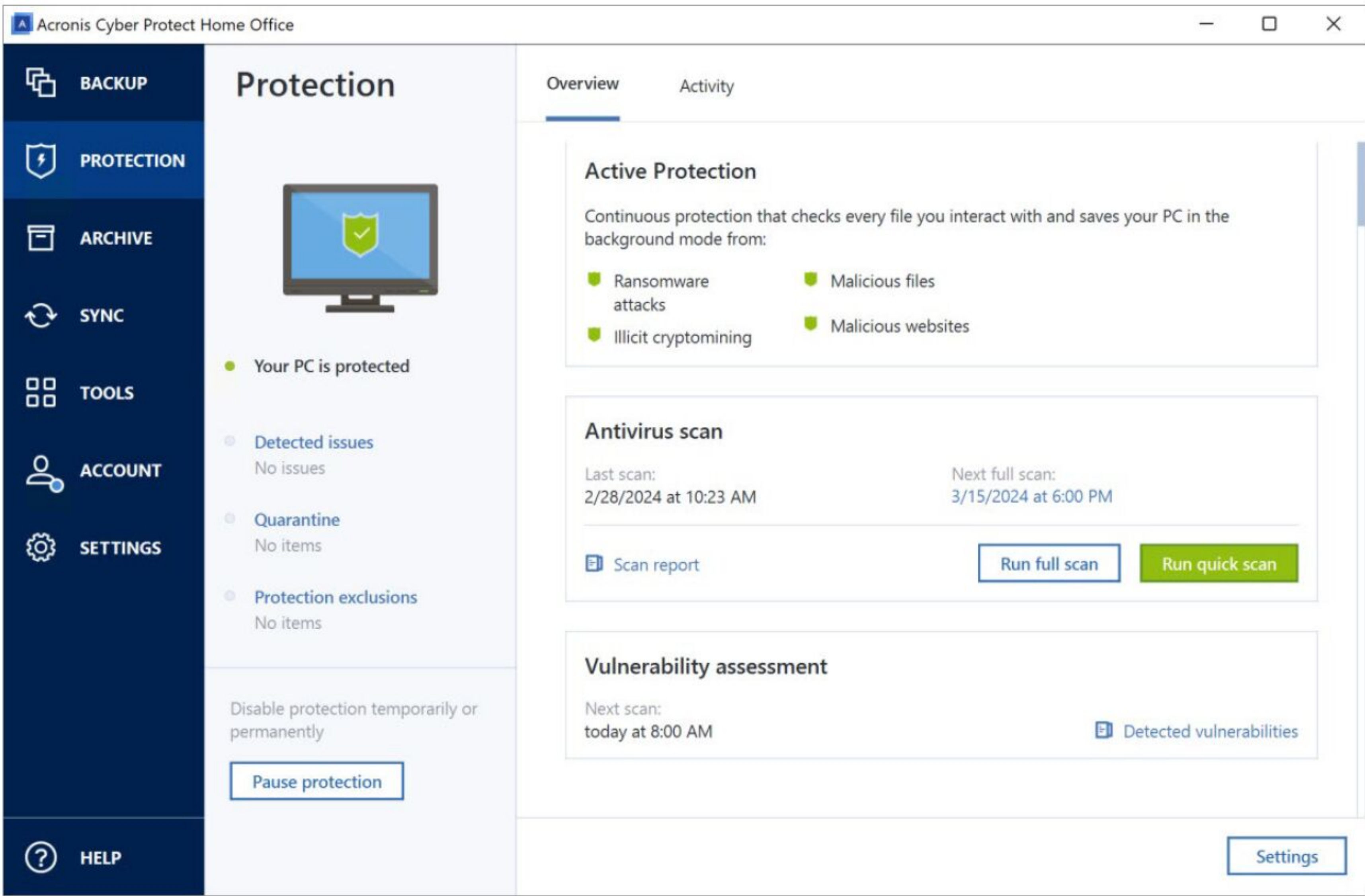
should be good to go. Assuming you’re familiar with basic backup concepts.

EFFECTIVENESS

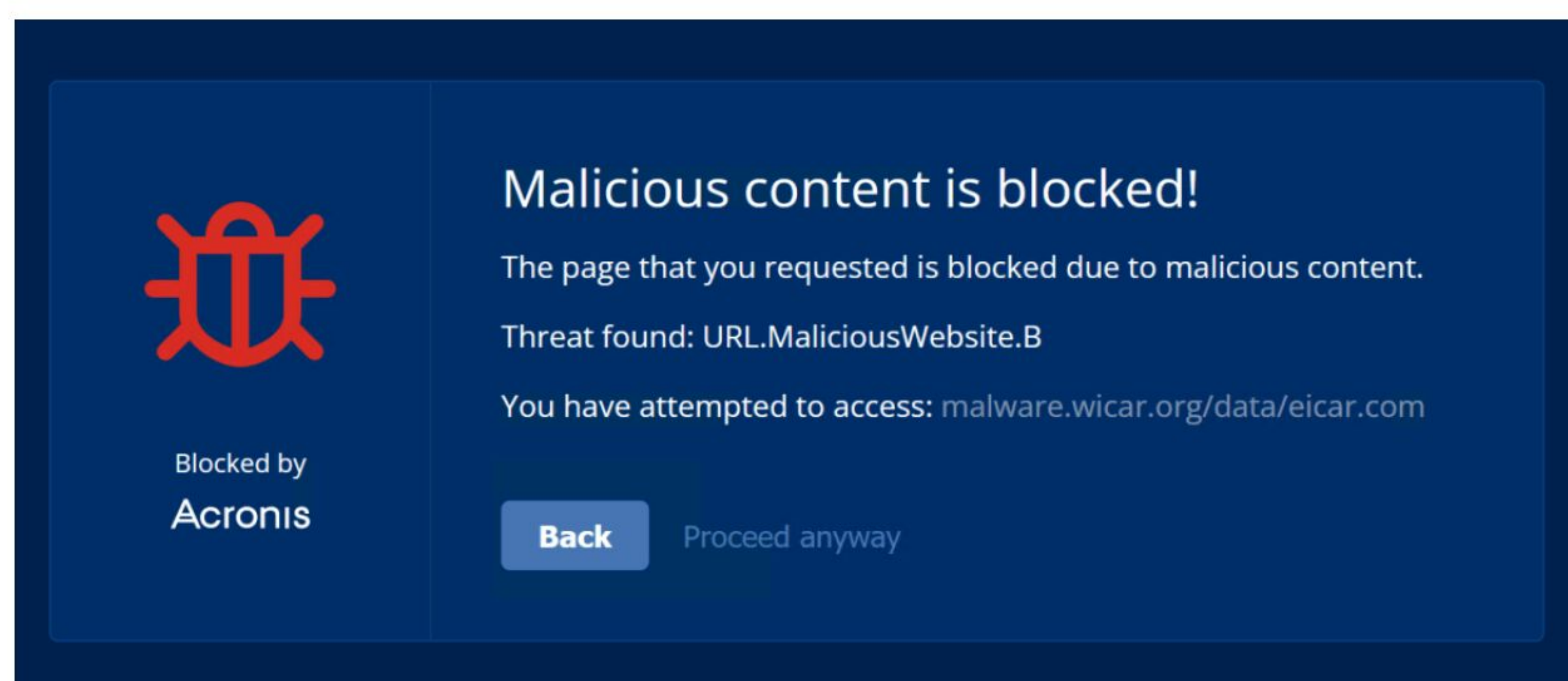
A few years ago Acronis recognized an opening in the market due to a spate of ransomware attacks, and added ransomware protection to its flagship software’s bag of tricks.

Don’t pooh-pooh ransomware as something that happens to someone else. It happened to me. Trust me, it’s out there and without backups, I would’ve been royally hosed.

Acronis subsequently expanded anti-malware capabilities to protect against



Cyber Protect Home Office’s Protection settings page.



Cyber Protect Home Office warning of a dangerous web page.

general threats, malicious websites, and other bad behavior such as code injection into apps. This obviously requires real-time intervention — a big addition back in 2021.

To test Cyber Protect Home Office's anti-malware abilities I ran the tests on the WICAR.ORG site and surfed some known bad areas of the web. Cyber Protect Home Office caught everything. As effective as it proved, real-time protection is optional and may be turned off.

PRICE

Acronis thoughtfully provides a 30-day trial that you can use to test out the program. Beyond that, it's \$50 for a one-year subscription sans online storage (Essentials), \$55 per year for Advanced with 50GB of storage (enough for most essential, non-media data) and more malware features, and \$125 for Premium with 1TB of storage, which should be enough for most of your stuff excluding video. A full comparison is available here (fave.co/4aXPJw2).

You're basically paying \$75 per year for 1TB of storage with Cyber Protect Home Office, which is only a bit more than OneDrive's 1TB plan. However, OneDrive includes Microsoft Office, both local and online.

Which brings me to cloud storage managers (fave.co/4azEVol) such as CloudMounter (fave.co/3Q5C6Tx) and Mountain Duck (fave.co/3Q04F52).














These will integrate any number of online storage services, including cheaper S3-compatible services, into Windows Explorer as pseudo local drives (fave.co/4azEVol). You can then use the \$50 version of Cyber Protect Home Office (or any other backup software) to back up to them and save some coin.

Note that there are Enterprise-level versions of Cyber Protect available as well.

PERFORMANCE

Generally speaking, Cyber Protect Home Office is as quick as it gets. I ran backup jobs to external and internal SSDs, a NAS box (2.5Gbps), wrote folders to optical (single BD-R/M-Disc), and to Acronis Cloud. All proceeded as quickly as you could ask given each bandwidth, and without incident. I hate incidents and tend not to trust backup software that suffers them.

On the other hand, I did have some slight

>  Acronis Active Protection Service	1.9%	41.1 MB
>  Acronis Agent Core (32 bit)	0.2%	20.9 MB
 Acronis Alert Manager Service (32 bit)	0%	13.4 MB
 Acronis Cyber Protect Agent (32 bit)	0%	9.4 MB
 Acronis Cyber Protect Home Office (32 bit)	0.1%	40.0 MB
>  Acronis Cyber Protect Home Office Sync Agent Service (32 bit)	0%	12.1 MB
>  Acronis Cyber Protect Service	0%	475.4 MB
 Acronis Cyber Protect Updater (32 bit)	0%	9.7 MB
>  Acronis File Level CDP (Time Machine) Service (32 bit)	0%	1.8 MB
>  Acronis Scheduler Service (32 bit)	0%	6.7 MB
 Acronis Scheduler Service Helper (32 bit)	0%	1.2 MB
 Acronis Task Manager (32 bit)	0.1%	16.6 MB
 Acronis TIB Mounter Monitor (32 bit)	0%	0.7 MB

12 processes running in the background is a lot, even for a program as comprehensive as Cyber Protect Home Office.

issues with the Linux boot disc, although the Windows PE version was A-OK.


My only real performance gripe is that the main interface is rather slow to launch. No doubt due the large number of processes spawned by the various components, not to mention connecting to Acronis Cloud.

As to processes... Cyber Protect Home Office has a sprawling system footprint that spawns a whopping 12 of them (shown above). I noticed little impact on system performance other than the program boot time, and modern PCs such as my AMD Ryzen test bed should be able to handle it, but for older legacy hardware it might be a strain. Cyber Protect Home Office also takes up a substantial 1GB of disk space.

BOTTOM LINE

Given its broad capabilities, Cyber Protect Home office is a pretty good deal. You might

opt for another vendor with cheaper online storage, but Acronis Cloud is integrated and I will admit, I found it very handy. Bottom line: If you’re looking for a comprehensive, set-it-and-forget-it data-safety solution, I know of nothing better, or comparable for that matter.

Note: Our software testing is necessarily limited due to time and equipment constraints. We report any issue experienced historically or during testing for the article; however, you should research user forums for information on issues other users may have experienced. This applies to all software. 

Acronis Cyber Protect Home Office



PROS

- Imaging, backup, and disaster recovery.
- Actively protects against viruses and ransomware.
- Integrated cloud storage available.

CONS

- Heavy installation footprint.

BOTTOM LINE

Acronis Cyber Protect Home Office (previously Acronis True Image) is a comprehensive backup and security solution with no equal. If you want everything tied up in a neat package, this is it. But if your needs are minor, this is overkill.

From \$50

If you are anywhere in your journey with substance use disorder,

I want you to stop,
look around
and open your heart.

Revel in the abundance
of your existence.
See how small
substance use disorder
can be when sat next
to all that you are
or ever could be.

Fill your existence
with beauty, purpose
and a life of service.

And your substance
use disorder—
your history of
addiction,
the things you
may have done
that you are not
proud of—will one day
be small enough
to deal with
while allowing you
space to live this life
of joy.

Hold on.

We are not the sum
of our scars but rather
a beautiful mosaic of the
life they hold together.

—Joseph
Washington, DC
In recovery from
substance use
disorder

Learn how
substance use
recovery can

StartWithHope.com





LAPTOP FORM FACTORS

A COMPLETE GUIDE
TO EVERY SHAPE,
USE CASE, AND
SPECIAL FEATURE

THE DEFINITION OF
“LAPTOP” IS MORE
COMPLEX THAN
IT USED TO BE.
BY JARED NEWMAN





There's a wide range of laptop types to choose from.

Until about 15 years ago, the term “laptop” meant one thing: a portable PC that unfolds to reveal a screen on one half and a keyboard on the other.

But with the launch of Apple's iPad in 2010, PC vendors' subsequent push into touchscreen designs, and the continued maturation of the PC market, the definition of “laptop” has broadened. Choosing a laptop isn't just about tech specs and build quality. It's now about the fundamental shape of the thing.

Let's try to break it all down with a taxonomy for every kind of laptop you can buy today.

CLAMSHELL LAPTOPS

The most conventional category of them all, clamshells do not flip, bend, or transform. They merely focus on letting you work with a

keyboard and trackpad (or mouse) with the most efficient designs possible.

Even here, though, we can define a handful of subcategories:

Touchscreen laptops: These allow you to manipulate the screen directly while still resembling a regular laptop. Some regular laptops offer a touchscreen as an optional upgrade.

Ultraportable laptops: High-end consumer laptops with premium designs focused on portability. These may be informally known as “Ultrabooks” — stemming from Intel's early-2010s marketing push against the MacBook Air — or just “thin-and-light” laptops. HP's Dragonfly G4 (fave.co/3Q8dXM9) is our current top pick in this subcategory.

Gaming laptops: Clamshells with dedicated graphics cards and other gaming-centric features, such as customizable

keyboard lighting, unique cooling solutions, and flashy designs. You know them when you see them. Alienware's m16 R2 (fave.co/3UkuBur) is our top pick right now for a gaming laptop.

Desktop replacements: Heavier laptops with larger screens and powerful CPUs, with battery life and portability as afterthoughts. These tend to have some overlap with gaming laptops, as seen in our best laptops for video editing (fave.co/39LsbRb).



Clamshells let you work with a keyboard and trackpad.

2-IN-1 LAPTOPS

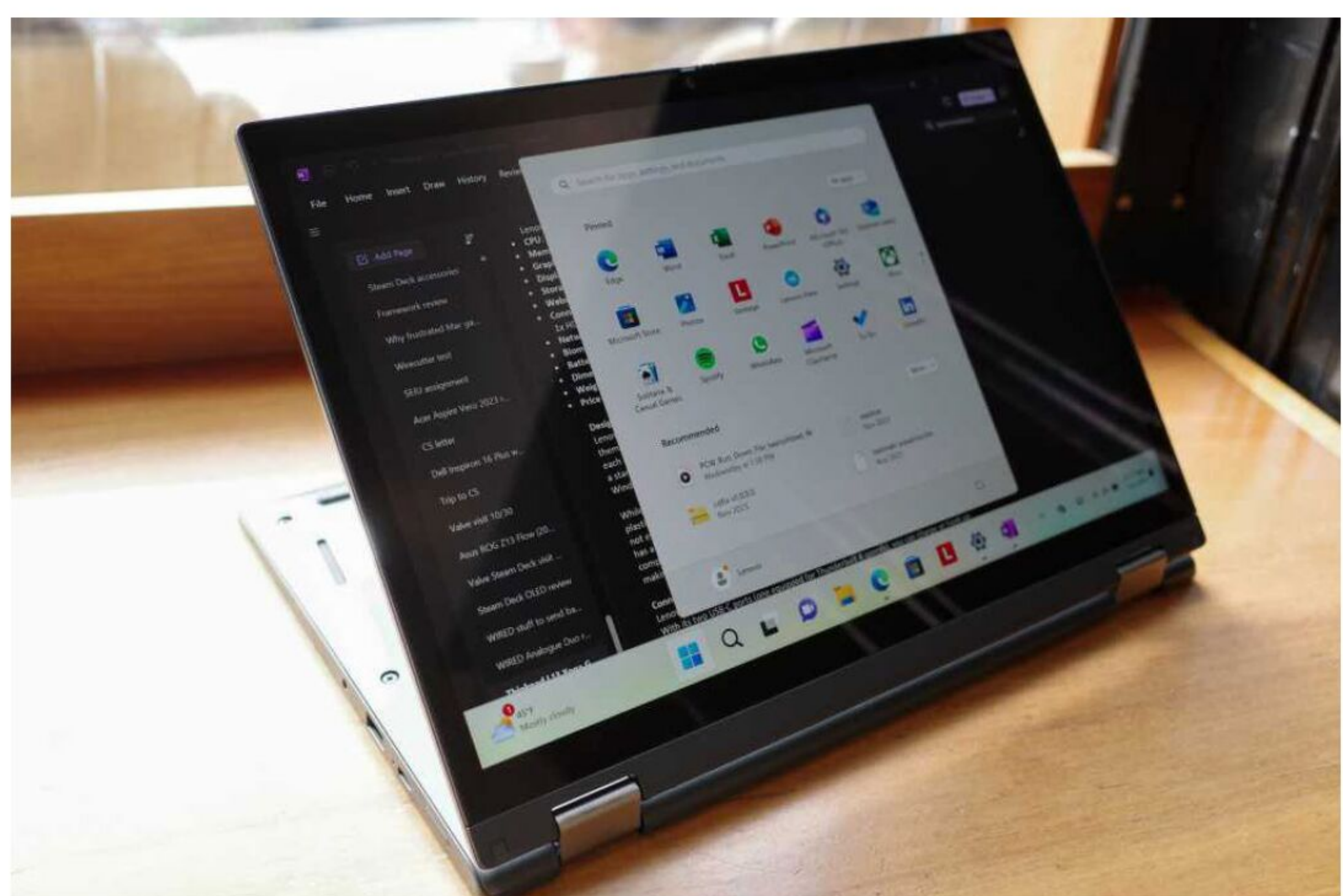
Beyond the basic clamshell, many PC makers offer laptops that can transform into tablets for drawing, taking notes, reading ebooks, and playing touchscreen games. While there are many kinds of 2-in-1 laptops, they fall into two camps: convertibles and detachables.

Within the convertible subgenre, there are a couple of subtypes:

- **360-degree hinge convertibles** have screens that fold all the way around underneath the keyboard — a form made famous by Lenovo's Yoga line (fave.co/3TYuVON).

Convertibles

With convertible laptops, the keyboard section is permanently connected to the screen, but it folds out of the way so you can lay the screen flat in your lap or on a table. While convertibles are heavier and bulkier than detachable laptops, they feel more like traditional clamshells when used in laptop mode. (They do, however, tend to be bulkier than non-convertible laptops.)



Convertibles fold out of the way so you can lay the screen flat on a table.

- **Easel-style convertibles** have pivoting screens that lay down on top of the keyboard. These are rarer, but Microsoft's Surface Laptop Studio (fave.co/3U0WxCn) and HP's Elite Folio (fave.co/4aEnDGq) are notable examples.

Detachables

With detachable laptops, the screen portion pulls apart from the keyboard and becomes a standalone tablet. This gives you an uncompromised tablet experience, but with some trade-offs on the laptop front: Because all the computing components must sit behind the screen, it can be top-heavy and may need its own kickstand, so it's more cumbersome to keep on your lap.

Detachables may also be less performant than standard clamshells, whose components can use all the space under the keyboard to dissipate heat.



With detachable laptops, the screen portion pulls apart from the keyboard and becomes a standalone tablet.

Detachables themselves fall into a few subcategories:

- Detachables with kickstands, such as the Microsoft Surface Pro (fave.co/31UYIG9) and Dell's Latitude 7320 Detachable (fave.co/3vvGcJq), have lightweight keyboard covers that snap magnetically to the tablet portion.

- **Detachables with hinges**, such as Microsoft's Surface Book (fave.co/3n9ATLI) and Lenovo's forthcoming ThinkPad Plus Gen 5 Hybrid (fave.co/4bFc2rN), look more like traditional laptops when docked. (The latter actually has a Windows PC in the keyboard base and Android in the screen portion.)

EXOTICS

Want something a little more unusual? Laptop makers have started experimenting with new kinds of laptops that involve multiple screens or foldable display tech.

These devices tend to be much pricier than traditional laptops, and they can sometimes feel like solutions in search of a problem. It's not unusual for laptop makers to abandon or overhaul their ideas after a generation or two, so these experimental laptops are best-suited for folks who don't mind living on the bleeding edge.



Dual-screen laptops replace the usual keyboard section with a second screen.

Let's break down the different types:

- **Foldable laptops** consist of a single, flexible display, whose two halves offer a laptop-like surface when partially folded or a larger, freestanding display when unfolded. A separate keyboard and trackpad deck allows for interaction without relying on the touchscreen. HP's Spectre Foldable (fave.co/4b0sOjF) and Lenovo's ThinkPad X1 Fold (fave.co/3UITRAA) are recent examples.

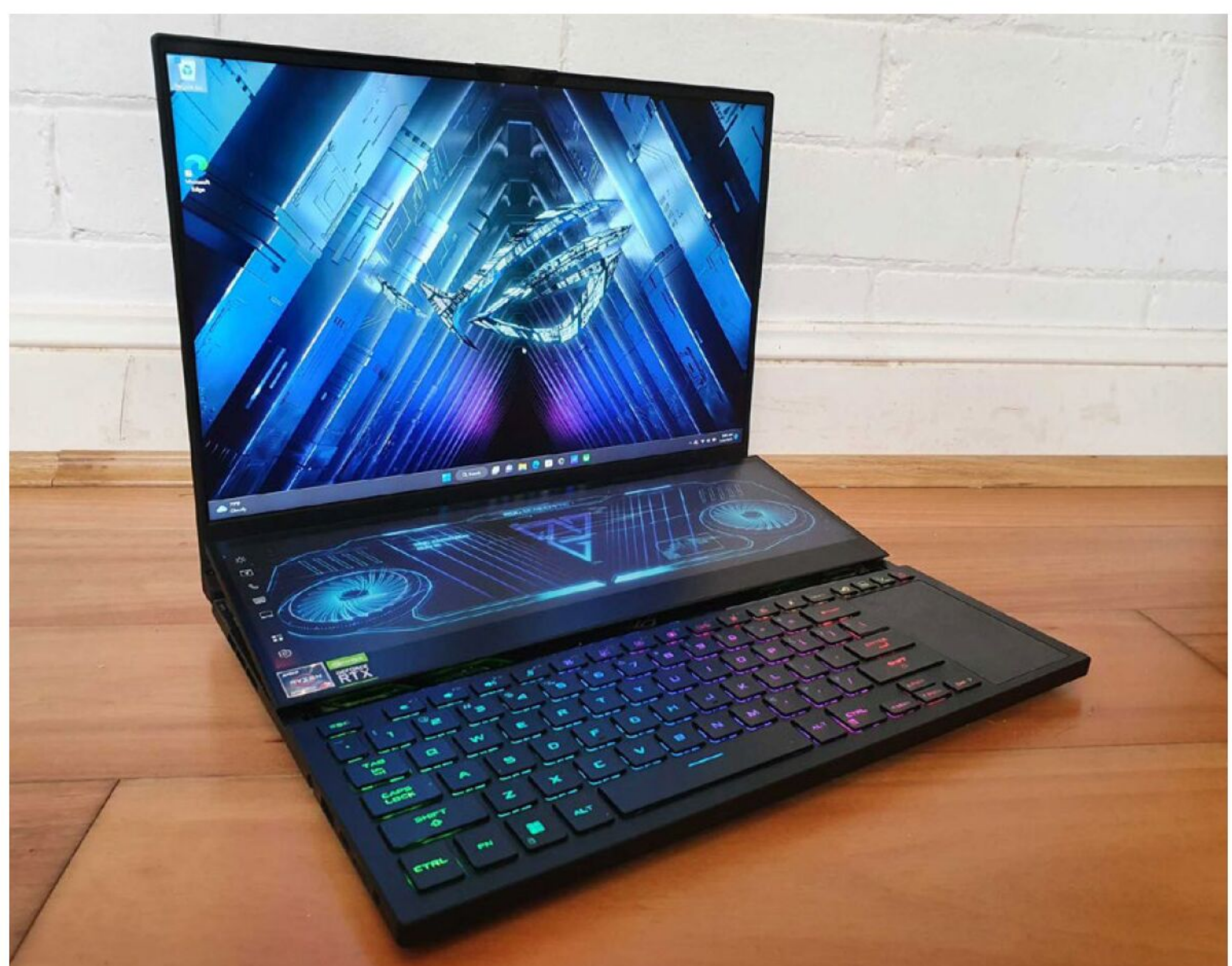
- **Dual-screen laptops** replace the usual keyboard section with a second screen, perhaps with an attachable keyboard and trackpad deck for input. Standing the screens up and using the keyboard separately approximates the feel

of having two monitors. Asus did a great job on this concept with the 2024 ZenBook Duo (fave.co/49Ef7pF).

- **Laptops with extra screens** can supplement the main screen with extra information, as seen with Asus' ROG Zephyrus Duo 16 (fave.co/3W1ii7A).

- **Twistable laptops** have a screen that rotates around to provide extra functionality on

the other side. An example is the Lenovo ThinkBook Plus Gen 4 (fave.co/442RGVS), which has an OLED screen on one side and E-ink on the other, with the latter aimed at notetaking, reading, and focused writing. 🔌



Laptops with extra screens can supplement the main screen with extra information.

5 TOOLS THAT YOUR CLOUD S WINDOWS FIL

INTEGRATE STORAGE INTO FILE EXPLORER

CLOUD STORAGE MANAGERS LET YOU TREAT YOUR ONLINE STORAGE AS LOCAL SO YOU CAN PERFORM OPERATIONS FROM WITHIN WINDOWS EXPLORER — INCLUDING BACKUP AND SYNC.

BY JON JACOBI

If you're like me and have multiple online storage accounts, you know that managing them via separate websites and clients is tedious at best. In my case, simply remembering what's stored where can be a chore. That all ended when I discovered applications such as CloudMounter (fave.co/3Q5C6Tx), RaiDrive (fave.co/46IPp8), ExpanDrive (fave.co/49HivQw), Mountain Duck (fave.co/3Q04F52), and Air Live Drive (fave.co/3vWOSwU).

These "cloud storage managers" integrate your online storage services, as well as FTP/SFTP and WebDAV connections, into your operating system's file and folder manager: Windows Explorer, macOS Finder, etc. Each connection appears as pseudo local or network drive with an honest-to-goodness drive letter that behaves just like the real deal, albeit a tad slower.

Yup, you can browse, copy, rename, delete, back up (fave.co/3nINb3Z), etc. to your online services without firing up any additional software or a web browser. As an added benefit you can leverage cheaper, S3-compatible services that lack friendly client software. Or take advantage of all the

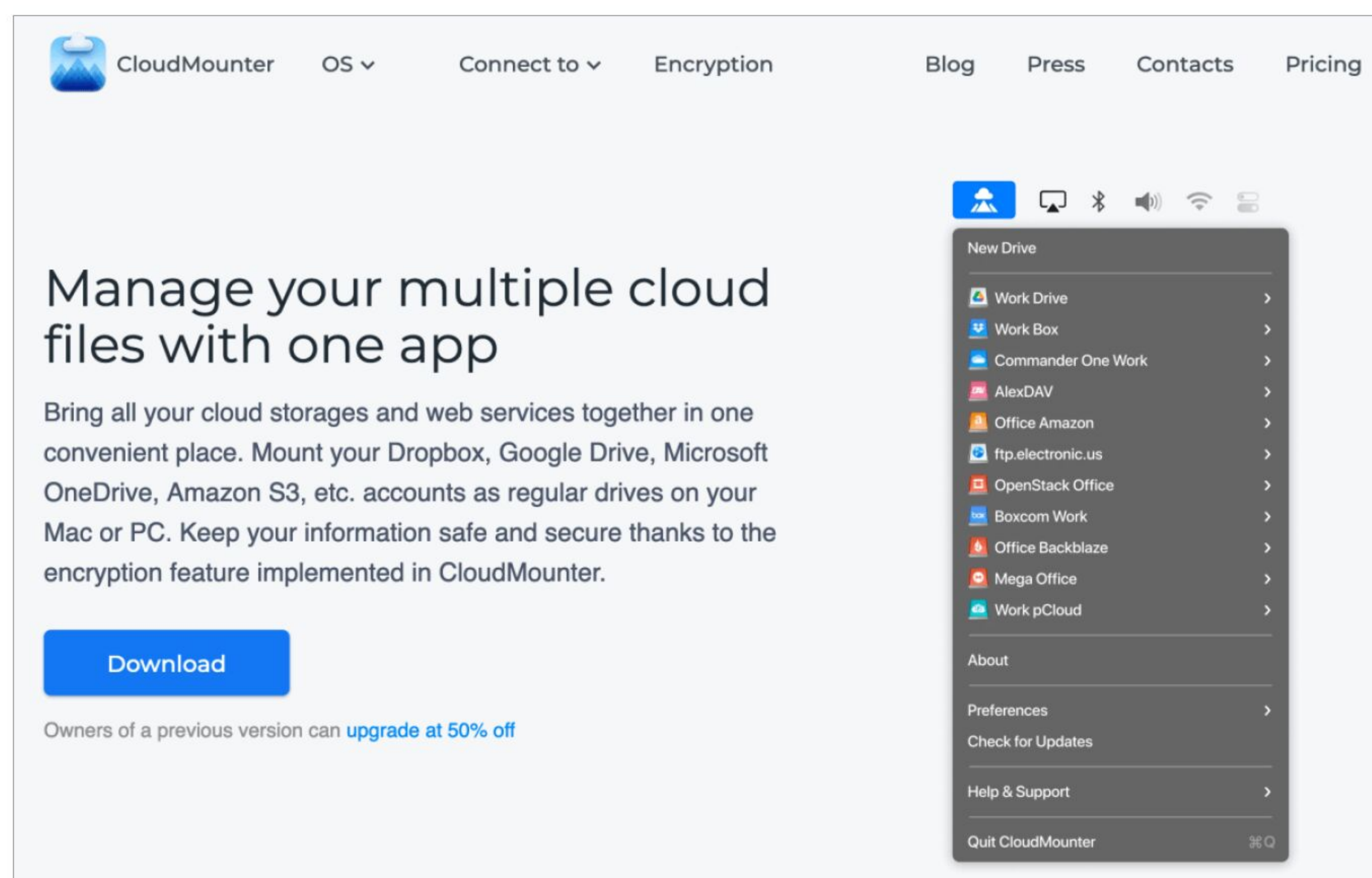
free accounts out there with minimal fuss.

Note: Apple's iCloud is not supported by cloud storage managers as Apple won't grant other companies access. I can't blame the company from a security point of view. But when it comes to backup, Apple's practice is... limiting.

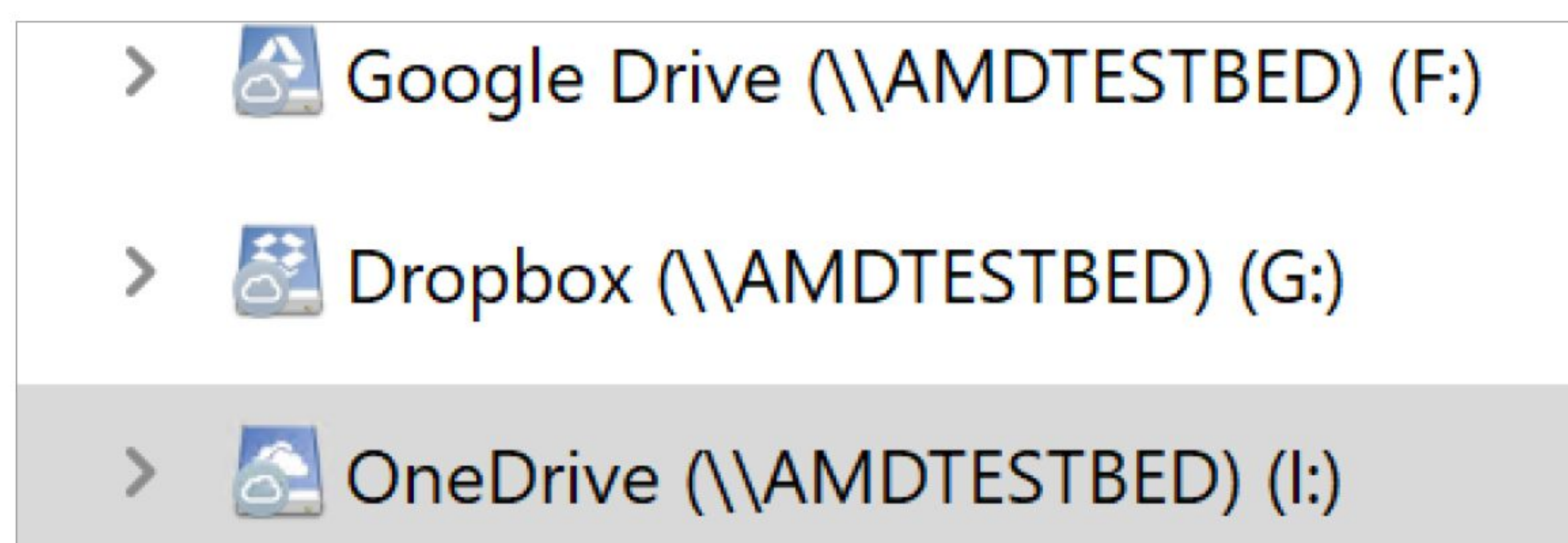
I'll get into some detail about the five utilities I tested in a bit, but as they all operate similarly... first a brief synopsis of how the whole deal works.

HOW TO USE A CLOUD MOUNTING UTILITY

After installing a cloud storage manager, the next step is to connect it to your services. If the service is mainstream like Dropbox, Google Drive, or OneDrive, the program will use that service's website to connect. All you



Cloud Mounter integrates your online storage services into your operating system's file and folder manager.



Listing in Windows Explorer of services mounted by Mountain Duck as virtual drives.

have to do is log on and either enter your password, or copy a code.

If the service is S3-compatible such as Wasabi, you'll need to create and grab the access and secure keys from the service's website, then enter the them into the cloud manager's connection configuration dialog. Most cloud manager utilities offer templates for various S3-compatible services which generally include what's called the server endpoint — i.e., the web address/URL of the service's storage.

You might need to choose from several server endpoints as some services offer multiple geographical locations. Choose the one closest to you for the best performance. If there's no template, you'll need to enter the server endpoint URL, which should also be available from the service's website.

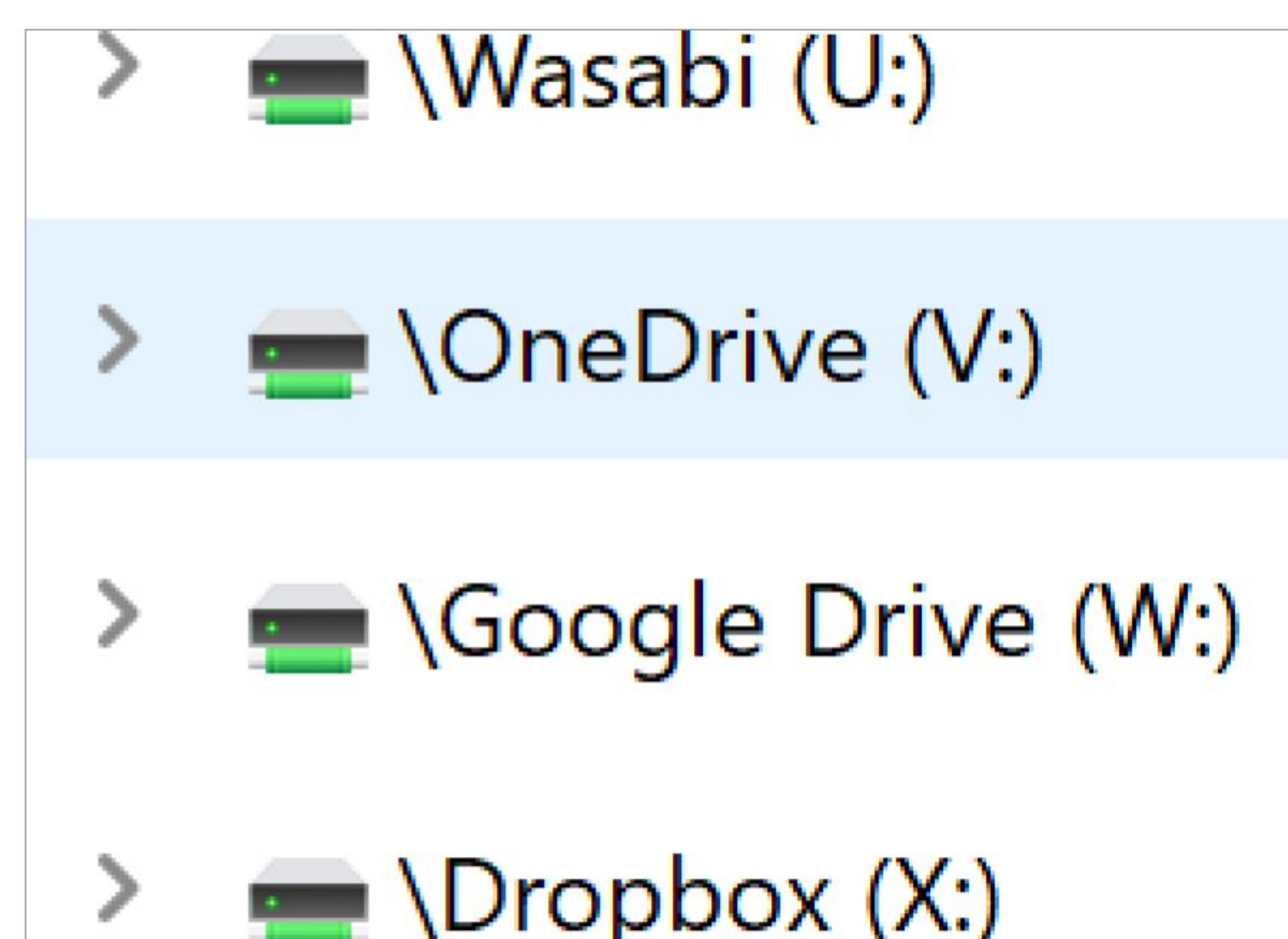
Caveat: *If your service features a second-level encrypted folder, you may not be able to access it using cloud manager software. That's likely a good thing.*

Once a connection is defined, you can "mount" it, i.e. create a virtual drive in

Windows Explorer (or macOS Finder, or whatever). All the managers I tested will mount these pseudo drives at startup as well. If you're working off them regularly, or want to automate backups, this is crazy handy.

While you can usually choose which file operations will be allowed by a connection, generally speaking, the convenience lies in allowing all of them. You'll need to be just as careful with the data as you would be with local storage and there may be some cases where you want to make a drive read-only.

It's a given that you're not going to get "local-like" performance when you're accessing online services. Lags are part of the deal. Also, copying from one service to another means downloading, then uploading. Your internet bandwidth will have



RaiDrive mounts services as network drives, but the same file functionality exists.

a lot to do with the apparent speed of a cloud manager.

Note that this is not true sync where complete copies exist both locally and online. For the most part files in the virtual drive exist only online, though depending on the program, extensive or minor caching may occur for editing, as well as boosting performance, etc.

There's also a certain amount of trust involved with using these programs. They are after all gathering and using your passwords to connect. I only mention this because a couple of them use telemetry, i.e., communicate with their home IP.

I kicked the tires using trials of all the aforementioned cloud managers. Each worked as advertised with no major glitches, so I'll call it basically a toss-up in terms of

mission accomplished. The most salient differences are in price, though there is some variance in ease of use and interface.

CLOUDEMOUNTER

CloudMounter (fave.co/3Q5C6Tx) performed admirably and offers a free mode providing single read/write connections to Dropbox, Google Drive, and OneDrive; as well as read-only connections to other services. All it costs you is a boot-time upgrade nag, which — thoughtfully — can be disabled. The unlimited-connections pay version of CloudMounter is \$29 for a single user (\$99 for five users), and lifetime upgrades are available for \$44.95.

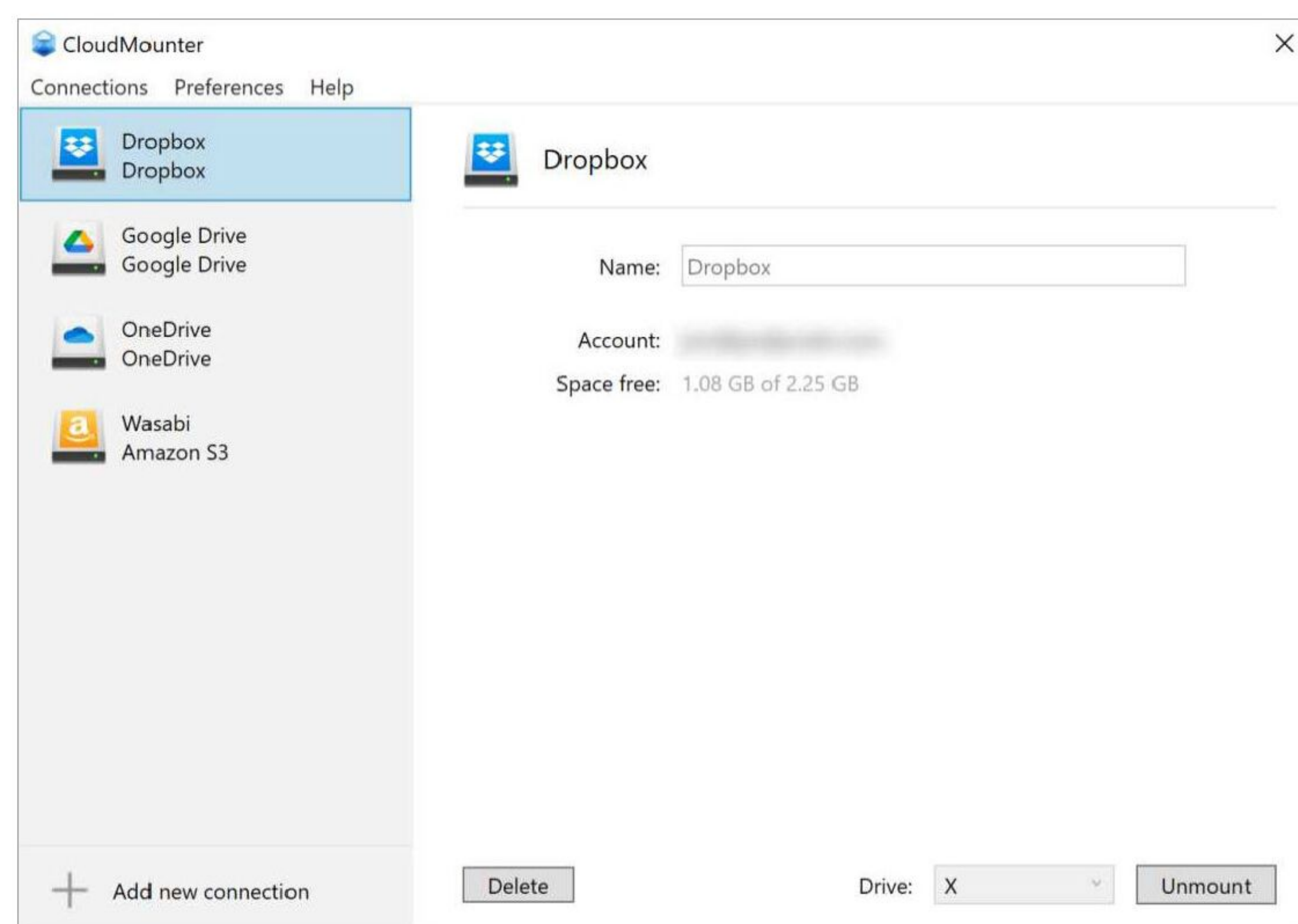
Note that CloudMounter mounts drives as pseudo network shares, which may not work with all software. This was the only issue I

faced. In terms of performance, it never batted an eyelash—even during very long transfers.

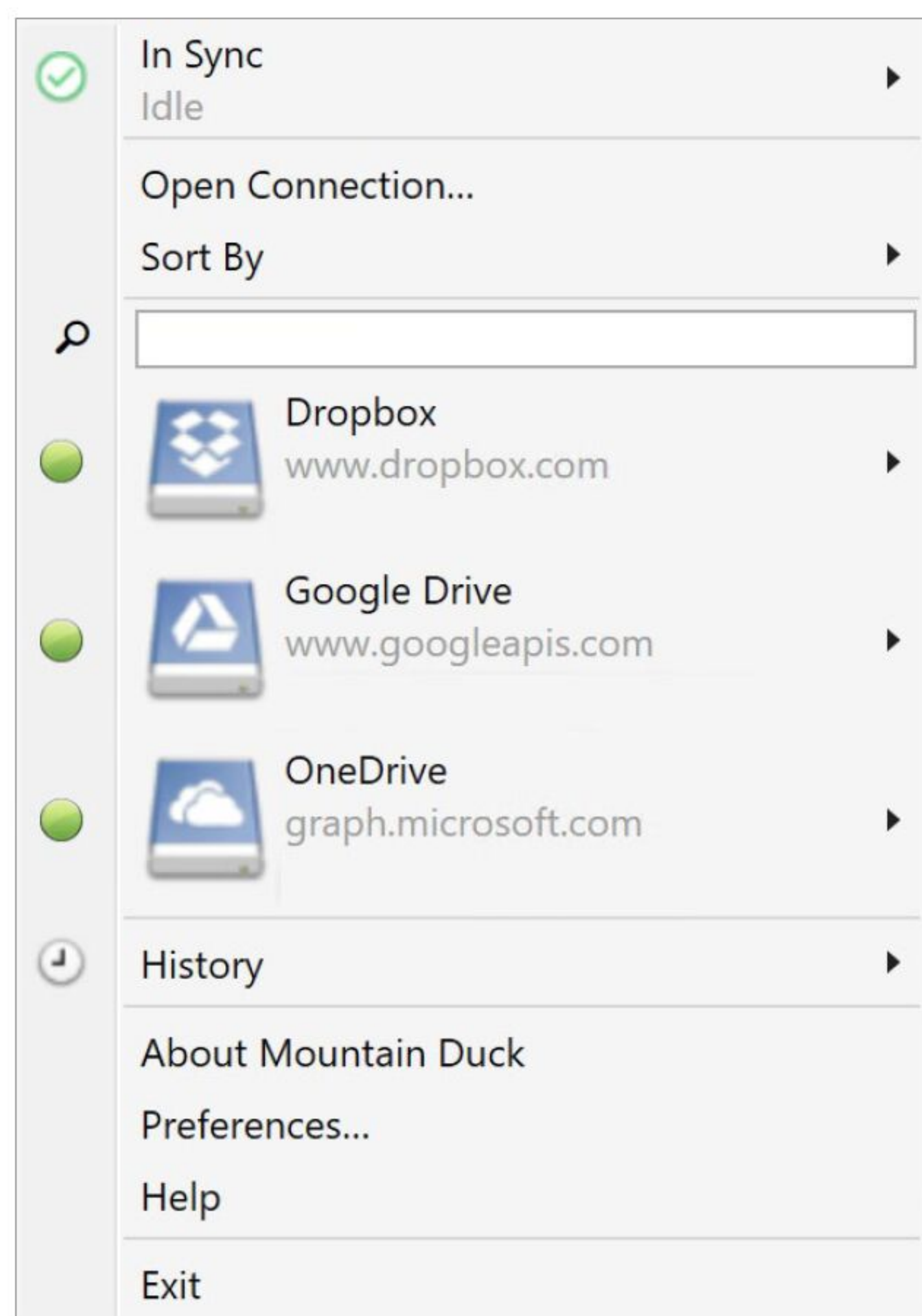
In total, I loved CloudMounter's super-clean interface. I could get picky about a couple of things as with the competition, but I'll let them go because of the overall excellence.

MOUNTAIN DUCK

The oddly named Mountain Duck (fave.co/3Q04F52) provides a very lengthy list of S3-compatible connection templates in addition to



CloudMounter features the cleanest interface of any of the utilities. That said, I'd like a bit more in the way of visible options such as S3-compatible. These are connected using the AWS S3 icon.



Mountain Duck's Context Menu.

the mainstream services. It's a commercial version of the free Cyber Duck, a program that can connect to services, but only within its own interface. There's a 14-day trial of Mountain Duck available, that requires a \$39 perpetual single-user license for continued use.

If I have any complaint at all about the Mountain Duck interface, it's that defining S3-compatible connections is a two-step process. First you select the services from the aforementioned lengthy list (searchable) of templates, then you connect from the the new shorter list you've created.

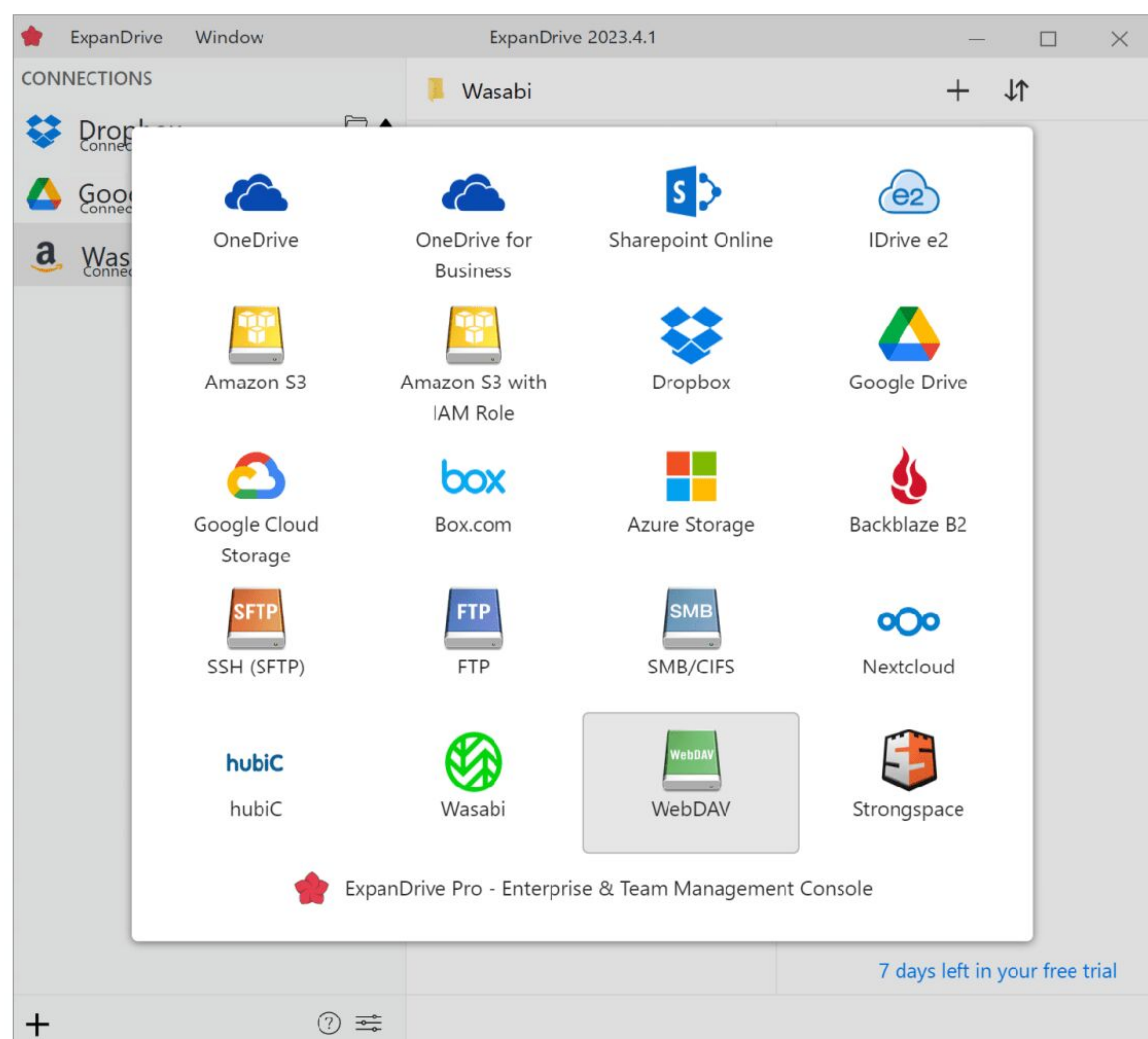
I'm not sure the reason for the layered approach, but it probably has something to do security while rolling out clients in a corporate

environment. That's a guess, mind you.

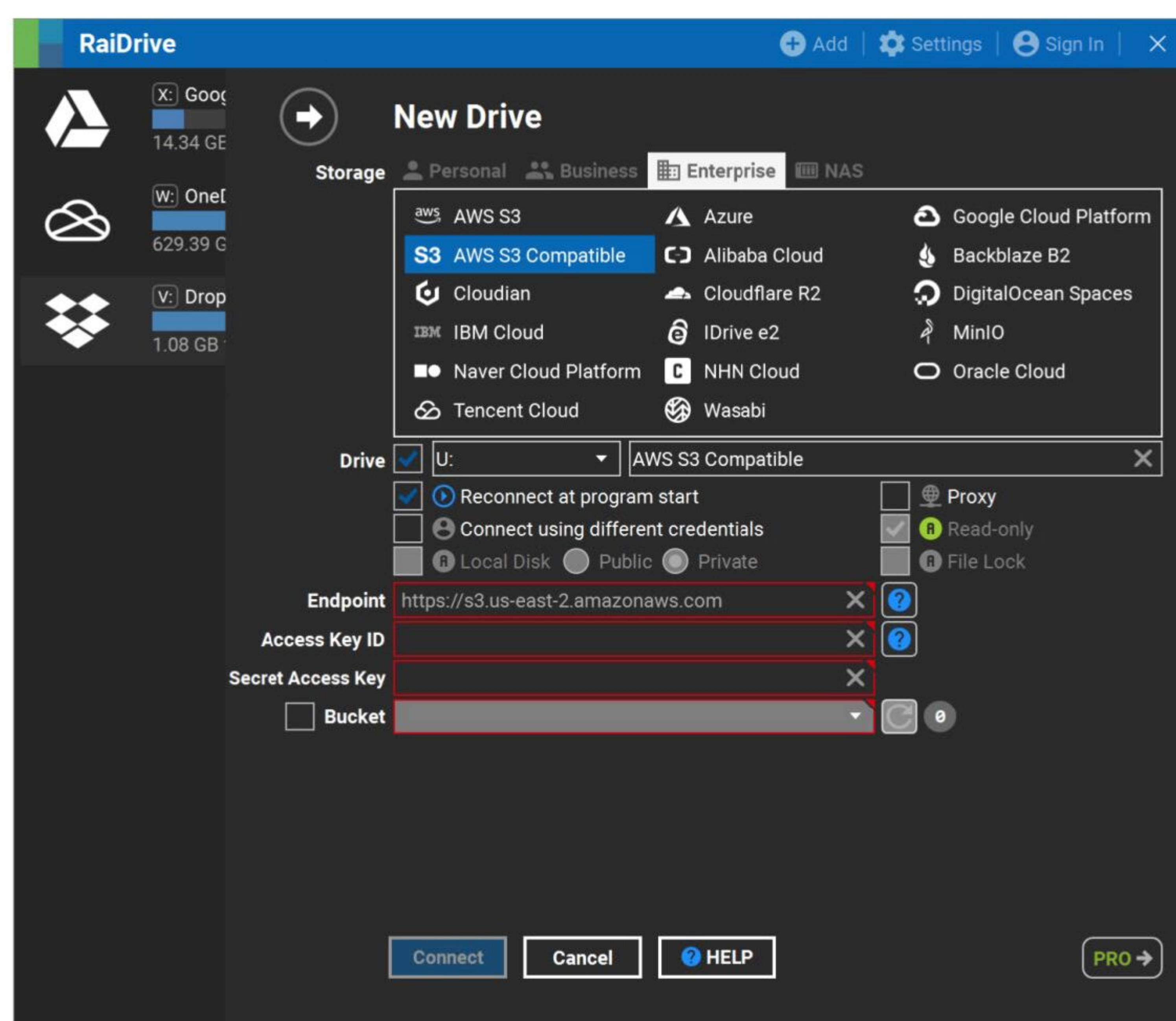
Mountain Duck performed well for the most part, and was by far the quickest to remove the virtual drives drives when I quit the program. However, I did notice a tendency to lose contact during long writes to some services on my Mac. Generally a retry fixed the issue.

EXPANDRIVE

ExpanDrive (fave.co/49HivQw) is as good at mounting online services as the other cloud storage managers, but also provides its own Cyber Duck-like file-browsing window in addition to the Windows Explorer integration. It does, rather uniquely, offer SMB/CIF mounting, but that's covered by Window's



ExpanDrive provides its own Cyber Duck-like file-browsing window in addition to the Windows Explorer integration.



The RaiDrive client during the define-connection process. You can see exiting connections to the left.

standard *Map network drive* functionality.

A 7-day trial is available, and there were no limits to that trial that I found. It was also quick to mount and un-mount the drives.

RAIDRIVE

RaiDrive (fave.co/46IPlp8) offers the best deal. It's free for up to eight services, but you do have to put up with an advertising banner at the top of the client. To be perfectly honest, the fact that it's phoning home for ads made me a tad nervous about trusting it with my passwords. The RaiDrive pricing is a bit complex, starting at \$1.84 and peaking at \$4.84 monthly with a three-year commitment. I found

no perpetual license. Drat.

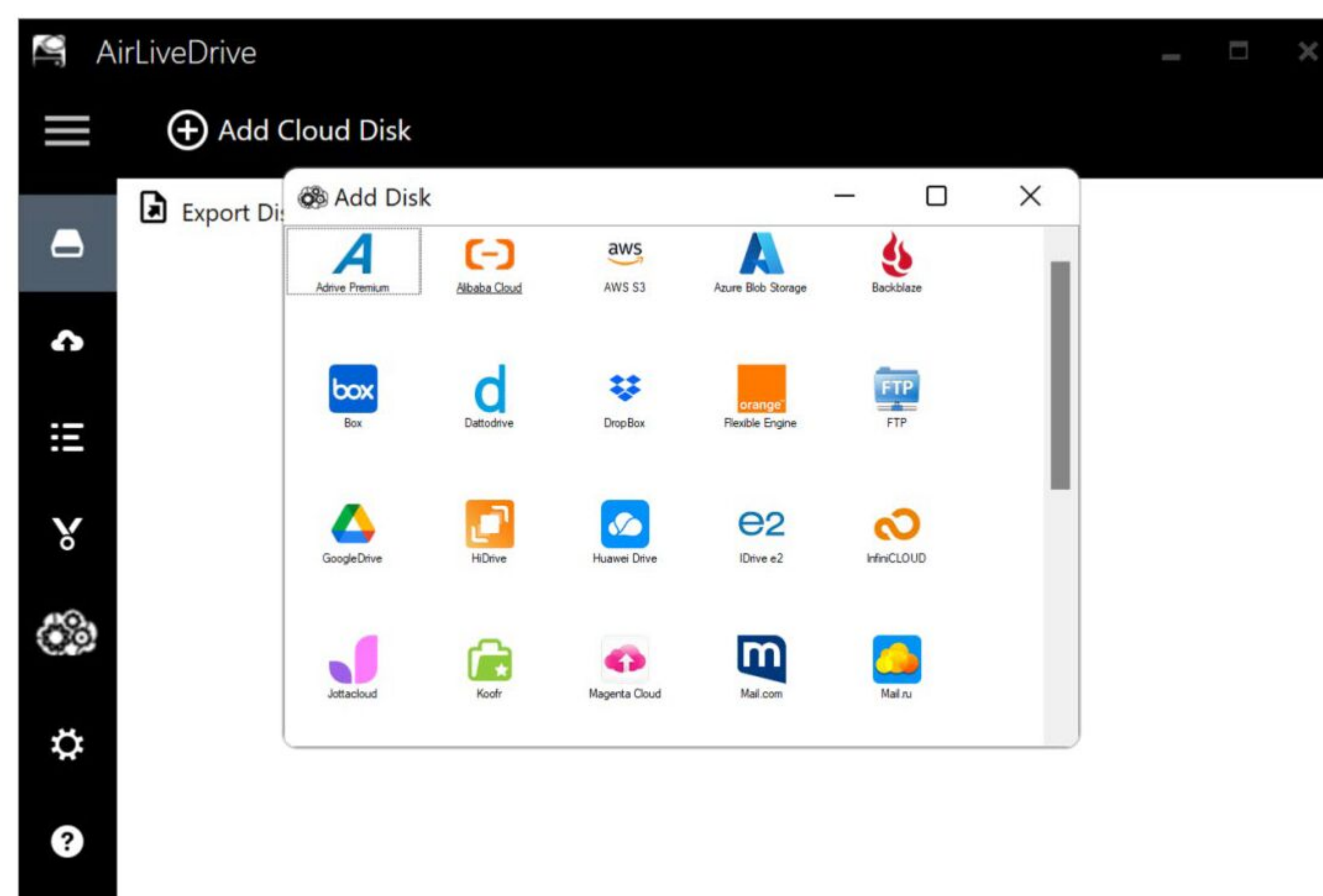
Nervous or not, I found RaiDrive's client and approach one of the easiest to connect and use. And eight services should easily suffice for most users. Keep the program minimized and the ads are less of a bother.

AIR LIVE DRIVE

Air Live Drive (fave.co/3vWOSwU, also punctuated AirLiveDrive) is free for up to three services, and the unlimited pro version is \$17 a year/\$25 for a perpetual license. The Pro version removes the every-time-you-run-it-or-close-it

upgrade nag and connection limits. The perpetual license seems like the much better deal than the yearly should you opt for it.

Like the others, Air Live Drive mounted



Air Live Drive has the most colorful connection definition dialog, and is generally very easy to use.

and unmounted drives easily, though I found the interface a tad disconcerting. It didn't separate data folders shared with me on Dropbox and Google from my own folders. Until the light bulb went off, I was wondering if I'd somehow breached others accounts.

Also, closing the client kills the program rather than minimize it to the system tray, albeit with a warning.

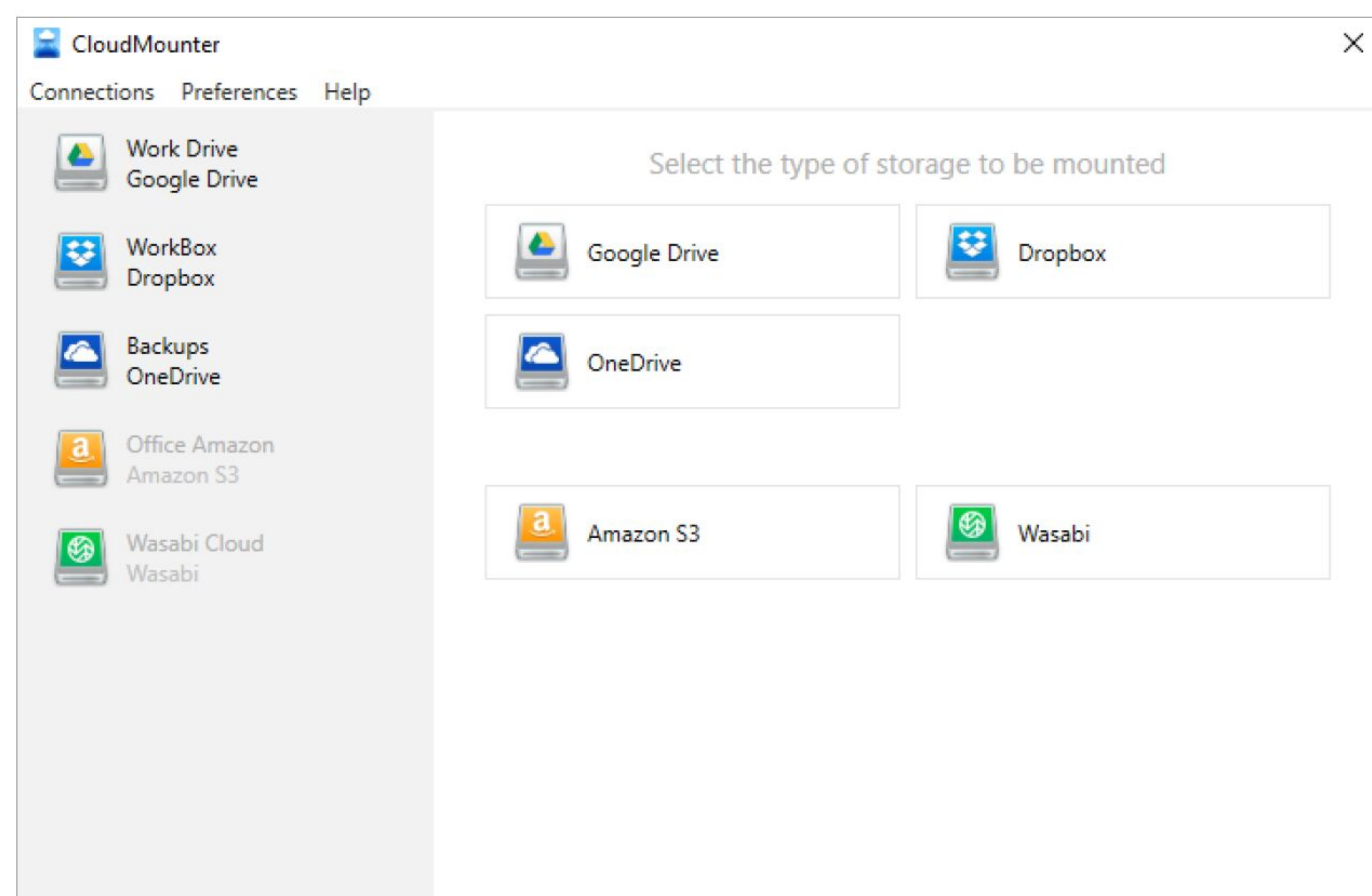
Most clients force you to actually select quit before they exit fully. There are a couple of other things, but all fall under the heading of odd rather than fatal.

The company also sells the \$42 Air Explorer Pro (fave.co/3JkOKdN), which might better suit users who don't want operating system integration. It offers sync in addition to cloud service management. Look for a review soon.

WHICH CLOUD-MOUNTING UTILITY SHOULD YOU BUY?

RaiDrive offers the most bang for the buck — it's extremely difficult to to argue with eight services for free, even given the ads.

However, CloudMounter was my overall favorite due to its smooth operation, clean look, and interface; even if it's a bit harder to




CloudMounter was our overall favorite due to its smooth operation, clean look, and interface.

define some connections. Also, the free version of CloudMounter might suffice for many users.

On the other hand, the way CloudMounter mounts drives wasn't copacetic with a couple backup programs, which leaves me with perpetual-license Mountain Duck as my bargain pay recommendation. Mountain Duck is minimally intrusive like CloudMounter, and is just as quick.

Then again, Air Live Drive and ExpanDrive both worked very well and sport interfaces that many users might find preferable.

If that sounds like a lot of hemming and hawing... it is. In truth, all of the cloud storage managers worked as advertised, so it's down to a matter of preference and cost. I suggest you take them all for a test run and see which you like best. Let us know! 



Who adopted who?

Adopt a teen.
You can't imagine the reward.



A D O P T U S K I D S . O R G



How to speed up your laptop without spending a dime

If it's free (speed), it's for me. **BY MARK KNAPP**

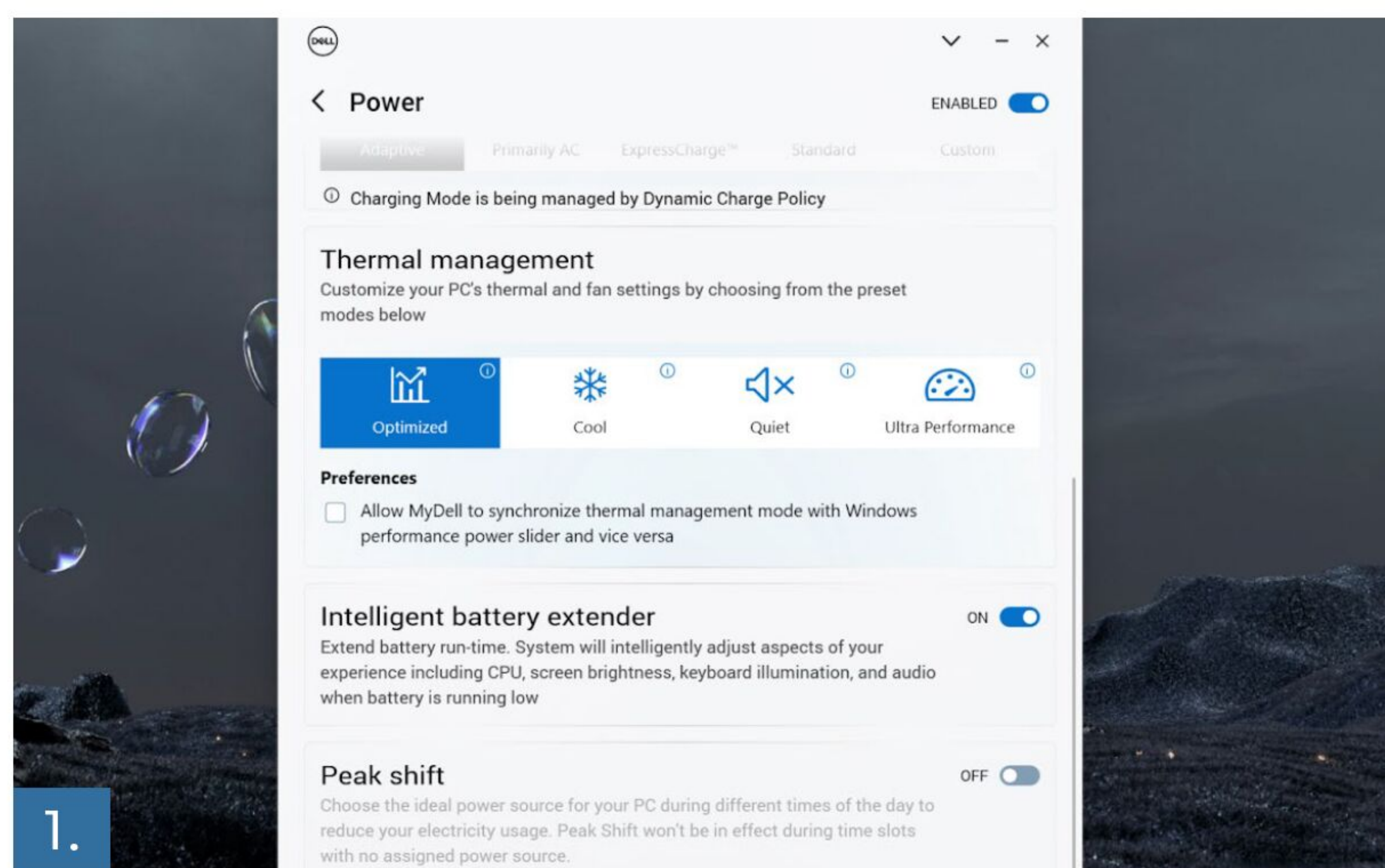
We all have expectations from our laptops. We want them to work snappily and let us get through whatever it is we're trying to get through, be it a big work projector or the next level of our favorite video game. Sadly, there's plenty of occasion for our laptops to let us down, running slowly and bringing all the smooth productivity to a grinding halt. Wrestling that performance back doesn't have to be hard, and there are quite a few things you can

attempt to boost your speeds for free.

If you're trying to get your laptop to run smoother and feel a little bit more like the day you first bought it (or you just bought one and don't think it's running as fast as it could), here are some free things to try in order to give it a boost.

1. ENSURE YOU'RE ON THE OPTIMAL POWER PROFILE

This is a big one. Having the wrong power profile selected can leave tons of



Then look for any tools your laptops' manufacturer pre-installed. Some examples are Lenovo Legion Arena, Alienware Command Center, Razer Synapse, Acer Predator Sense. In these tools, you should be able to find different power profiles (be sure your computer is plugged in to see all the options) that will let you push the system to its full

performance on the table. If your laptop thinks you want it running quiet or cool, it might not let the CPU and GPU reach their full potential.

With a lot of laptops, it's become common to find both Windows' power plans as well as special manufacturer plans. Just about any gaming laptop you find will have a pre-installed system management software that packs in all the power profile management you could need, and the same is becoming more and more common of general-purpose laptops as well, but unless you know to look for it, you'll be leaving it at whatever setting the laptop shipped in.

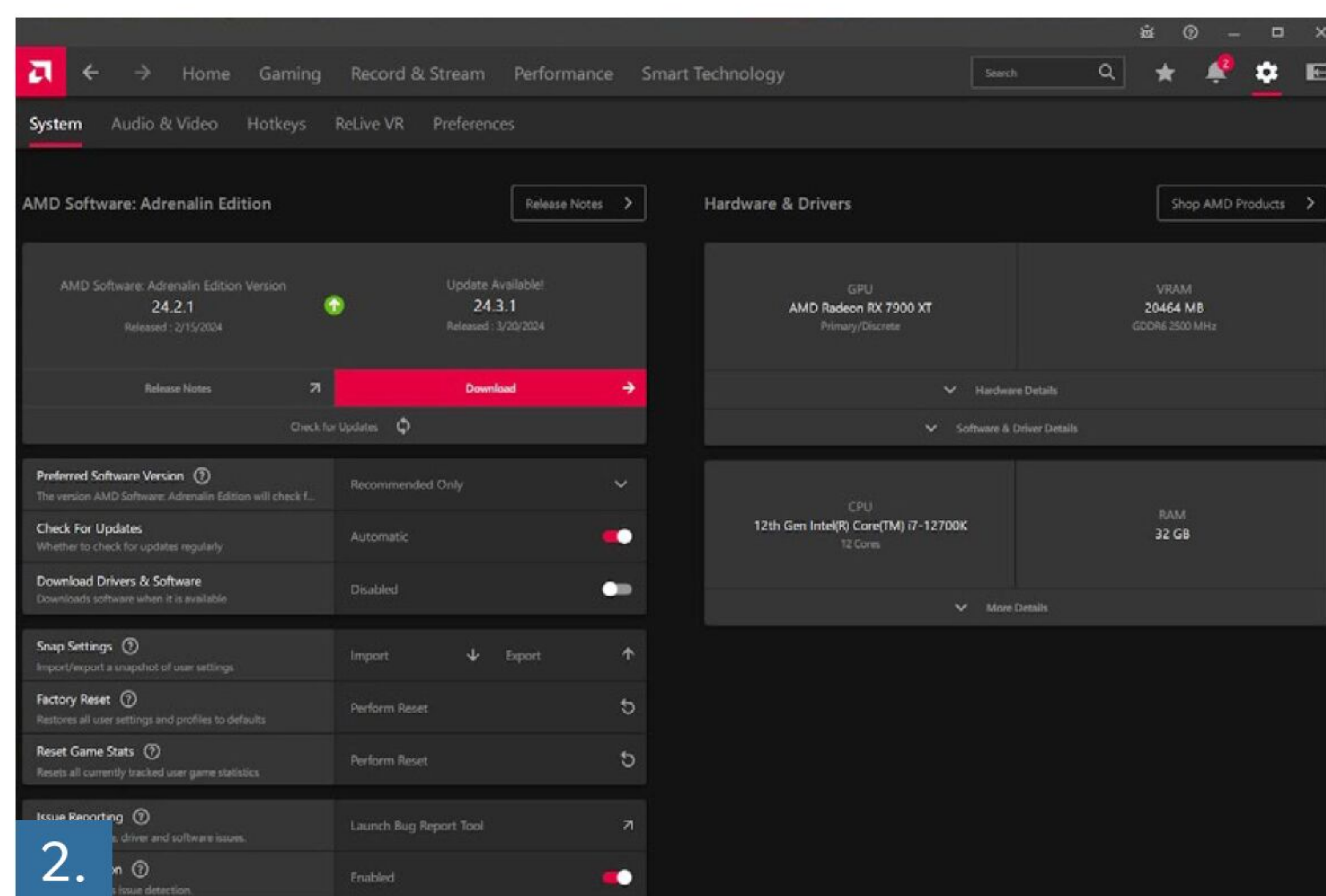
On a Windows 11 machine, open Settings, select System, and then Power & Battery. On this page, look for Power Mode and set it to Best Performance.

potential.

If you want to try to push even further, you could try your hand at undervolting (fave.co/3AwwaWy).

2. DOWNLOAD THE LATEST GPU DRIVERS

Whether you have a gaming laptop or a workstation, if your system has a discrete GPU and it's not running on the latest appropriate

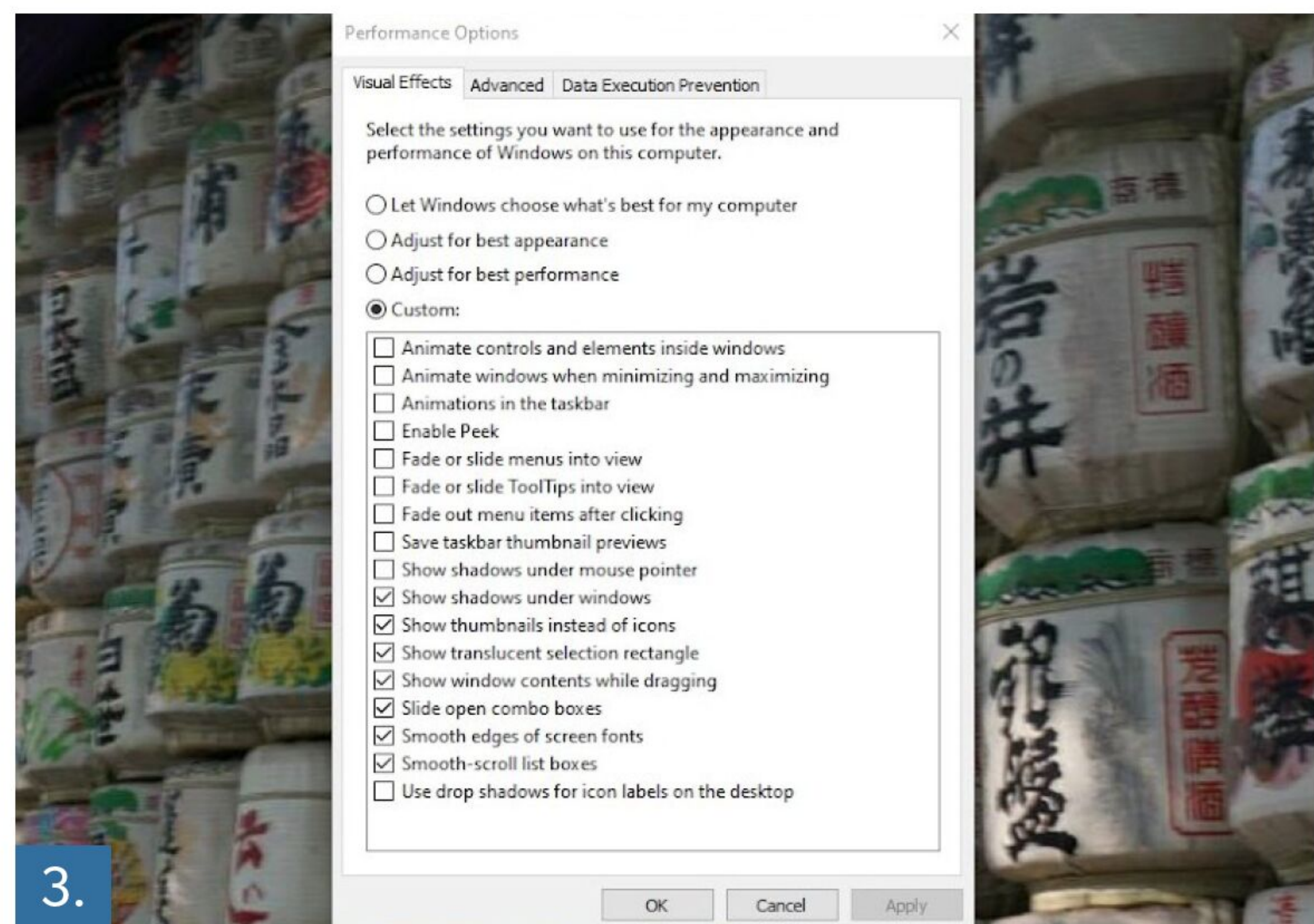


drivers, you could be leaving a lot of performance on the table. Drivers help optimize the GPUs handling of select applications, and it can make a load of difference. In recent years, Intel's Arc graphics have been a perfect example of this, seeing huge performance boosts with drive updates (fave.co/3UhJ1f4). AMD, Nvidia, and Intel all have different tools for updating their drivers, so research what components you have in your computer to find the appropriate method for updating.

3. ADJUST WINDOWS' 'PERFORMANCE OPTIONS'

Your laptop runs on Windows, but also Windows runs on your laptop, and that means it has its own overhead. It hogs resources, it takes up clock cycles, and it does unnecessary things in the name of looking pretty that you can give the axe in order to spend that horsepower elsewhere.

Getting to this settings menu can be a little tricky. You can open the Start Menu and start typing "adjust the appearance and performance of Windows" until that same text shows up for you to select, but Windows search can be finicky. Alternatively you can open Command Prompt, type "systempropertiesperformance.exe" and launch the tool that way. It can also be found

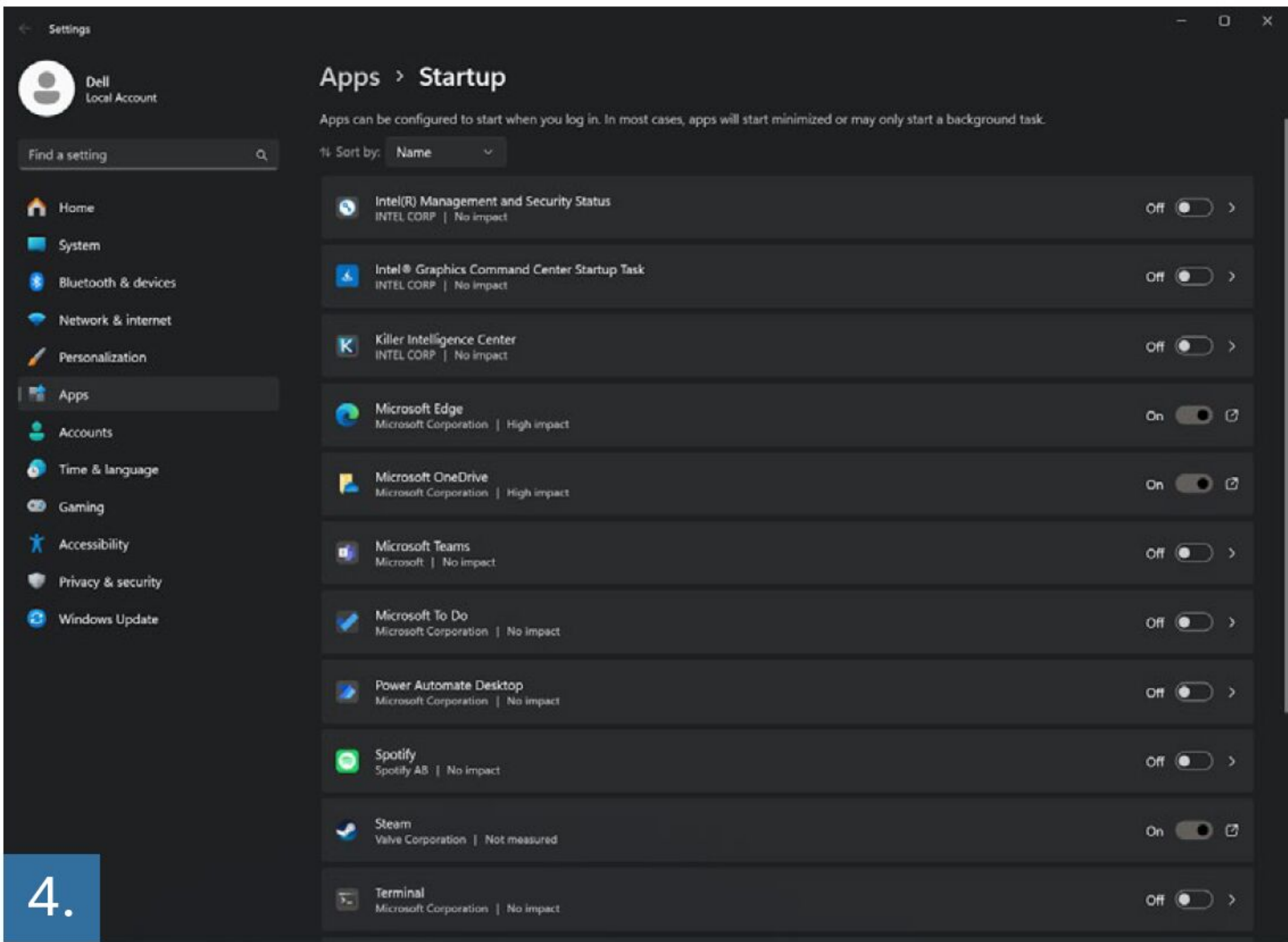


in C: > Windows > System32 > SystemPropertiesPerformance.

In the Performance Options tool, select the Visual Effects tab, and uncheck any of the options you don't want. The more you uncheck, the less extra processing your system is going to do in the name of making Windows look pretty. Some of these are admittedly pretty useful, and they aren't likely to bog down a moderately powerful laptop, but if your system is suffering from considerable slowdowns at every turn, it may be worth the little bit of extra performance you can steal back by disabling these effects.

4. STOP ANY UNNECESSARY STARTUP APPLICATIONS

If your computer is especially slow at starting up, it's likely thanks to some applications all hogging whatever system resources they can during startup. Not only is the process of



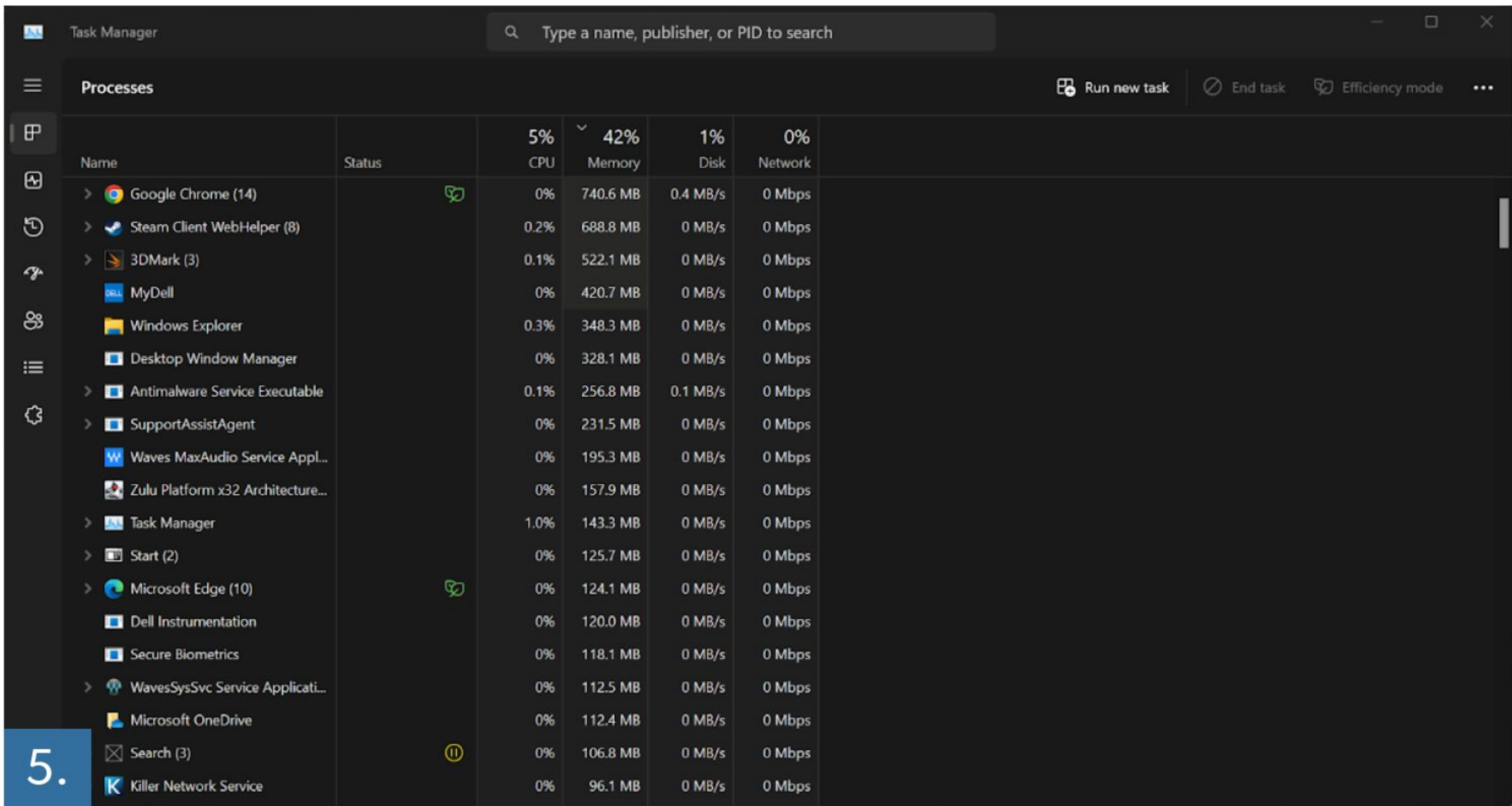
launching each application going to slow things down, but the memory and processing they then take once they're running will just keep things slower until you manage to shut them all back down.

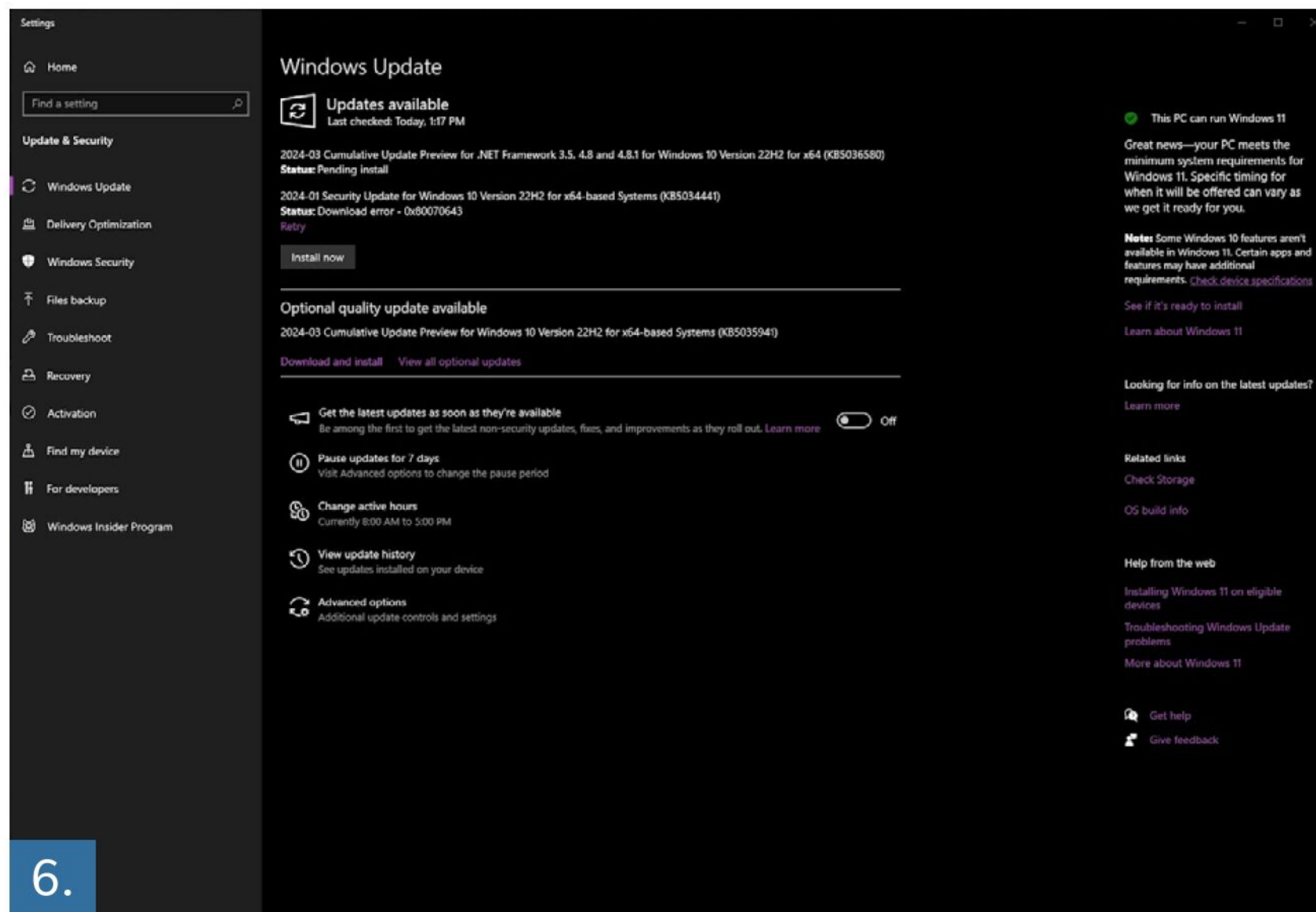
Instead, you can just stop them all from ever starting up. To do this, simply go to Settings > Apps > Startup (can also be quickly accessed by typing "Startup" into the Windows search bar and selecting Startup Apps). From this menu, you can uncheck every app you don't want automatically starting every time Windows boots up.

5. MAKE SURE THERE ARE NO MEMORY HOGS

Even if you stop a bunch of startup apps, the point of having a computer is to have stuff running on it, so eventually you'll have to let some programs tap into its resources. But you should still be vigilant of memory hogs as they're a quick way to end up with slowdowns again.

If you feel like your system is running unexpectedly slow, pop over to Task Manager (Ctrl+Shift+Esc will launch it in a jiffy), select Processes from the left-hand menu, and then click on the Memory column to quickly sort it. Here, you'll be able to quickly identify any programs or processes that are using up a lot of memory (or CPU, disk, or network bandwidth for that matter). If the application you want to use isn't near the





Applying updates is important. Make no mistake. But the updates can probably wait until you're done with whatever you're trying to get done. If you go to Settings > Windows Update, you should find an option to pause updates for anywhere from one to five weeks. You can take advantage of this to give yourself time

top of that list, you might have a few other applications worth stopping.

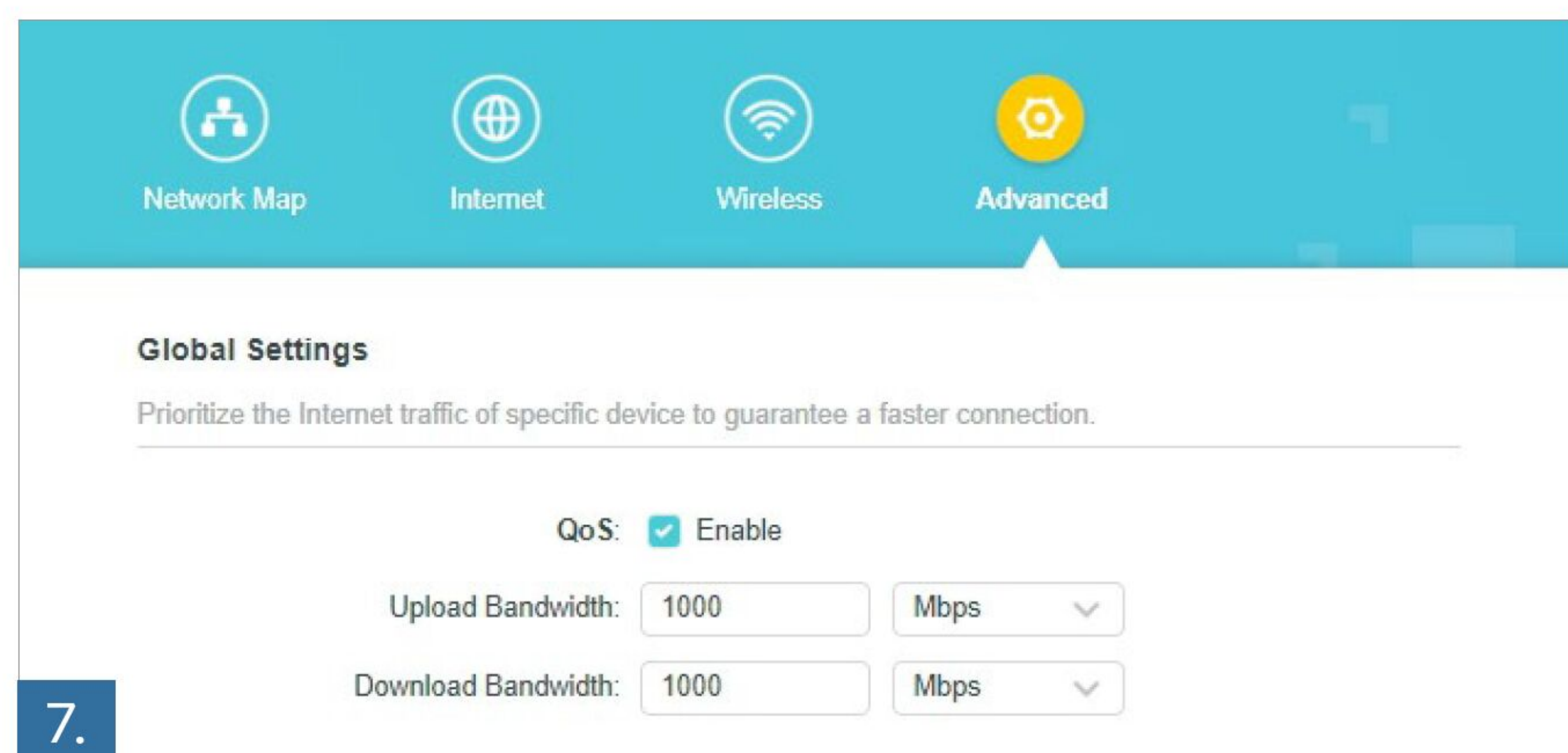
6. PAUSE WINDOWS UPDATES

Speaking of system resource hogs — Windows Update can be a truly massive drain on performance. Downloading and installing updates can be pretty intensive, and even higher-performance machines can feel a hit if updates are going on in the background. Low-performance systems get it all that much worse, sometimes grinding to a halt with little obvious reason until you notice Windows Update has spun up.

to finish whatever you're working on. Just remember to resume updates afterward if you want to stay up-to-date.

7. TAKE ADVANTAGE OF A ROUTER'S QOS SETTINGS

The speed of your laptop isn't purely the result of your laptop itself. If you're suffering from internet slowdowns, it could just as easily be coming from your router.



Depending on your router, you may have an option called Quality of Service (or QoS for short). This is a tool for prioritizing different traffic and devices on your network. Try accessing your router's settings (often by going to 192.168.0.1 in a browser, but the process will vary depending on your router), finding any QoS tool it might include, and giving your laptop a higher priority.


8. LOOK FOR WAYS TO OPTIMIZE AIRFLOW

Nothing slows down a fast system quite like heat, and with laptops, it's all too easy to smother their potential. Most laptops will have some array of ports and slots in the chassis to pull in cool air and push out hot air. Any obstruction to either of these can result in heat building up and throttling the performance of the system's internals. Even

passively cooled systems, which lack these vents, tend to rely on heat transfer from their metal chassis into the air, so they are also susceptible to smothering.

To avoid this, try to make sure your laptop isn't on anything soft, such as a blanket, carpet, pillow, or even a placemat. You want it on a flat surface where its feet can appropriately lift it, letting air move underneath it. You also don't want to block its sides or rear if they have exhaust vents. You can even take this up a notch by putting your laptop on a surface with its own slots or vents to derestrict airflow even more. Throw a fan into the mix blowing cool air in your laptop's direction, and you might even get a little boost.

All this won't mean too much if your system has sucked up so much dust and debris that its ventilation is clogged

internally though. If you think this might be the case for your system (you might be able to see dust inside if you flip it over and look through the vent), consider opening up your laptop and cleaning out the dust. We have some tips on dusting a laptop here (fave.co/3UiXAif). 



Windows includes built-in ransomware protections. Here's how to turn it on

Be sure to enable automatic backups, too. **BY ALAINA YEE**



Ransomware is nasty stuff. This type of malware encrypts files on your PC so that you can't access them—unless you pay the attacker to unlock the data. In other words, your files are held hostage until you cough up the demanded ransom, unless you're able to survive the ransomware attack (fave.co/3Q5pUm2) using other means.

CBS News just ran a cautionary segment on the Scattered Spider ransomware group

(fave.co/3Q8p9IS), underscoring just how much damage ransomware can do—so it pays to be prepared. The hackers shut down Las Vegas casinos, causing millions in damage. Your personal computer is less of a target, but why tempt faith?

The best defense against ransomware is avoiding sites and downloads riddled with it, but you can take other protective measures, too. Modern antivirus software often restrict which apps can change files in

folders commonly targeted by ransomware. Microsoft Defender, which is built into Windows, can do this too. (Microsoft changed the name from Windows Defender several years ago, but it's the same program.) Some antivirus suites also run automatic backups, in case you need to restore your files.

The catch? Unlike third-party antivirus software, these extra safeguards are *not* turned on by default in Microsoft Defender. You have to enable them yourself.

HOW TO TURN ON RANSOMWARE PROTECTION IN WINDOWS

Step One: Open Windows Security

Open the Windows Security app on your PC. You can access it in one of several ways:

- Press Alt + Spacebar on your keyboard, type in windows security, then hit Enter
- Open your Start Menu and type in windows security, then press Enter
- Open your Settings app, then choose Windows Security in the left pane

Step Two: Find your ransomware settings

In the Windows Security app, click on Virus & threat protection. Then click Manage ransomware protection at the bottom of the screen (1.).

Next, turn on Controlled

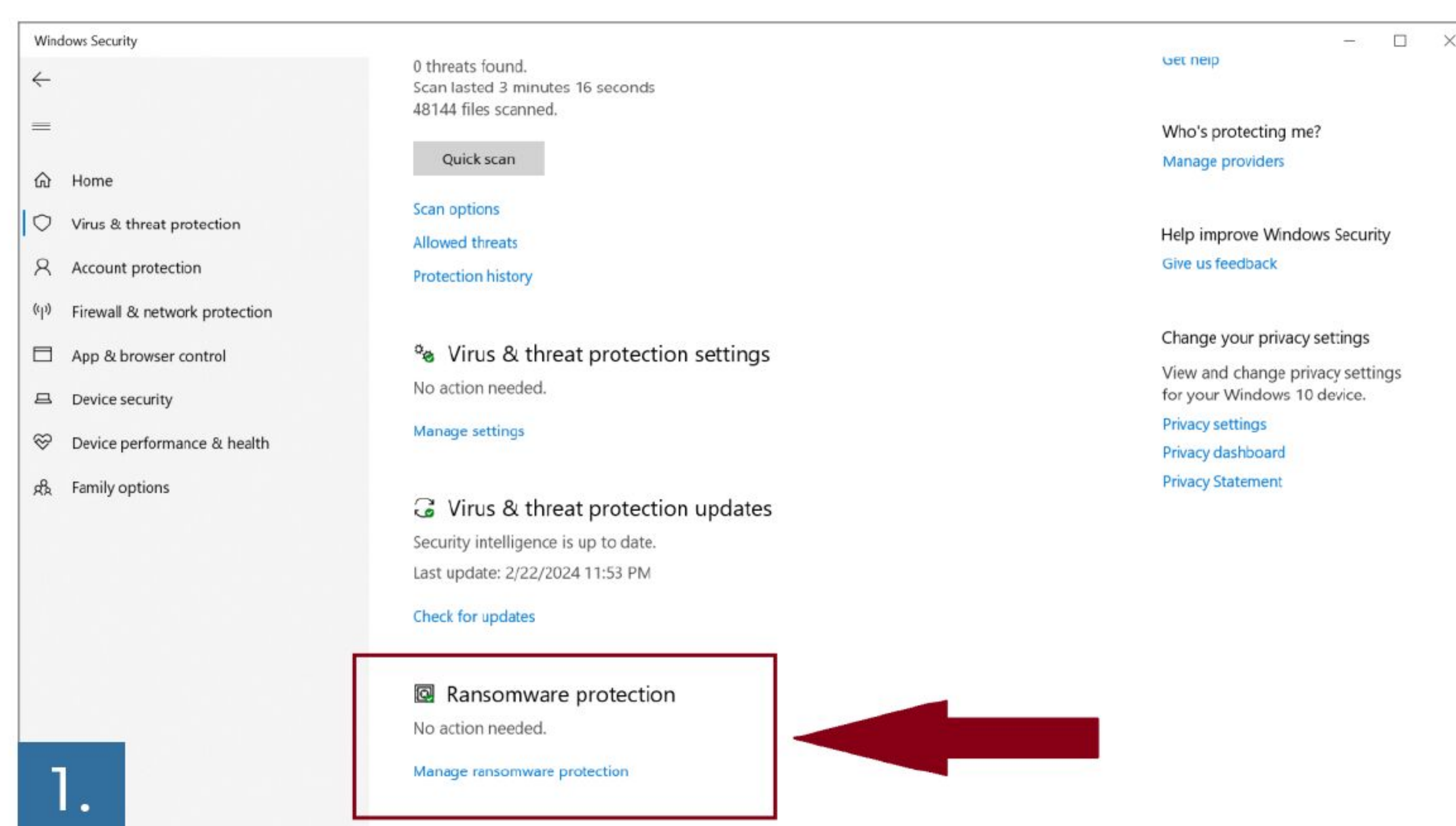
folder access. This setting restricts app access to your PC's default OneDrive, Documents, Pictures, Videos, Music, and Favorites folders. You can also manually add other folders to the list.

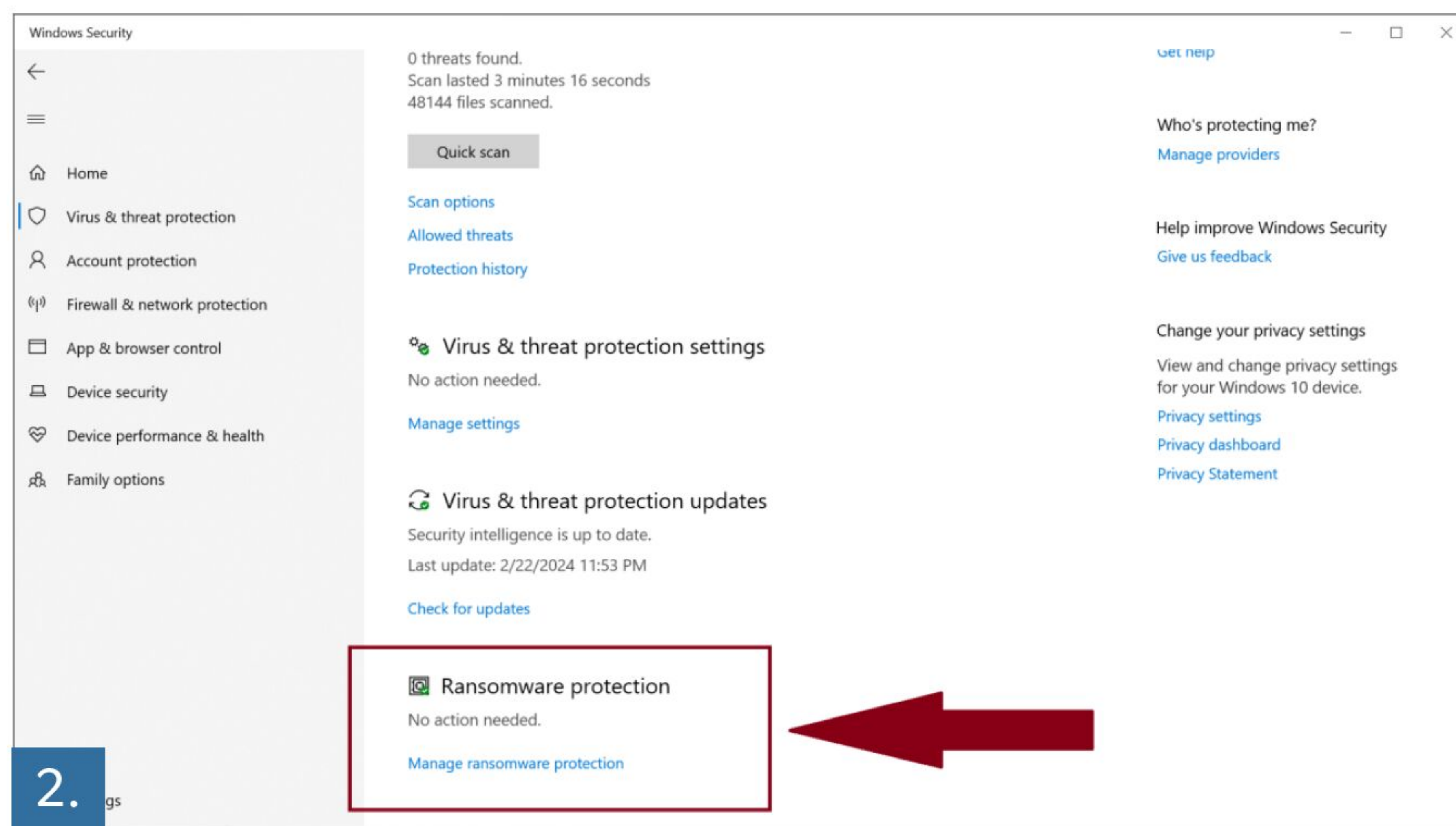
Not all apps will be barred from these areas in Windows—Microsoft Office programs are automatically allowed to open and alter files. But if it's not on Microsoft's internal list of trusted apps, a program can't see anything in those folders until explicit permission is granted in Windows Security.

Step three: Make sure you're logged into OneDrive

Limiting access to files and folders won't completely protect them. Another important method of defense is to have good backups—which Windows automatically does if you're logged into OneDrive. (You can either connect a Microsoft account to your whole Windows PC, or just the OneDrive app specifically.)

To confirm that this protection is on, you





You can solve this problem with minimal work—add the app to the access list. Or save game files to a different folder on your PC that does not have controlled access to it. (You’ll just have to use third-party software to set up a schedule for regular backups.)

can look at Ransomware protection > Ransomware data recovery (2.).


Of course, for the purpose of warding off ransomware’s worst effects, the safest backup of your files is the one you keep offline. You should make one in addition to anything stored in the cloud—if you only have one copy of your data, you’re not properly backed up after all.

SHOULD YOU TURN ON RANSOMWARE PROTECTION IN WINDOWS?

Security and convenience live on opposite ends of a spectrum, and that’s the case here, too. Controlling folder access in Windows can keep attackers out of your important folders, but it can also be slightly inconvenient. Gamers, for example, may find that access to save files might be blocked by default, as they’re often saved in your Documents folder.

PROTECT YOUR WINDOWS PC FROM OTHER ONLINE THREATS, TOO

For more information about Windows Security (and its different components), you can check out our video overview on YouTube (fave.co/44iWbvP). If you prefer more sophisticated software, plus additional protections, you can also look into upgrading your antivirus software (fave.co/3CnDHuk). For example, Norton 360 Deluxe (fave.co/30Bk59o), our current top pick for antivirus, bundles strong malware protection with a VPN, password manager, dark web monitoring for your personal data, and more. It can help simplify staying safer online.

Finally, if you’re interested in learning more about ransomware protection, check out our separate guide on how to prevent (or survive) a ransomware attack (fave.co/3Q5pUm2). 



LocalSend: A free, super fast way to transfer files over Wi-Fi

Share files between Windows, Mac, Linux, and mobile. **BY JARED NEWMAN**

While cloud storage services are convenient for sharing files across all your devices, sometimes there's no substitute for a local file transfer.

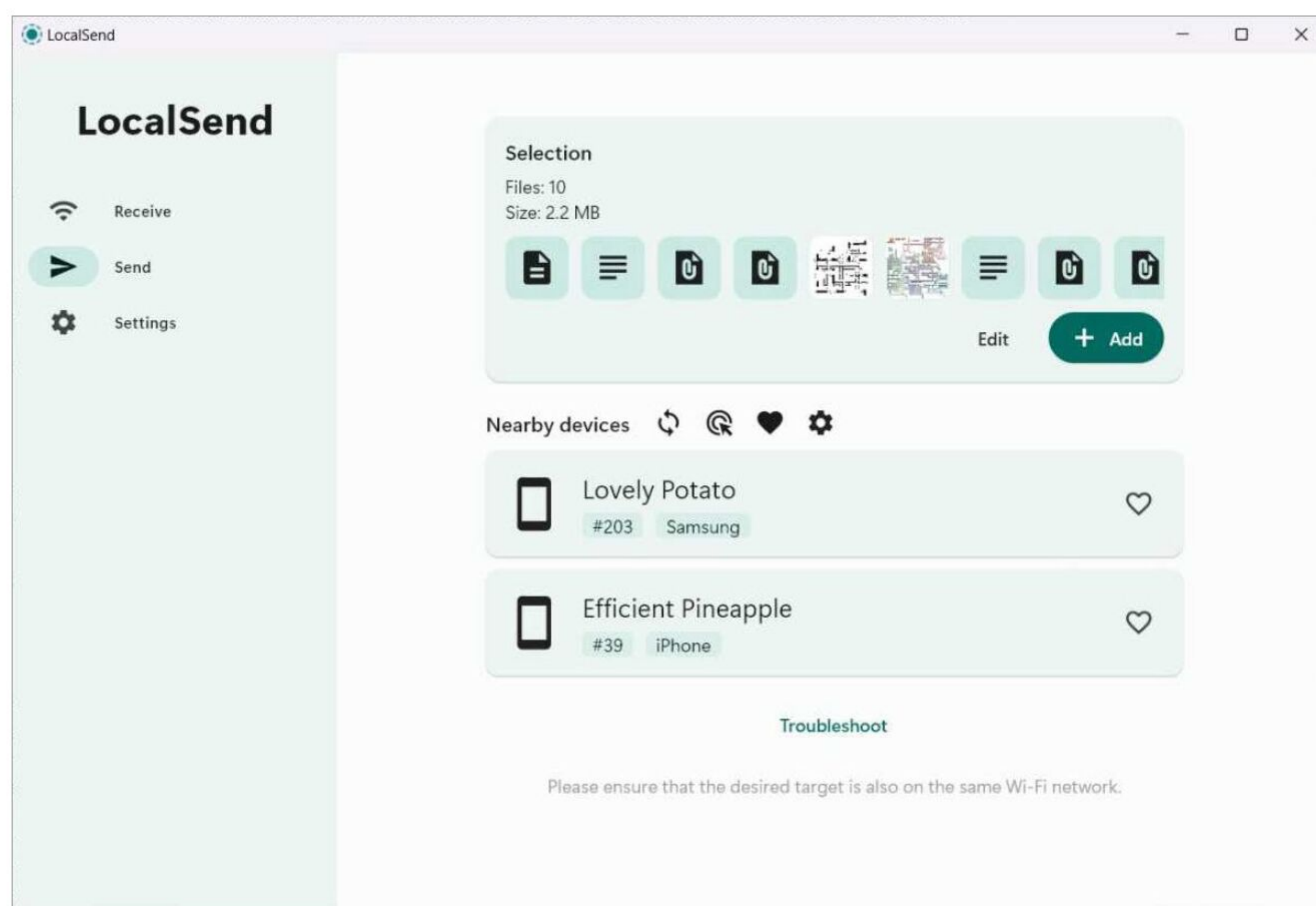
That's where LocalSend (fave.co/4cWC5uZ) comes in. This free, open-source app uses your local Wi-Fi network to transfer files between practically any two devices. It's much faster than uploading files to a cloud storage service and then waiting

for them to download. Best of all, LocalSend works across Windows, Mac, Linux, iOS, and Android, so there are no ecosystem barriers to get in the way of sharing your files.

(Looking at you, AirDrop, fave.co/4aSgXox.)

SENDING FILES WITH LOCALSEND

To use LocalSend, you must install the app on each of your devices. Head to LocalSend's download page (fave.co/4cWC5uZ) for the



LocalSend’s Send menu, showing two nearby devices, including a Samsung device and an iPhone.

desktop versions, or use the direct app store links for iOS (fave.co/3W4K5nl) and Android (fave.co/4d1J8Tm). There’s also an Amazon Appstore version (fave.co/3Jkrso6), useful for transferring media files or sideloaded apps to a Fire TV Stick.

Once you’ve installed LocalSend on at least two devices, head to the app’s “Send” tab. Your other devices should appear under the “Nearby devices” heading with randomly-assigned nicknames, along with details on the device type.

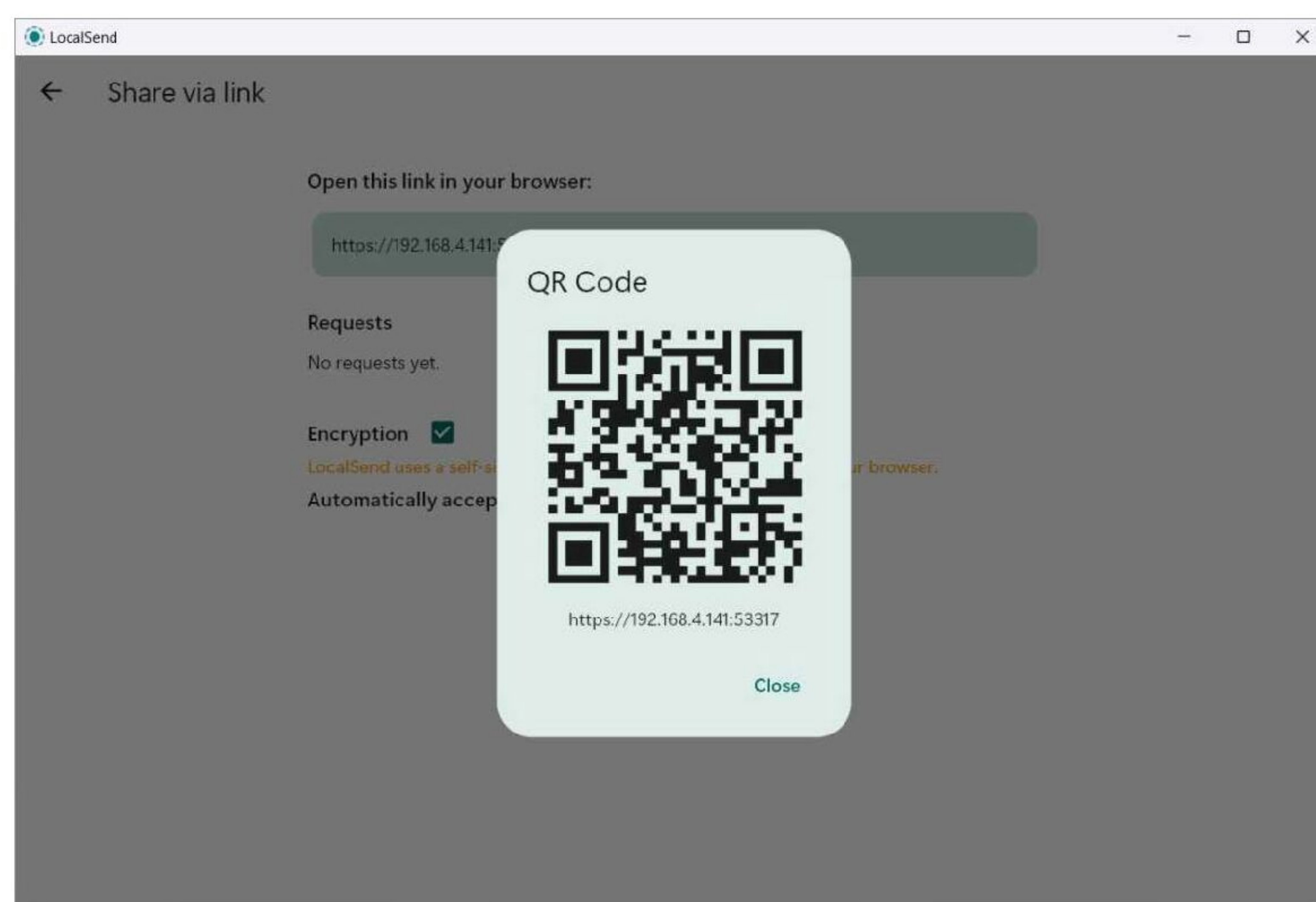
Select a file using the File, Folder, Text, or Media tabs, then tap on the device where you

want the file to go. On the other device, accept the file transfer request, and it’ll start downloading.

Want to send files to more than one device at the same time? Click the gear icon in the “Nearby devices” heading and select “Multiple devices,” then click all the devices you want to receive the file.

You can also generate a sharable link or QR

code from gear icon menu, allowing you to share files with devices that haven’t installed the LocalSend app, but note that these devices will have to download each file one at a time.



LocalSend file sharing with a QR code instead of the app.

TWEAKING LOCALSEND'S SETTINGS

While LocalSend works well out of the box, the app's settings menu includes a bunch of additional tweaks you may find useful:

Quit: Minimize to Tray/Menu Bar: When enabled, LocalSend will run in the background on your PC after closing the window, so it'll remain visible to other devices on the network.

Destination: Choose where your files are saved.

Device name: Choose a more memorable identifier (such as "Desktop PC" or "iPad") instead of the randomly-generated one.

Quick Save: On each device where this is enabled, files will automatically download without a confirmation prompt. Don't enable this outside of your home network.

Auto Finish: When enabled, LocalSend will dismiss the file transfer status window a few seconds after the transfer is finished.


Save to history: Disabling this setting will stop LocalSend from keeping a record of previous file transfers. (You can also manually remove records through the history icon in the "Receive" tab.)

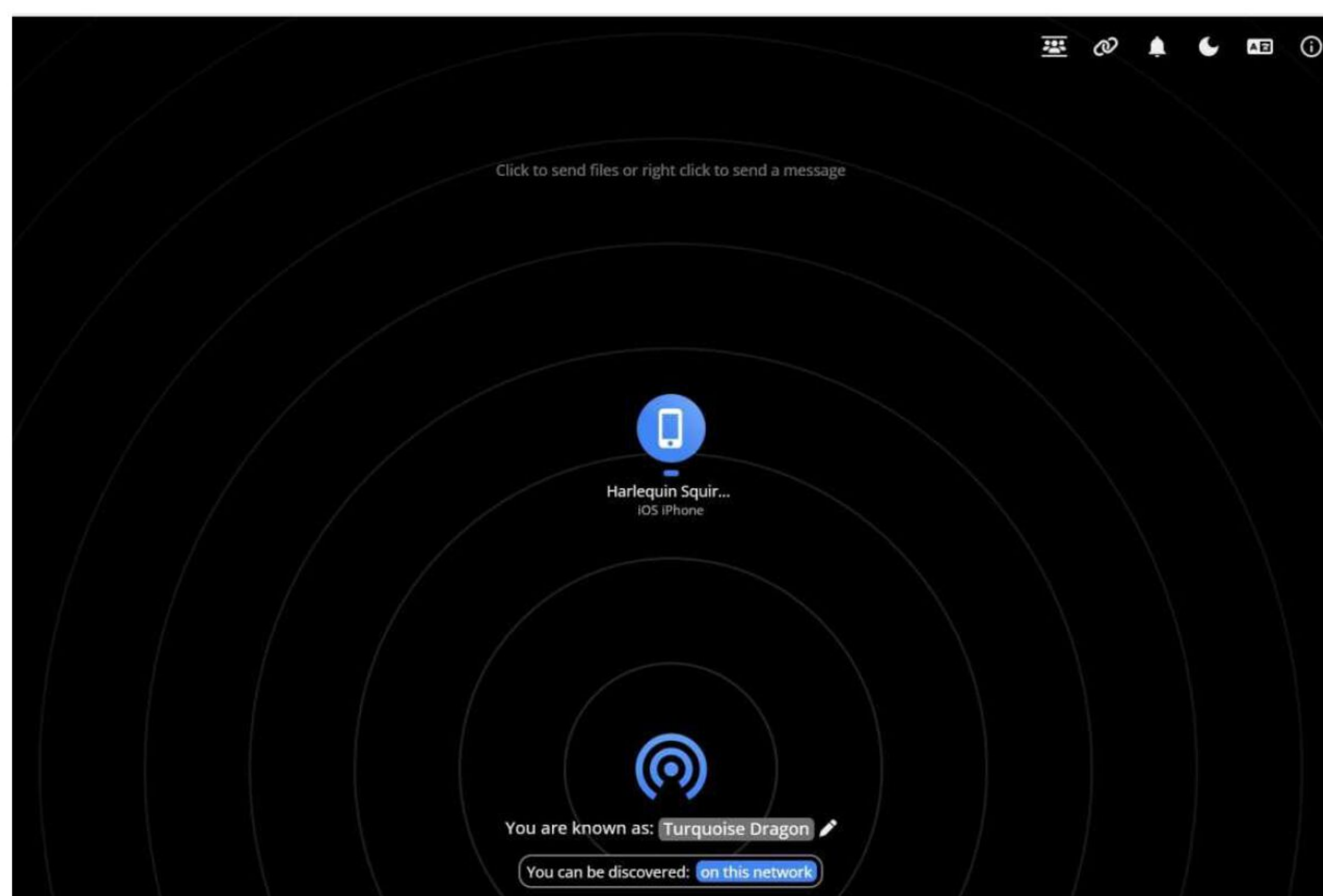
A COUPLE ALTERNATIVES

While LocalSend is the most versatile way to transfer files across a local network, a couple other options are also worth considering:

- Pairedrop.net (fave.co/3UlyCPm) works in any web browser without having to install any software, but it lacks LocalSend's ability to run in the background and automatically accept file transfers.

- Payload (fave.co/3xB9jjr) has a slicker and more intuitive interface than LocalSend, but doesn't support sharing with mobile devices.

Note that none of these options will automatically sync files and folders across your devices. For an open-source solution that syncs your all data without the cloud, check out SyncThing instead (fave.co/444fmcD). 



Pairedrop offers local file sharing through any web browser.

The fastest way to install your apps on a new PC

It's not as complicated as you may think. **BY CHRIS HOFFMAN**



Moving your files onto a new PC (fave.co/3qL4oHf) is just one part of the puzzle. Sure, you'll need a backup program (fave.co/3nINb3Z) or a cloud sync tool like Microsoft OneDrive to move files onto a new PC, but you'll also need to install all of your favorite programs—and file backup tools won't help with that.

Windows comes with a hidden tool known as Winget that allows you to install

your favorite applications in a snap. Spend a minute or two figuring it out and you'll be able to quickly get up and running on any new PC without all of the tedious web-searching, downloading, and installing applications. And, if you'd like to also move large game downloads over quickly so you don't have to download terabytes of game data again, Steam offers an easy way to move your Steam install to a new PC. Here's how to do it.

INSTALL YOUR FAVORITE APPS IN ONE COMMAND (OR A FEW CLICKS)

The secret weapon here is Winget, the Windows Package Manager (fave.co/3W0oexG). You can make a single command that installs your favorite applications and save that command somewhere. Copy-paste that command into the Command Prompt (or Windows Terminal) on a new PC and Windows will do all the work, downloading the programs from the web and installing them for you. It's like Chocolatey (fave.co/4aHPhCv) or Ninite (fave.co/4aVqZEF), which you may remember, but it's built into Windows.

Not a fan of the command line? Try using WingetUI (fave.co/3JniGpB) instead — this convenient program is the like having a better, more capable alternative to the Microsoft Store on a Windows 11 or Windows 10 PC.

But, after a little bit of setup, you'll appreciate the command-line method. For example, let's say I really want to Install Google Chrome, Microsoft PowerToys (fave.co/3OoQQKX), Spotify, and VLC on each PC

I use. I'd just use the following command:

**winget install Google.Chrome
Microsoft.PowerToys Spotify.Spotify
VideoLAN.VLC**

Copy-paste that command into Windows Terminal and away Windows will go, doing all the downloading and installation work for you. Windows will download the application installer from the program's official website. You can add as many IDs as you want after the "install," separating each with a space (**1.**).

So, how do you find them? Just open a Windows Terminal window and use this command:

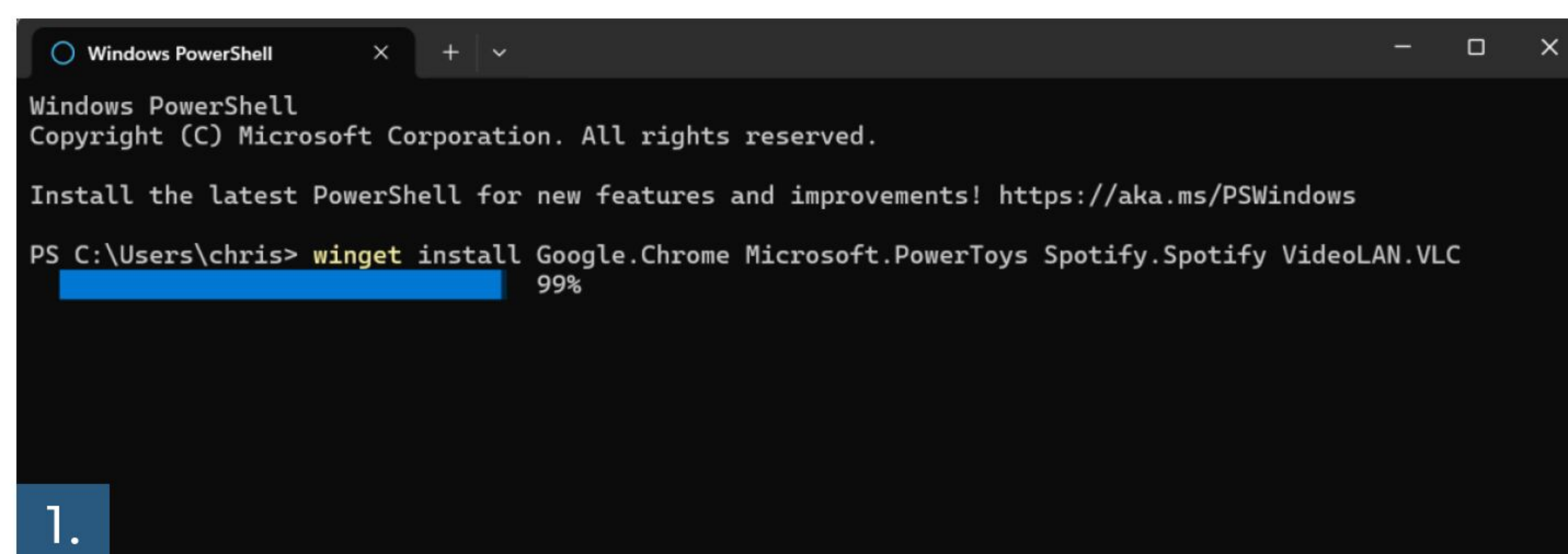
winget search program

Replace "program" with the name of the program you want to search for (**2.**). You'll see search results, and the ID of the program you need will be displayed under the "ID" column. (The first time you use winget, you may have to type "y" to agree to the terms and continue.)

You may not touch the command line much, but this is just a one-time setup process that should take a few minutes — and then you'll have a one-step installation command

for your new PCs.

Don't want to bother? Again, I really like WingetUI — you can search for applications and put together program lists in just




```
Windows PowerShell
PS C:\Users\chris> winget search VLC
Name Id Version Match Source
-----
VLC XPDM1ZW6815MQM Unknown
VLC UWP 9NBLGGH4VVNH Unknown
VLC media player VideoLAN.VLC 3.0.20 Moniker: vlc winget
Streamlink Streamlink.Streamlink 6.7.0-1 Tag: vlc winget
PS C:\Users\chris> |
```

2.

a few clicks in a graphical interface.

Of course, you could always just download your favorite program’s installers in EXE or MSI form, save them to a USB drive (or perhaps even your OneDrive cloud storage, if they’re small), and install them that way. But you’d have to do a lot of clicking, and the programs would have to do a lot of updating after that.

COPY YOUR STEAM FOLDER TO A NEW PC

Most applications download quickly on a modern internet connection. But game folders are often *huge* — your Steam folder alone might even hold a terabyte or more of games. That’s a lot of download time, and it’s a lot of download bandwidth, especially if you have an internet connection with a data cap (fave.co/4d1oXVt).

The good news is that Steam lets you copy-paste your Steam folder between PCs, if you do it the right way.

First, you’ll want a nice big external hard drive (fave.co/3n5NIMC), big enough to

hold all those game files.

Then, just follow Valve’s official guidance on this process. Here’s what Valve recommends. It’s a process I’ve used

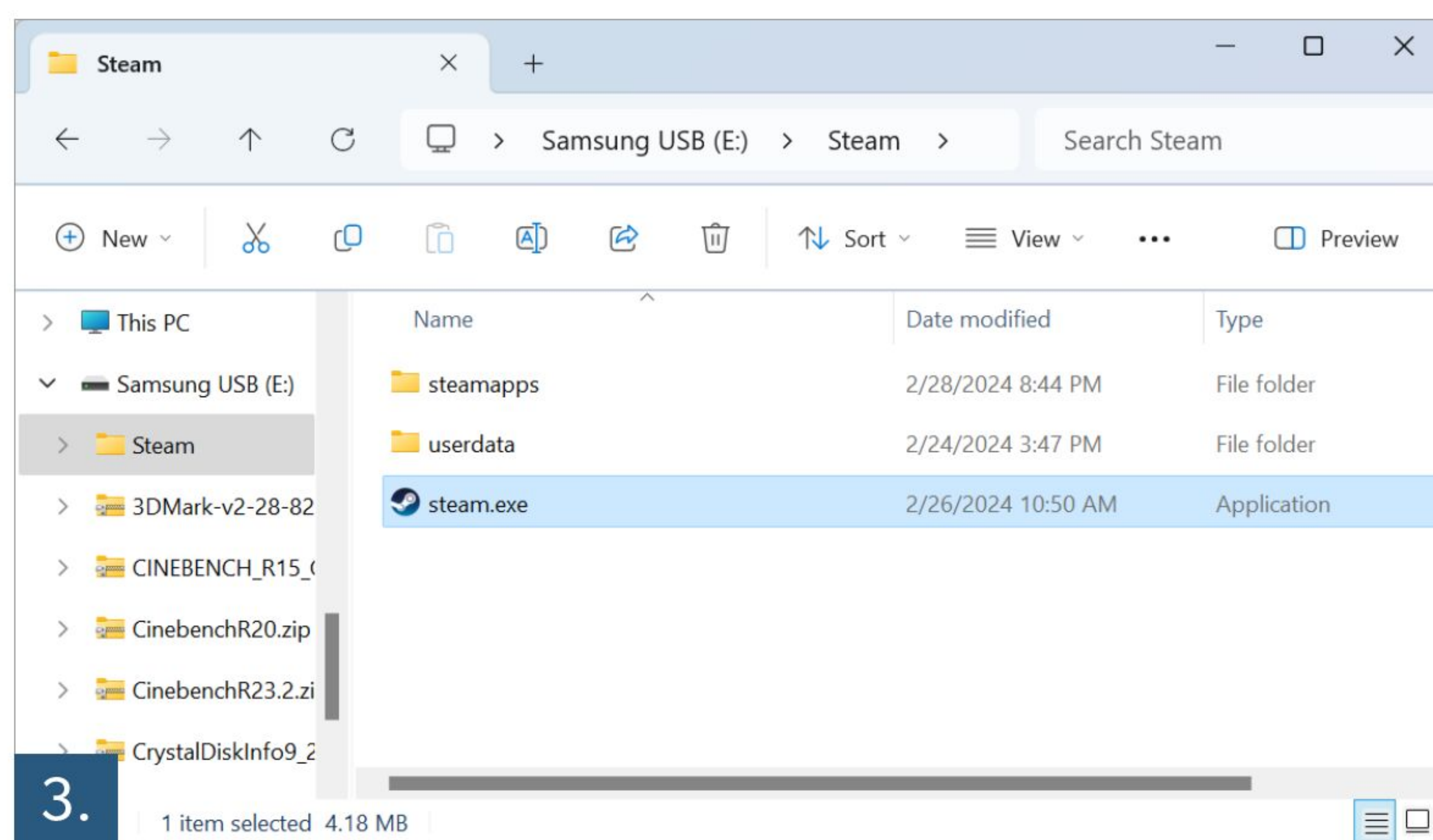
successfully, myself:

1. Exit Steam on your PC. To do so, click Steam > Exit. You don’t want Steam running in your system tray while you do this.
2. Open File Explorer and navigate to your Steam folder. The default location is C:\Program Files (x86)\Steam.
3. Select and copy only the “steamapps” folder, the “userdata” folder, and the “steam.exe” application file.
4. Paste these three items into a “Steam” folder on your external hard drive.

You should end up with a “Steam” folder containing three items: A steamapps folder, a userdata folder, and the steam.exe application file (3.).

Once that’s done, you’re good to go. You can then copy-paste the Steam folder from your external hard drive to a new computer. Double-click the steam.exe file on that new computer and Steam will repair itself.

If a game supports Steam Cloud, Steam will re-download its save games on your new computer automatically. Nice and easy. Valve has official Steam-folder-moving



documentation (fave.co/444joRX) with extra troubleshooting instructions and tips for games that don't support Steam Cloud saves.

Here's a bonus, though: Steam can now download games from other PCs on your local network (fave.co/3vS89j9), if Steam is open on them. This could save you download time and internet bandwidth, as your new PC would be downloading the game *from your old PC*, not from Valve's servers.

Other games and launchers may or may not make this so easy. You may be able to copy a game's folder to a new PC and launch it or you may have to jump through some hoops. For example, the Epic Games Launcher has a rather annoying process for this (fave.co/4aCxJrI). You'd have to copy an individual game's folder to your external drive, install the Epic Games Launcher on the new PC normally, start installing that particular game, cancel the installation partway through, copy the game files over, and resume the installation process. That's a pretty


convoluted process — we're trying to save time here! You may be better off using winget to quickly install your game launcher of choice and then downloading the game normally.

RESTORE YOUR FILES, TOO

Your programs are only part of the puzzle. They're normally

more time-consuming to restore, but the above tricks should help you get up and running on a new PC much more quickly.

Then, you just need to get your files on your new PC. Luckily, you can restore from your backups. You should always have up-to-date backups. You can re-download programs, but if you lose your important files, they're gone forever. I recommend choosing online backup software or local backup software (fave.co/3nINb3Z) and sticking to it. The best backup program is the one you'll actually use.

Windows now makes this much more convenient if you sign in with a Microsoft account these days. Your Documents, Pictures, Desktop, Music, and Videos folders are synced to OneDrive by default, and the files in them will automatically follow you to a new PC. Still, it's a good idea to think about using another backup program, just in case, rather than only relying on OneDrive or another cloud-file-syncing program. 



“Early detection gave us time to adapt together, as a family.”

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[ALZ.org/TimeToTalk](https://alz.org/TimeToTalk)



Tech Spotlight

A video showcase
of the latest trends



Debate: Does Windows Suck On Handhelds?

➤ Jeff Grubb from GiantBomb thinks Windows sucks on

handhelds, but do Adam and Will agree? In this video they debate all the finer points of how Windows works on handheld gaming PCs like the Asus ROG Ally and Lenovo Legion Go in order to figure out if they have a place in the Steam Deck's world.