

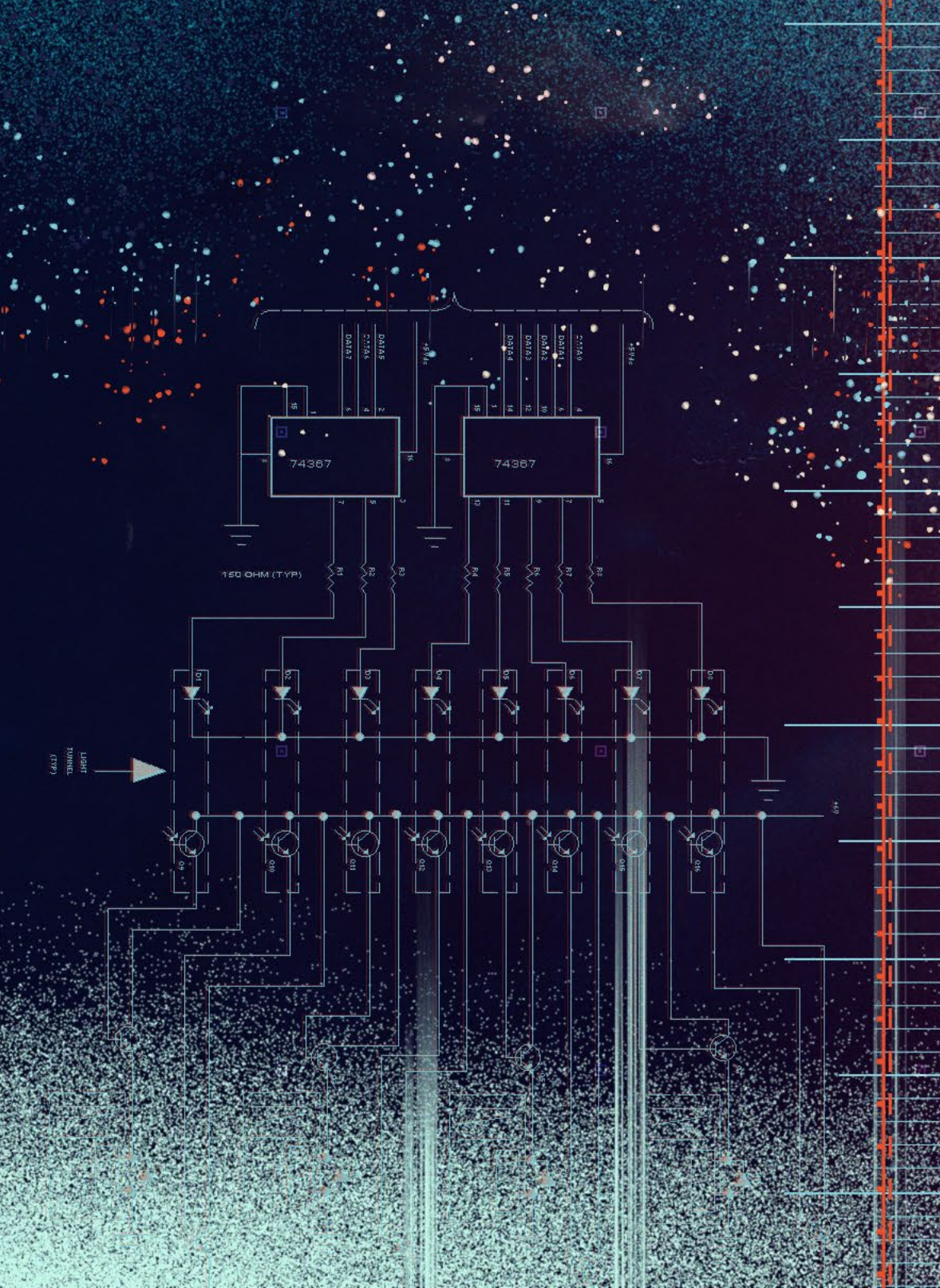
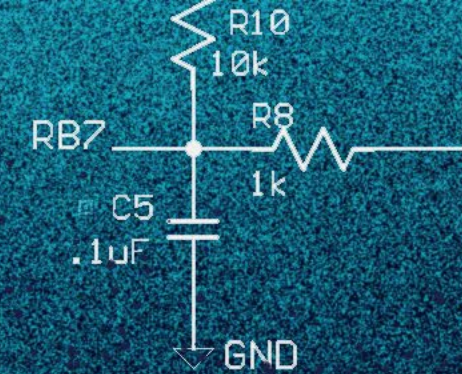


The Improving Landscape of Application Compatibility for Windows and Snapdragon Processors

Ryan Shrout
Matthew Connatser

COMMISSIONED BY

Qualcomm



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Introduction

It was all the way back in 2011 that Microsoft set out on making the standard version of Windows compatible with the Arm architecture, first with Windows RT. The PC-oriented operating system hadn’t supported any architecture besides x86 since Windows XP. At the time, x86 CPUs were used almost exclusively for PCs and datacenters, while Arm processors were largely made for phones and embedded devices. Even with perfect software compatibility, optimal hardware would also be needed to bridge the gap between Windows and Arm.

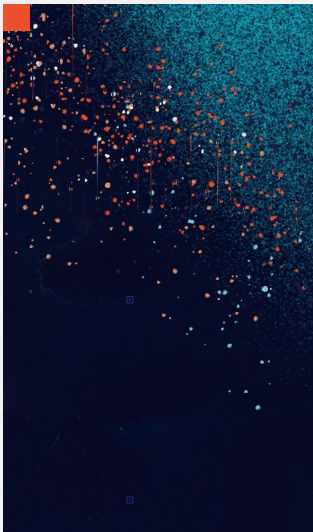
Microsoft found a key ally in Qualcomm, one of the world’s premiere designers of smartphone processors. Windows on Arm went from running on the Snapdragon 800, an SoC first launched in 2007 that

was made for mobile devices, to running on the PC-first Snapdragon 8cx in 2019. The Snapdragon X Elite isn’t the first Arm CPU to run Windows on Arm or to even be made specifically for Windows laptops, but it is the first family of Qualcomm CPUs to truly rival the best x86 processors from Intel and AMD.

The launch of the Snapdragon X Elite in May 2024 brought two major changes to Qualcomm’s line of PC chips. First, power and performance improved drastically. Whereas previous Snapdragon processors for the PC capped out at four big and four small cores, the Snapdragon X Elite goes up to 12 uniform, high performance cores that hit dramatically faster clock speeds and achieve much greater overall performance. The integrated graphics also

	Snapdragon X Elite	Snapdragon 8cx Gen3	Improvement
Cores	12	8	+50%
Turbo Frequency	4.3 GHz	3.0 GHz	+43%
Graphics	4.6 TFLOPS	3.7 TFLOPS	+24%
Memory Bandwidth	135 GB/s	68 GB/s	+99%
NPU	45	15	+200%

have a nice boost in performance, and the integrated Hexagon Neural Processing Unit (NPU) on the Snapdragon X Elite is three times faster compared to the previous generation.



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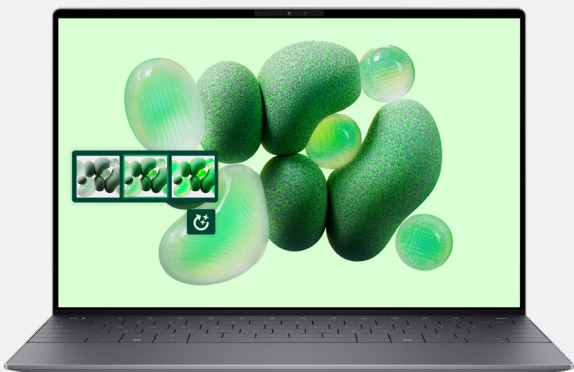
Introduction

The second big shift has been non-x86 Windows being positioned as a leading compute option. Before the Snapdragon X Elite, companies like Dell and HP launched laptops using a Snapdragon processor only intermittently. As of today, those same OEMs are giving the Snapdragon X Elite as much attention as any other Intel or AMD CPU, and are updating their most mainstream families of laptops with the Snapdragon X series. Microsoft in particular has taken to Qualcomm’s new PC chips, to the point that all consumer Surface devices announced since May 2024 have exclusively used either the Snapdragon X Elite or Snapdragon X Plus.

Making this all possible largely hinged on one thing that Microsoft and Qualcomm have been working on since

the beginning: software compatibility. At first, apps needed a native Arm port to run on Snapdragon-based PCs, which created a chicken-and-egg problem where developers didn’t want to support a small ecosystem, and users didn’t want to buy into a platform with little support. Even once x86 emulation was added to Windows on Arm, the problem wasn’t entirely solved.

Both in the run-up and aftermath of the Snapdragon X Elite launch however, Microsoft and Qualcomm have made great strides to increase the spread of apps that run natively on Arm and to improve the emulation experience. The inflection point where the negative feedback loop becomes positive seems to be approaching rapidly, if it’s not here already.



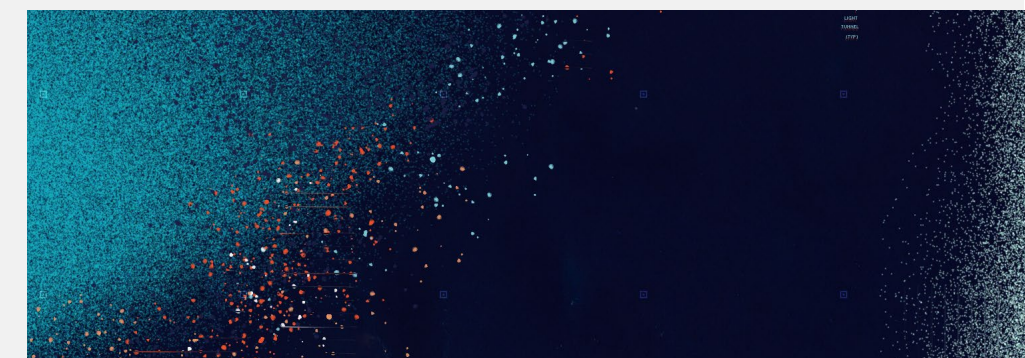
Bridging the Gap: Microsoft Prism Emulator and Application Compatibility

Prism is the emulator Microsoft created for running 32-bit and 64-bit x86 applications on Arm processors, first introduced with the Windows 11 24H2 update. Emulators are sophisticated software layers that enable software designed for certain hardware or computers to run on other devices. Emulation is often used to improve hardware-software compatibility when using a native version of that software isn't possible because a native version doesn't exist (and may not ever exist).

Emulators have been an important tool to allow older software, programs, and apps to run on newer computers. One of the most common use cases for emulators is in video gaming, as the video game consoles of many years ago are often very different from those used

today in respect to the CPU architecture. Microsoft and Sony have used x86 CPUs since 2013 and Nintendo has relied on Arm since 2017, but all three companies have variously used chips based on IBM's PowerPC, the MIPS architecture, SuperH by Hitachi, and more.

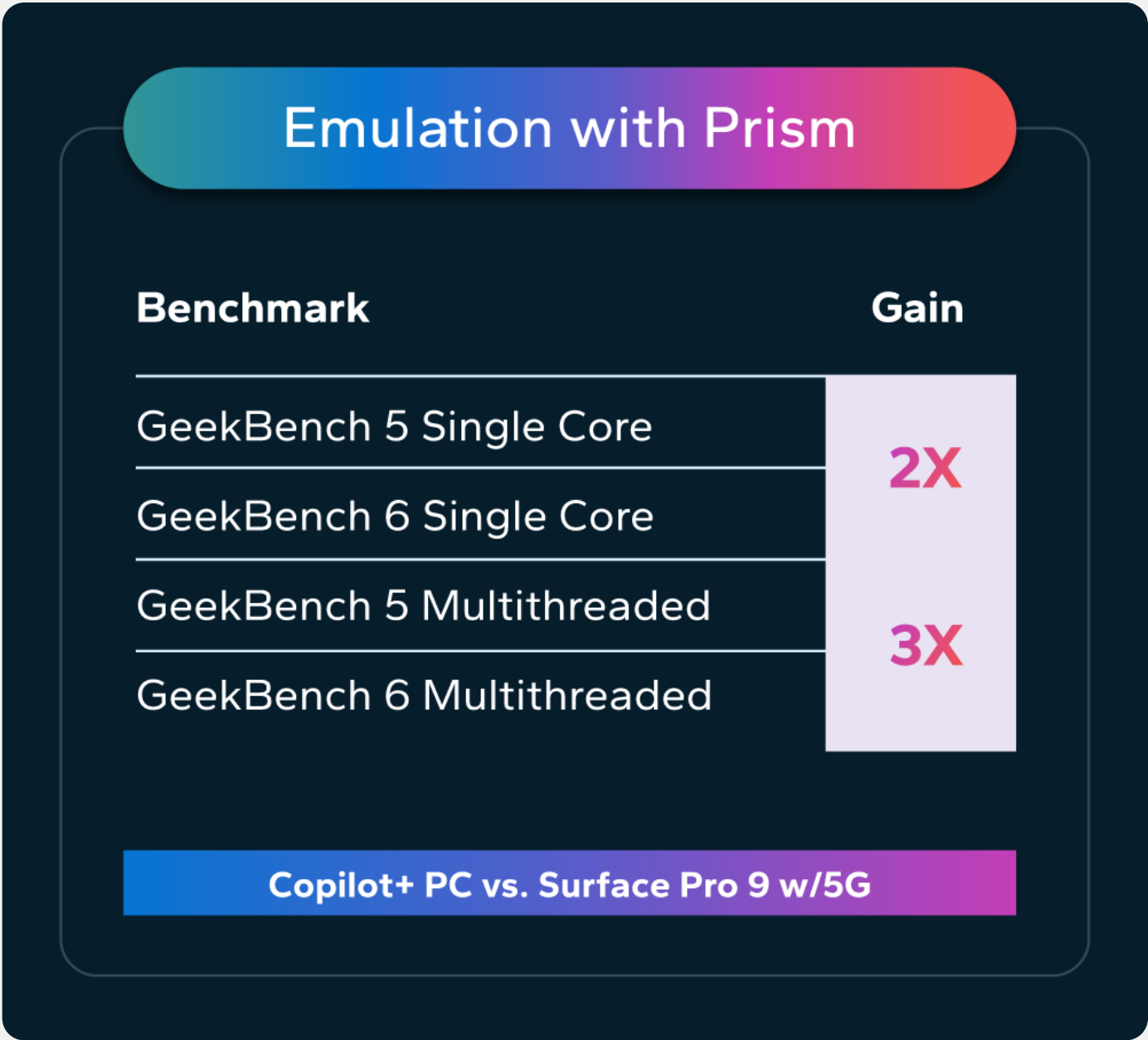
Today, the PC industry has consolidated around x86 and Arm processors, perhaps making emulation easier but certainly not obsolete. Specifically, emulating x86 software on Arm-based PCs has become extremely important for both Apple and Microsoft, which has worked with Qualcomm since 2016 to make Windows more friendly to Arm chips. In Apple's case, it switched completely from x86-based Intel CPUs to its own M-series processors in 2020, and uses its own emulation layer called Rosetta.



Bridging the Gap: Microsoft Prism Emulator and
Application Compatibility

Emulation is nothing new for Windows laptops with Arm processors, but Prism features improved performance as well as the ability to emulate 64-bit apps. Prism uses JIT, or just-in-time compilation, to translate x86 into Arm code as an app is running. Translated code is compiled into blocks, which can be cached for later use. As far as the software itself knows, it's not being emulated, until it actually needs to know such as when calling certain APIs.

The performance enhancements that Prism sports aren't insubstantial either. Microsoft estimates that its emulator helps the Snapdragon X Elite-powered Surface Pro X be at least twice as fast



Source: Microsoft

as the Surface Pro 9, which uses a 12th Gen Intel chip. The combined performance boost from Qualcomm's flagship PC chip and Prism can be as high as three times in multi-threaded workloads.

Prism is extremely important for Microsoft because Windows has been intertwined with the x86 architecture since the MS-DOS days. Up until 2018, only one other CPU architecture ever got support on Windows: Itanium, which Microsoft only support for client on Windows XP. When Windows on Arm finally debuted, Windows had a three-decade legacy of code that could not run natively on Arm chips.

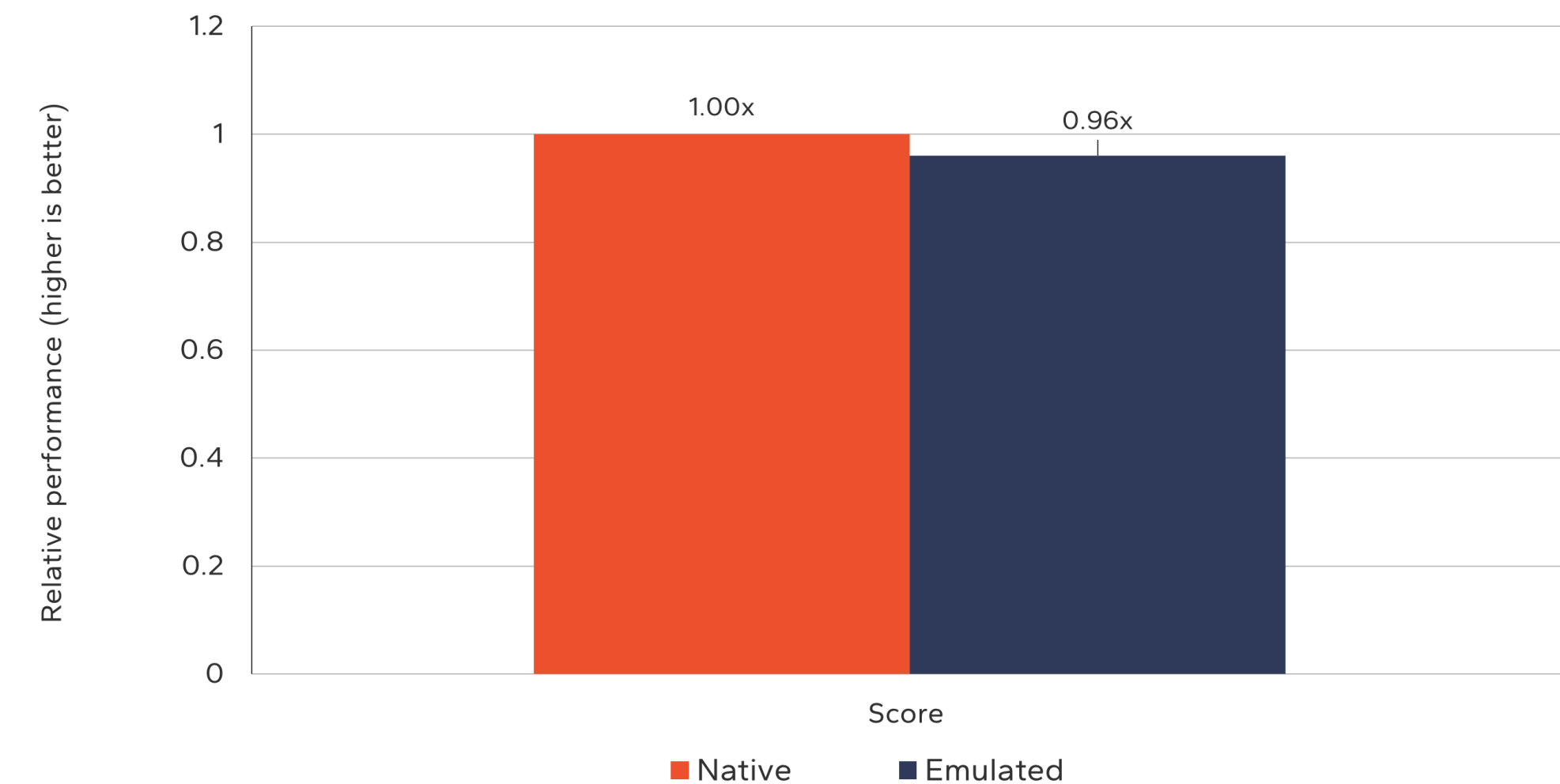
Rewriting and porting every single piece of x86 software available for Windows to run on Arm just isn't feasible (or perhaps even possible) as it would be costly and time-consuming. Emulation is the more practical alternative in the pursuit of better app compatibility, even though emulated software sometimes doesn't perform optimally. This is a very similar approach that Apple took when it started using its own custom M-series processors for Mac PCs, having previously used Intel CPUs.

Emulated Application Experiences and Performance

Performance doesn't have to go out the window when emulation is involved, however. There's no inherent reason why emulated software has to perform poorly, and in fact apps can run quite well under emulation.

Video editing app DaVinci Resolve added support for Windows on Arm with an update for release 19 in June 2024, allowing just-launched Snapdragon X Elite laptops to run the app natively. One might think that Blackmagic Design developed the Arm version out of necessity, so that its users wouldn't have to deal with an emulated experience, but optimized performance isn't a major selling point of DaVinci Resolve's Arm port.

DaVinci Resolve 19 Puget Bench

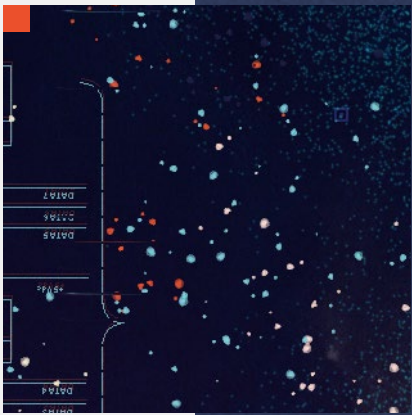
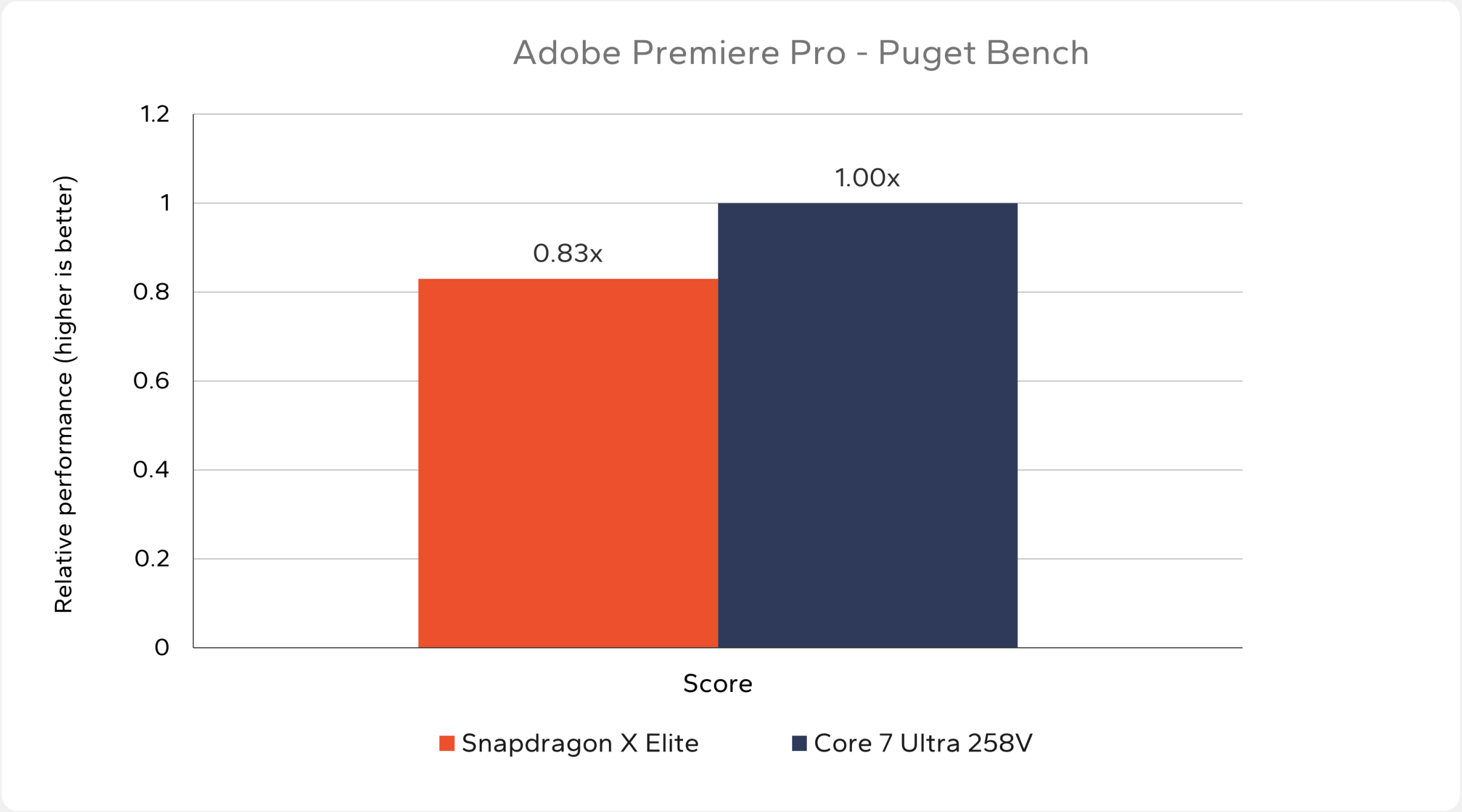


We tested both versions of DaVinci Resolve 19 via PugetBench on the Acer Swift 14 AI laptop, and in the basic benchmark the Arm-native version was only about 3.6% faster. Prism is certainly no slouch if the conditions are right, and if Blackmagic Design hadn't come out with official support for Arm, users would still be able to enjoy the same level of performance.

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Emulated Application Experiences and Performance

Premiere Pro, Adobe’s popular video editing app, also shows decent performance under emulation. The same Acer Swift laptop scored 2,467 points in PugetBench’s Premiere Pro benchmark; for reference, Puget says the average Core Ultra 7 258V scores 2,983 points in the same benchmark. That’s not a bad score for the Snapdragon X Elite, and Premiere Pro should be more than usable for Adobe’s Snapdragon users while they wait for the Arm version of the app to come out.



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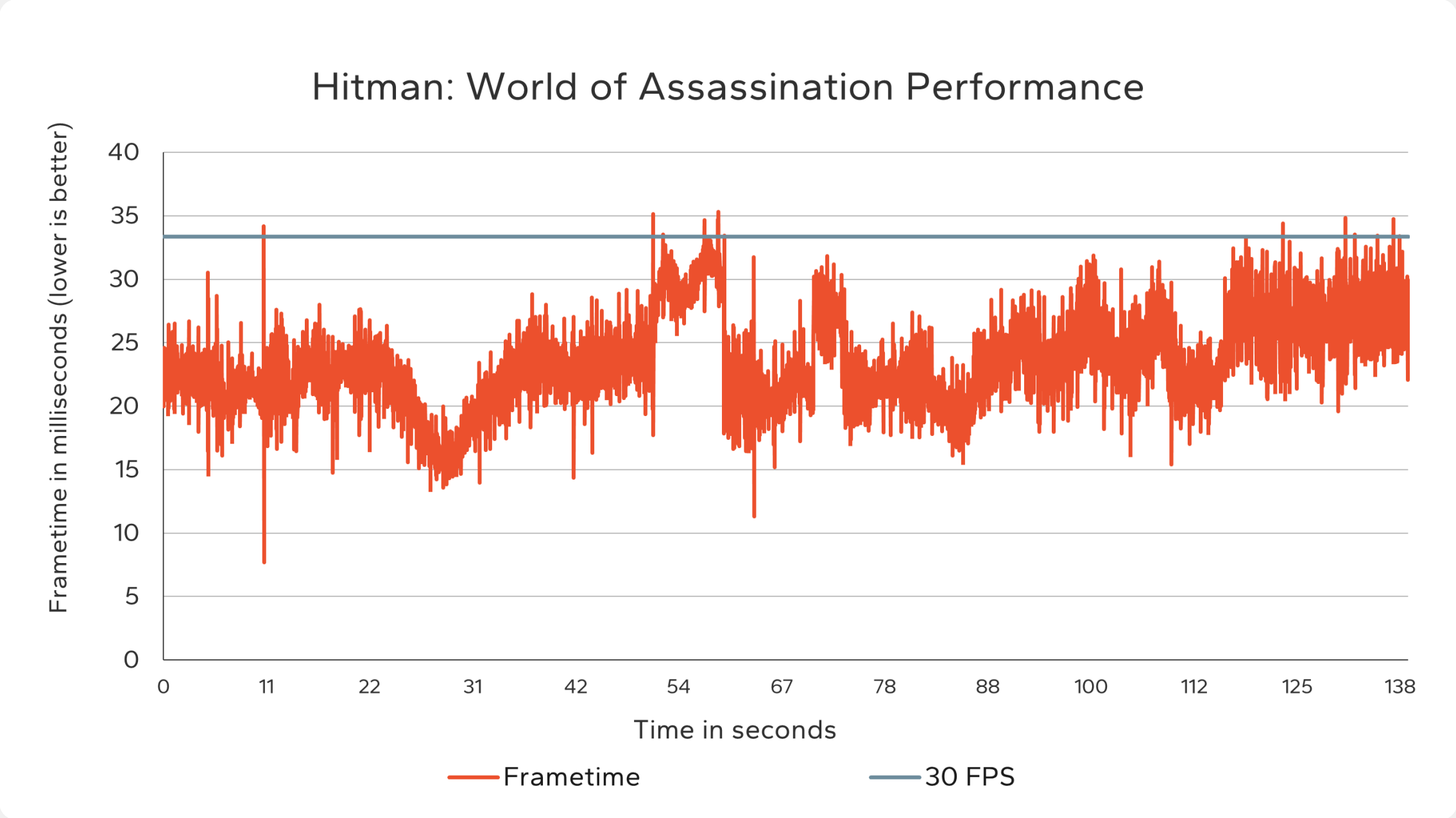
Emulated Application Experiences and Performance

Although PC gaming isn't Qualcomm's main focus for the Snapdragon X series, users obviously still desire the ability to game on the go since modern integrated graphics have gotten quite capable, and Qualcomm's Adreno graphics are no exception. With up to 4.6 TFLOPs of FP32 processing power, this integrated GPU is about as fast as the Xbox Series S's AMD-powered graphics, at least on paper. More and more users are gaming on integrated graphics, on traditional laptops and also handheld gaming PCs like Valve's Steam Deck, so having the prowess to game is definitely a plus for the Snapdragon X.

However, games are a whole category of software that Windows on Arm users should expect to

emulate very frequently, as Arm-native versions of games are quite rare outside of titles that are more at home on a smartphone than a PC. Since games are expected to flawlessly render a new frame at least every 33 milliseconds, inserting an emulation layer between the hardware and the game itself is definitely not ideal.

But despite this disadvantage, the Snapdragon X Elite can be quite potent at emulating PC games, even when it comes to heavy-hitters like Hitman: World of Assassination. This third-person stealth title is known to be fairly intensive on both CPUs and graphics chips, but the Acer Swift 14 AI (which uses the entry version of the Snapdragon X Elite) was able to run the game's Dartmoor benchmark at nearly 43 frames per second at



1080p resolution with all graphics settings set to the minimum. That performance is about on par with Valve's Steam Deck, one of the most popular handheld gaming PCs today.

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Emulated Application Experiences and Performance

Still, there are some aspects of Prism that could be improved, and Microsoft is actively working on it. Compatibility and performance improvements for Prism are slated for later this year; chief among those improvements is the enablement of instructions that were initially unavailable. Insider Preview Build 27744, released on November 6, touts support for AVX and AVX2 CPU instructions, which means greater compatibility and performance for non-native 64-bit apps.

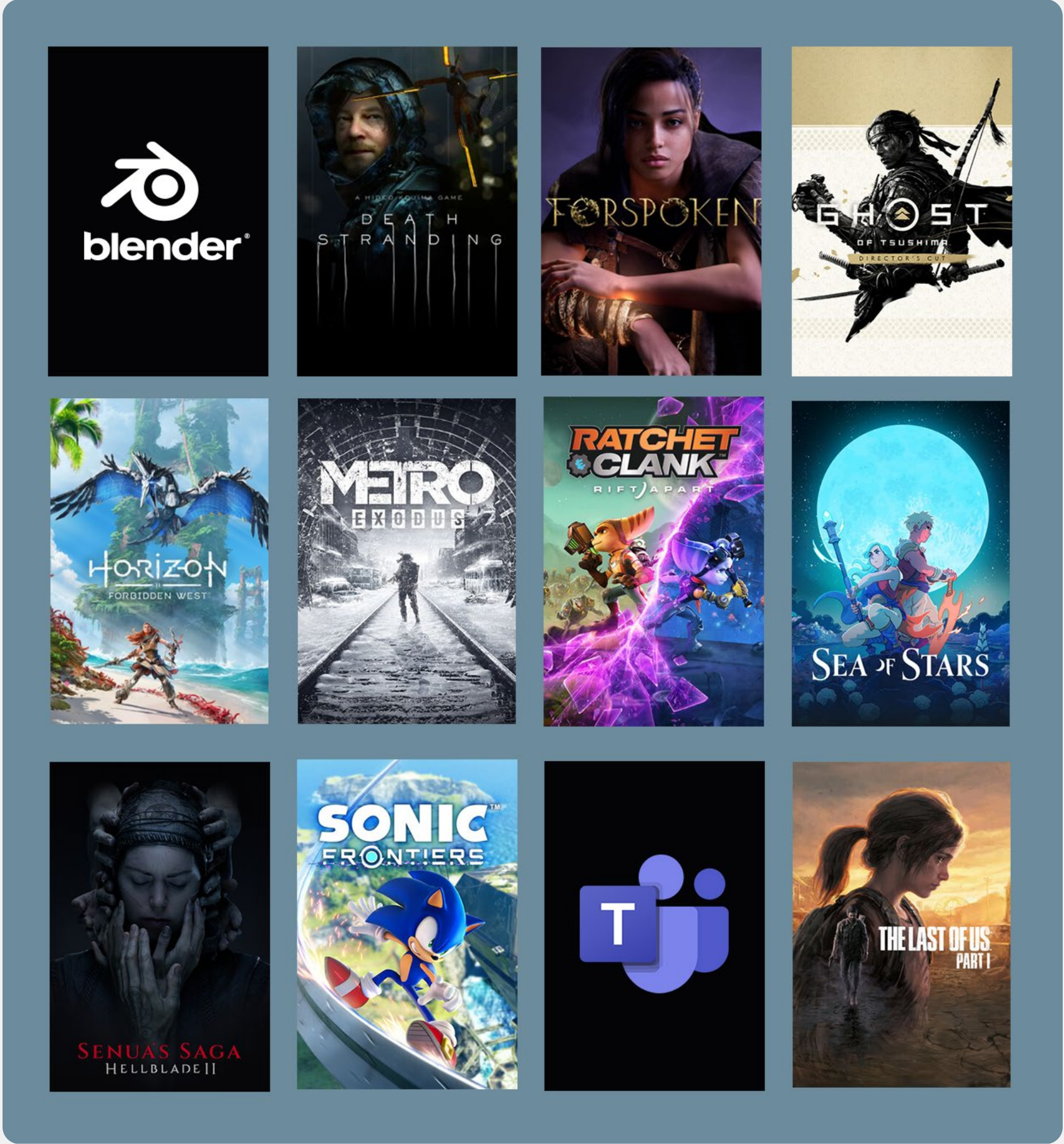
AVX instructions are used for a variety of software, including anything involving x264 or x265 video encoding, virtual backgrounds in Microsoft Teams, Blender, and more. This allows Windows laptops with Snapdragon X processors to run even more programs that were previously off limits.

One particular category of software that’s using AVX increasingly more frequently is video games; over 94% of Steam users own an AVX2-capable PC according to Valve’s March

hardware survey, so game developers have presumably felt more comfortable relying on the decade-old group of instructions.

Though, developers haven’t been very forthcoming with details on what role AVX serves in games that won’t run without support for AVX. Many of these titles have actually been updated post-launch so that PCs without AVX-capable CPUs can run the game, which may indicate that the inclusion of AVX wasn’t so crucial after all.

But regardless of the real utility of AVX for gaming, games that require these CPU instructions will not run if they are not supported. While not many games today mandate the ability to use AVX, it’s undeniable that the list of games that demand AVX support is getting longer. Prism’s upcoming support for AVX instructions means Snapdragon X-powered laptops won’t be locked out of certain games and left hoping for an update that removes AVX.



AVX Applications

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Emulated Application Experiences and Performance

Developers are also investing into making their apps more compatible with Prism emulation. Take Adobe for example, which has focused largely on improving emulation in addition to providing native support for Arm across its large app portfolio. Of the 11 Adobe apps that have official support on Arm, only Photoshop and Photoshop Lightroom run natively, and that support predates the launch of the Snapdragon X family. The other nine are emulated (two of these apps, Illustrator and InDesign, are in beta for Windows on Arm emulation).

While making native versions of its apps would probably be the best solution for performance, focusing on emulation has allowed Adobe to cover more ground more quickly. Working on shipping out native versions would certainly be more time consuming, inevitably delaying users from accessing Adobe’s software catalog.



Adobe Photoshop runs natively on Snapdragon X Series

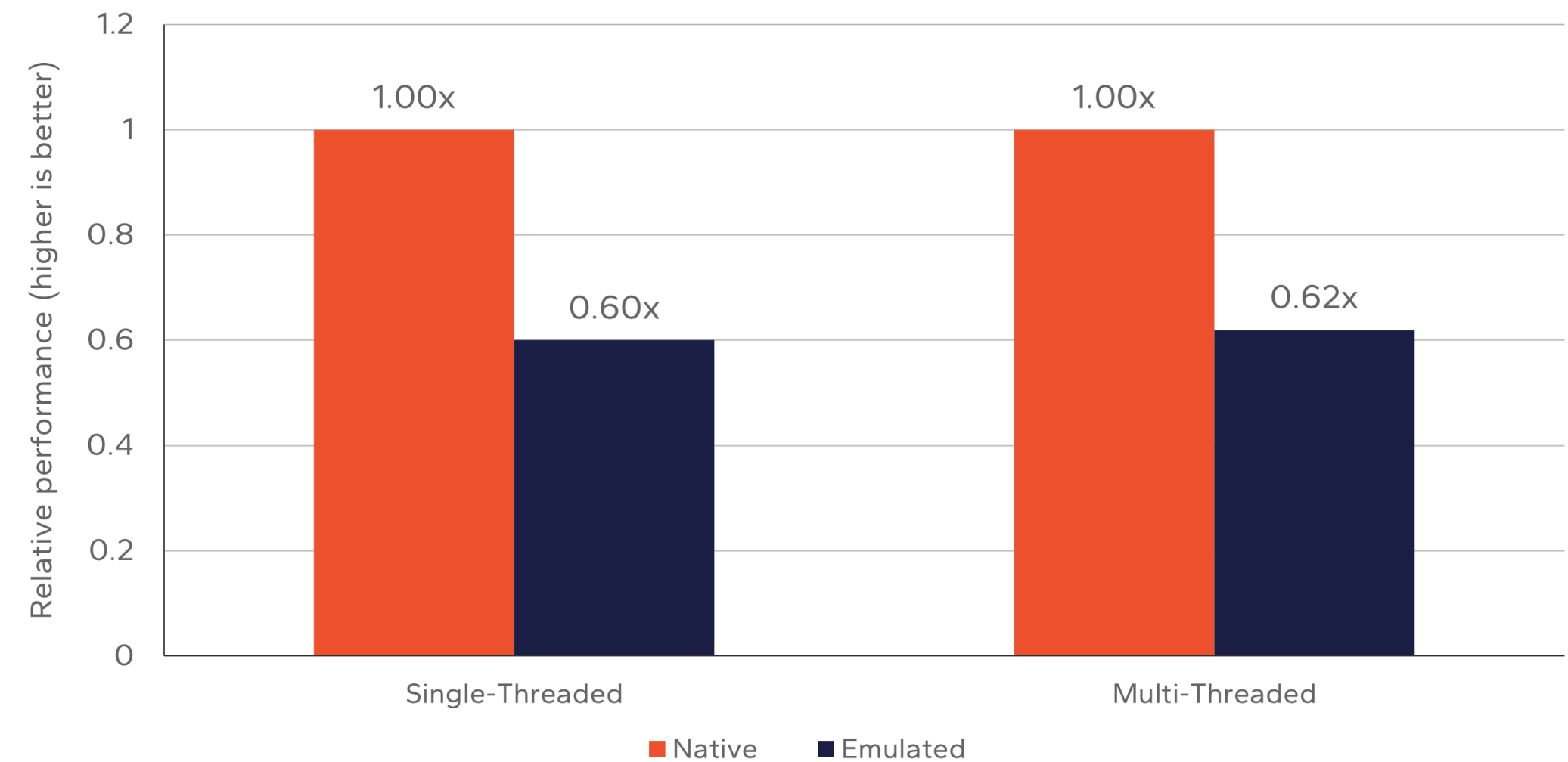
Native Applications Continue to Gain Momentum



Of course, running apps natively on bona fide Arm code is even better than emulating x86 software, and several developers have gone beyond emulation and have released Arm versions of their apps since the debut of the Snapdragon X family. Adobe, Blender, Epic Games, Proton VPN, and more; they're all investing into the Arm ecosystem with native apps.

Developers agree on why they should be porting their x86 apps to Arm: Snapdragon X laptop owners are becoming an increasingly larger slice of the PC pie. Not only that, there's also a future in Arm-powered Windows PCs that's more concrete than before after the launch of the Snapdragon X family. With this industry momentum, Arm CEO Rene Haas aims to capture 50% of the Windows PC market by the end of the decade. This target may be ambitious, but even achieving 10 to 20% market share in the same time frame would be significant for Arm and Qualcomm, and to software developers that need to update their apps and tools for the age of the Arm PC.

Cinebench 2024 - Snapdragon X Elite



While emulation via Prism gets users most of the compatibility and performance they need, native Arm versions are obviously the best. A native app can really unlock the true potential of the Snapdragon X and future Qualcomm processors, and users definitely notice. Take industry-standard benchmarking tool Cinebench 2024, which tests single- and multi-threaded CPU performance in Maxon One. We ran both the Arm and x86 versions on

an Acer Swift 14 AI equipped with the Snapdragon X Elite, and we saw over 60% better performance on the Arm version of the benchmark. Native ports undeniably offer users the best performance and feature support possible.

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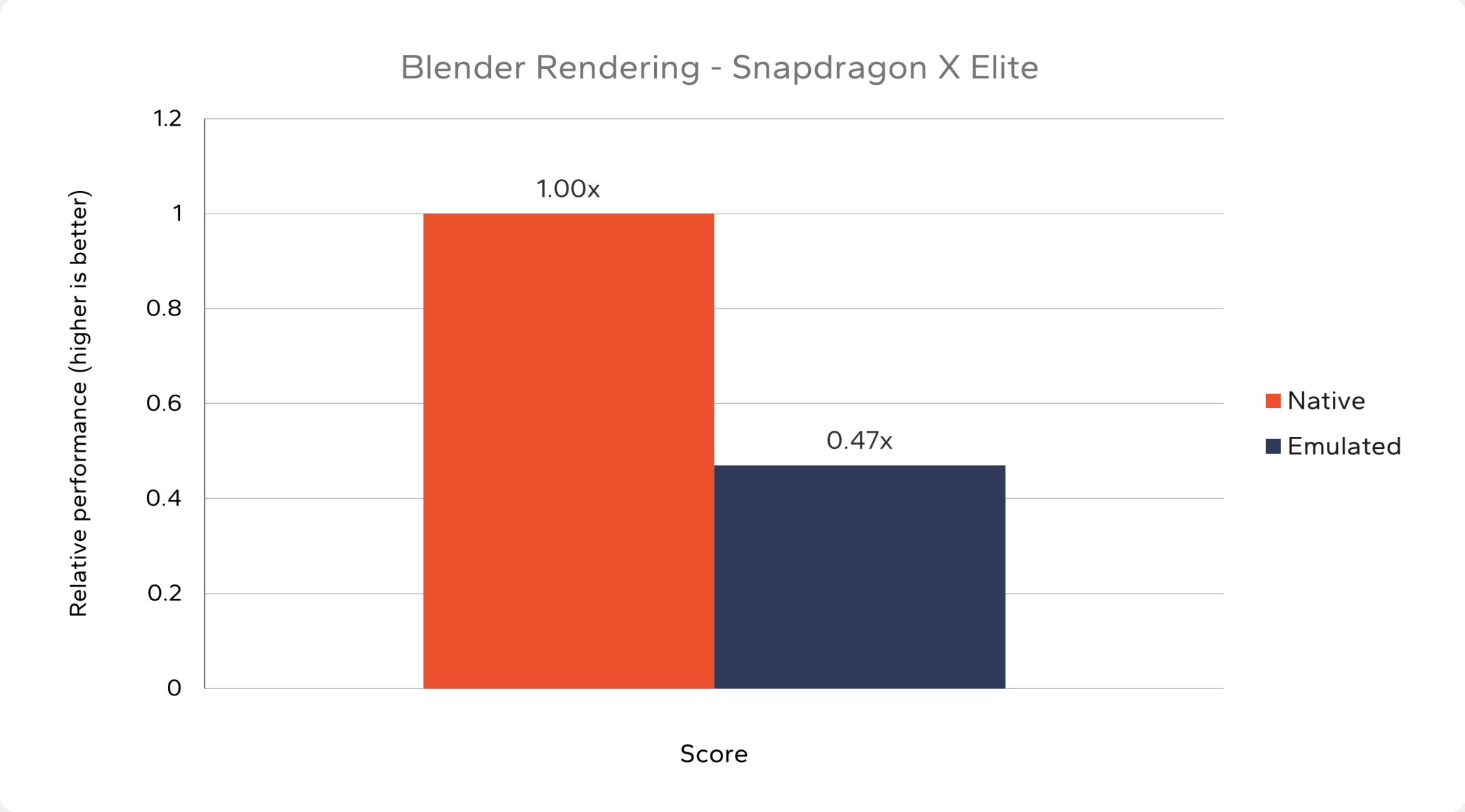
Native Applications Continue to Gain Momentum

An Arm version of 3D modeling app Blender had been in the works since 2022, and in May 2024 the first Arm build finally went live, just in time for the Snapdragon X family. Initial efforts to create Blender for Windows on Arm started with an ARM64EC-based version, which was intended to be a middle-of-the-road solution that would have allowed the Blender developers to gradually replace x86 code with true Arm code. However, compilation errors and issues with shaders convinced the developers that a native version was the right way forward.

Getting Blender to run natively on Arm processors wasn't easy, since the app has many dependencies, and apparently over 70 of them didn't have Arm versions. For most of these dependencies, creating an Arm-compatible version was simple, but a few posed significant

challenges. There were also hurdles in respect to OpenGL and DirectX drivers, but employees from Microsoft and Qualcomm stepped in to assist. And because Qualcomm joined the Blender Development Fund last year, we can expect further improvements and optimizations to come.

In the end, porting Blender to Arm made a big difference in respect to performance. Using the Monster scene that's packaged with the official Blender benchmark, we found that the Arm version rendered it in about half the time that the emulated x86 version took. Running Blender through Prism was certainly serviceable, but the performance on the native port is far superior.



“ Taking just over 1.5 years from start to finish, the journey to enable Blender on WoA devices has been a long one, marked with persistence, collaboration, and innovation. Despite various challenges - ranging from changing compilers out, to working out graphics stacks, and everything in between, Linaro (and its partners) has demonstrated its dedication and expertise.

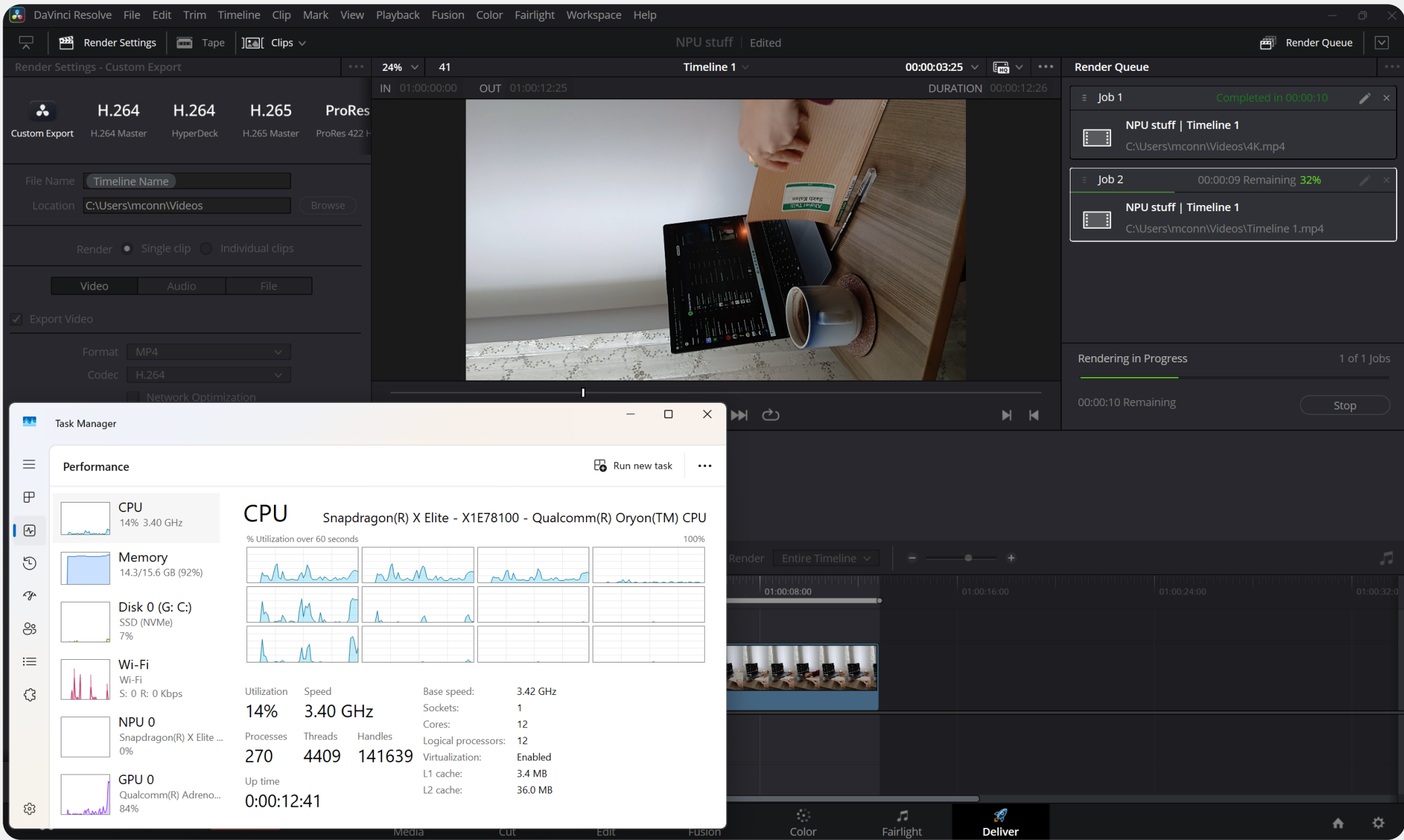
Source: <https://www.linaro.org/blog/blender-now-enabled-on-windows-on-arm/>

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Native Applications Continue to Gain Momentum

Another app that came out with an Arm port just in time for the Snapdragon X was Blackmagic Design’s DaVinci Resolve video editing software. Version 19 beta 3, released June 2024, featured Windows on Arm support, as well as specific optimizations for the Snapdragon X Elite and its CPU cores, integrated GPU, and NPU for AI. Blackmagic Design says Snapdragon X Elite users can enjoy up to 4.7 times better performance with DaVinci Neural Engine AI, indicating Arm support was anything but an afterthought.

DaVinci Resolve’s Arm users aren’t playing catch-up with Windows users either, as the latest update to the video editing app, version 20, featured Arm support as soon as it launched into public beta. That means Arm users are getting feature parity from day one, with Blackmagic Design explicitly pointing out that Snapdragon X Elite devices get full support for AI tools.



DaVinci Resolve runs natively on Snapdragon X Series

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Native Applications Continue to Gain Momentum

It’s hard to use a Windows PC without interacting with one of Google’s many apps at some point, whether that computer is running on x86 or Arm. One of Google’s most popular utility apps is Google Drive, a cloud-based storage solution that’s integrated with the company’s office programs, sort of a hybrid of Office and OneDrive by Microsoft. It’s available as a normal app and can also be accessed through a web browser.

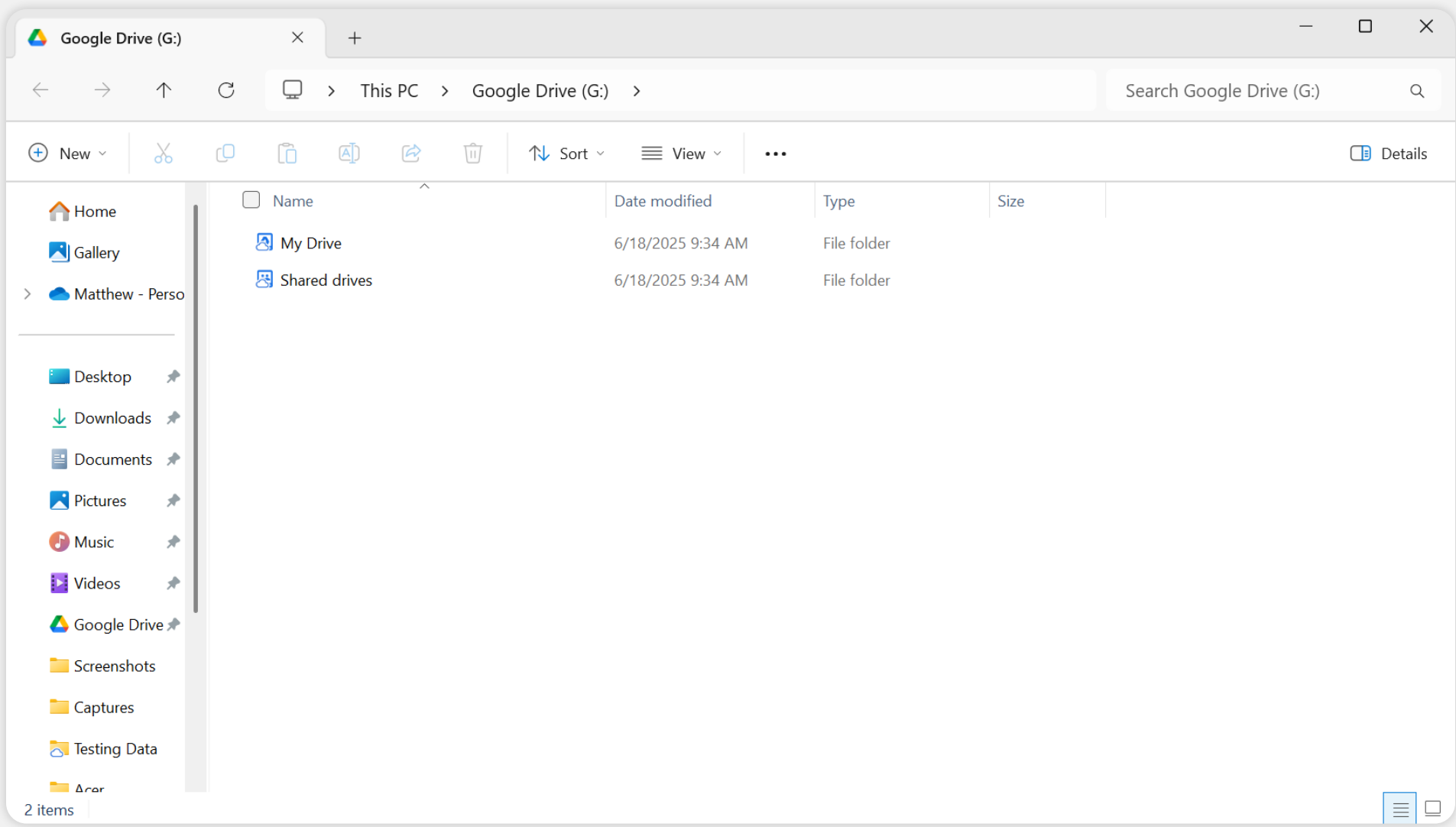
When Snapdragon X Elite laptops launched, the Google Drive app didn’t yet offer a native Arm version. Of course, users could just open up Chrome or any other web browser to get Google Drive, but the app allows Google Drive to pop up in Windows Explorer and allow users to store a local copy of files, similar to OneDrive. This is a critical feature in the event that a user can’t access the internet,

which is always needed to access Google Drive via a browser.

Fortunately for Windows on Arm users, Google released a beta version of Google Drive in November 2024, and finally launched the complete version in March. Google Drive was one of the last holdouts of mainstream apps that hadn’t yet received Arm support; now, there’s very few of these kinds of apps that won’t run natively on Snapdragon X processors.

“ Last year, we introduced a new beta that supports running Google Drive on Arm-compatible Windows PCs, and today we’re excited to announce this is now generally available. Compiled for ARM64, this release enables users to easily sync and store files online from Windows PCs powered by Snapdragon processors.

Source: <https://workspaceupdates.googleblog.com/2025/03/run-google-drive-on-arm-compatible-windows-pcs.html>



Google Drive runs natively on Snapdragon X Series

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Native Applications Continue to Gain Momentum

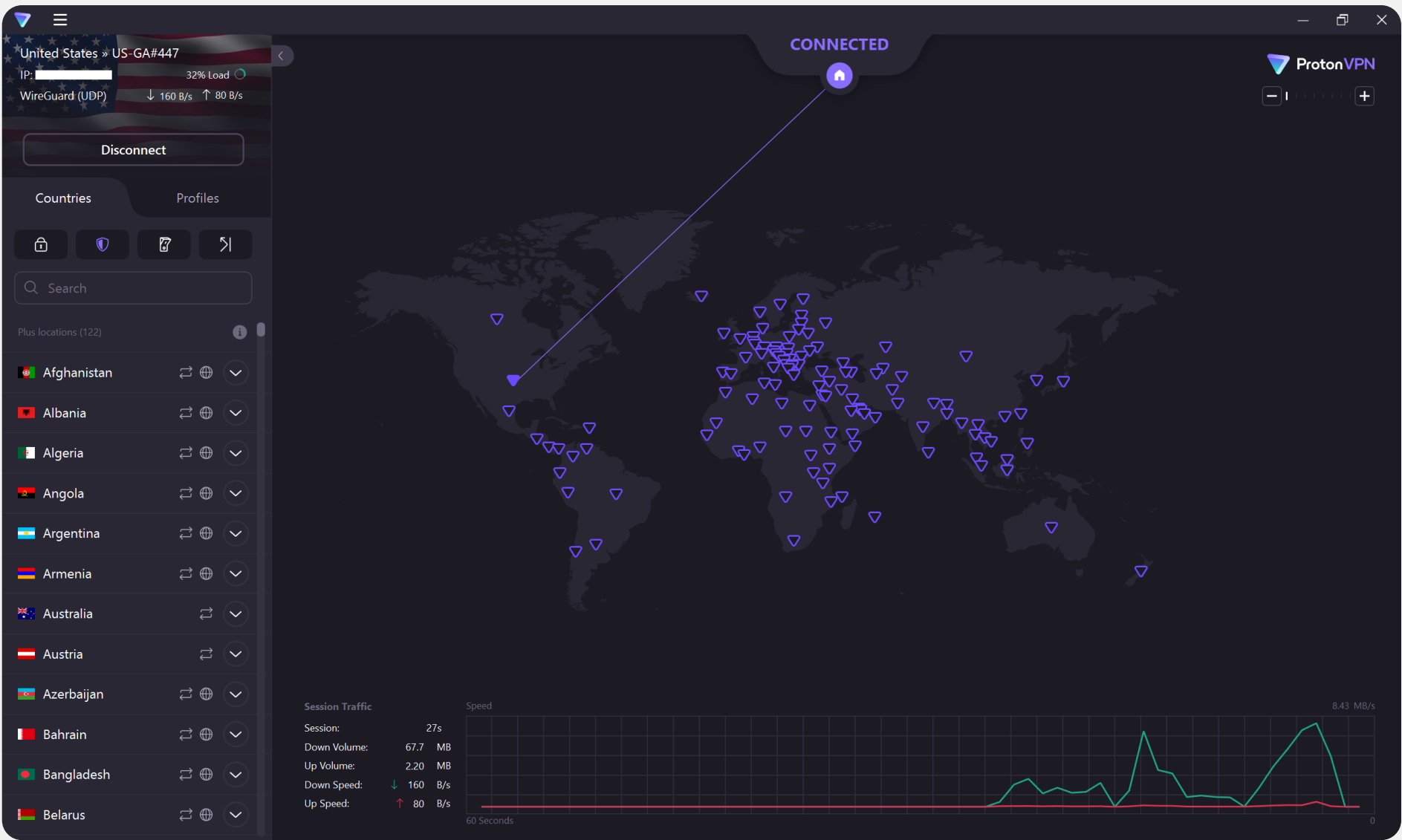
Virtual private networks, or VPNs, are becoming increasingly popular as a means to secure data on the internet, so it was significant that Proton VPN made its way to Windows on Arm in November 2024. The Arm version of Proton VPN works just like the x86 variant and has all the advanced features. (Worth noting that ExpressVPN and Nord VPN already supported Qualcomm-based Windows PCs.)

While the benefits of VPNs are well-known among consumers, they’re also very useful for businesses as well. Security is of course a big selling point and is arguably even more important to enterprises than it is to the average user, as companies often have much more sensitive information to safeguard. VPNs can also be used to create a virtual LAN network without the physical connections that are normally required, a big perk for wrangling multiple offices together and for also making sure remote employees are securely looped in.

The VPN company has a good amount of faith in the future of Windows PCs running on Arm, and said that Microsoft is in a “strong position” and that the Surface Laptop 7 would encourage the rest of the PC industry to join in and launch their own Arm-powered computers.

“At Proton VPN, our mission is to make privacy the default for everyone. Windows remains by far the most popular desktop platform in the world, and — moving forward — an increasingly large number of Windows devices will be powered by ARM. It’s therefore natural for Proton VPN to support all our community with a native (so no emulation layer required) Windows ARM app.

Source: <https://protonvpn.com/blog/windows-arm>

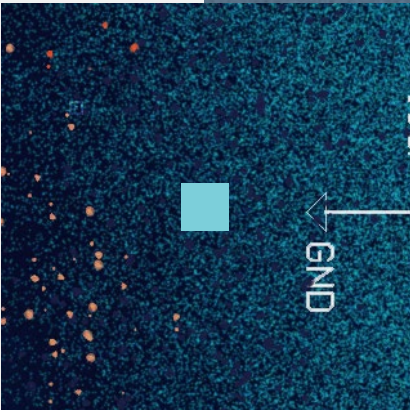
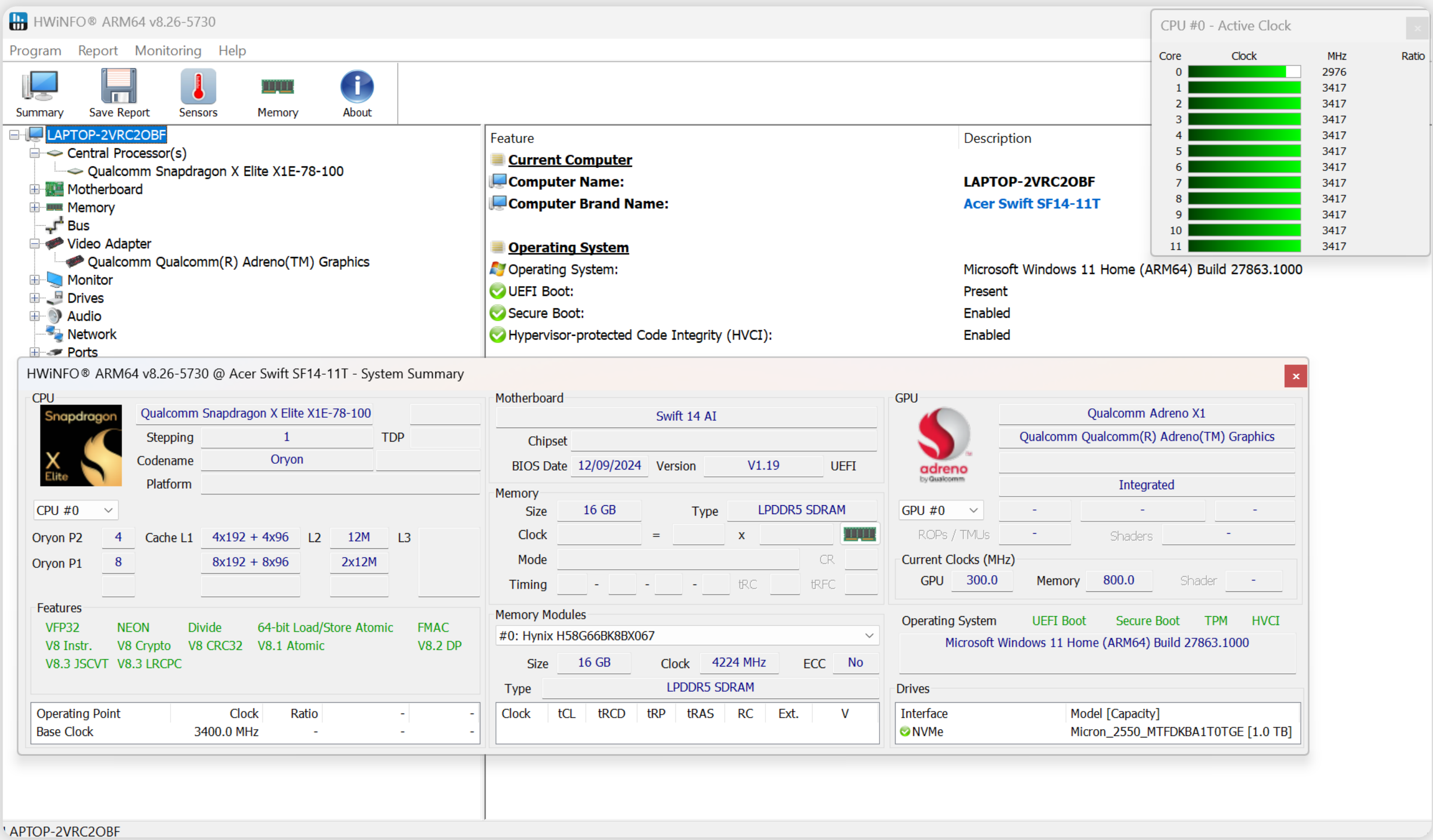


Proton VPN runs natively on Snapdragon X Series

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Native Applications Continue to Gain Momentum

Though perhaps not as essential as Google Drive or Proton VPN, HWInfo64 is a hardware monitoring and diagnostics tool that is regularly used by PC enthusiasts. If someone wants to know the clock speed of each core in their CPU, or find the total amount of power consumed, or see how hot things get during a heavy workload, apps like HWInfo64 are very useful, and in August 2024 the app finally made the jump to support Snapdragon.



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Native Applications Continue to Gain Momentum

Musicians are extremely reliant on computers and specialized apps to create modern music, and any PC lacking support for key software would be a deal-breaker for anyone in the music industry. Well-crafted drivers in particular are crucial for musicians, because the latency between the software and the hardware needs to be as low as possible, and audio quality also needs to be good too. Naturally, the CPU plays a big part in ensuring latency is low and quality is high, so having native drivers is much more ideal than relying on Prism.

The problem for the music industry is that drivers for musical devices are developed by the manufacturer, which is less than ideal for a ton of reasons. The most salient issue for Arm users is that a device more than likely only has x86 drivers, which could make using such a device impossible. It's possible to use

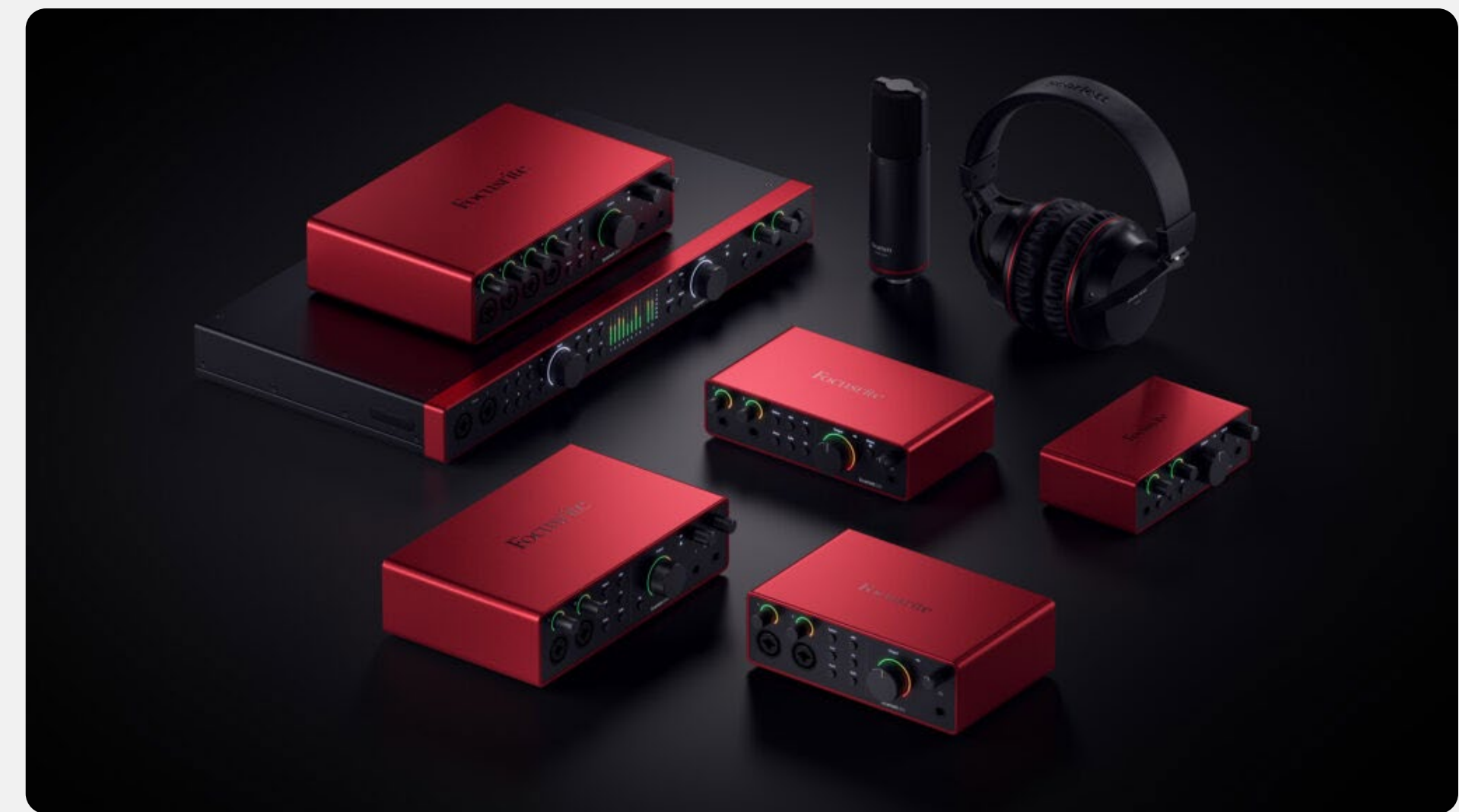
a solution like ASIO4All as an alternative when no driver is available (even x86 users may have to do this if there are no drivers at all), but it's still not great.

To solve this situation, Microsoft is working with Qualcomm and Yamaha to develop a universal driver using the ASIO standard, and the goal is to make it plug-and-play for musicians and their hardware. This driver is coming to both the x86 and Arm versions of Windows 11, but Arm users will receive access first. Additionally, Focusrite and Yamaha plan on creating native Arm drivers for their own devices to drive down latency even further.

(Focusrite driver support is coming soon; RME, Audient, and Yamaha/Steinberg have already released compatible drivers.)

“With the new MIDI stack and in-box ASIO, these three killer DAW apps, and two families of audio interfaces with optimized drivers for Arm64, we're set up to help make the experience of creating music amazing on Windows.

Source: <https://devblogs.microsoft.com/windows-music-dev/making-music-on-windows/>



Focusrite audio devices, which offer drivers for Windows on Arm

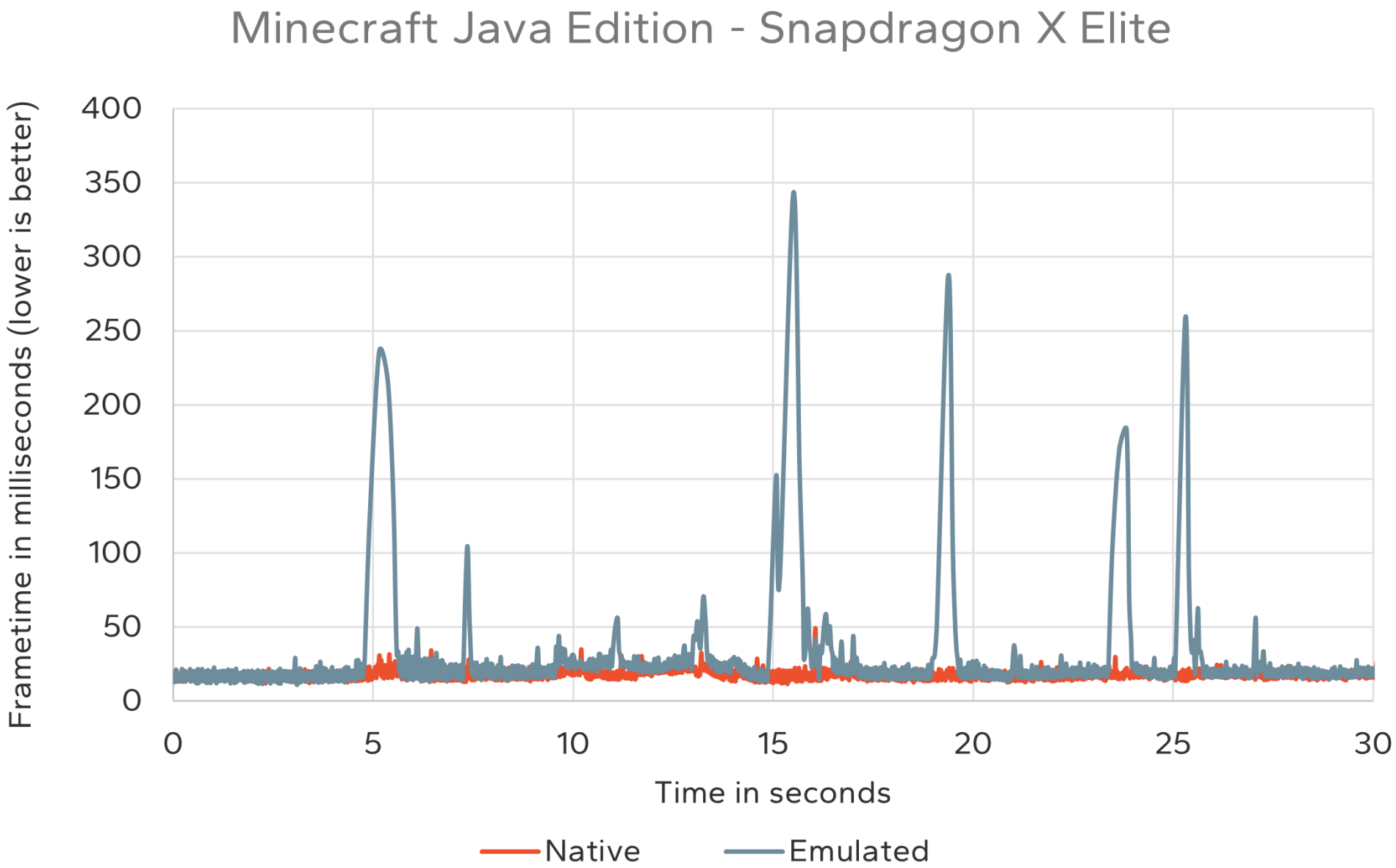
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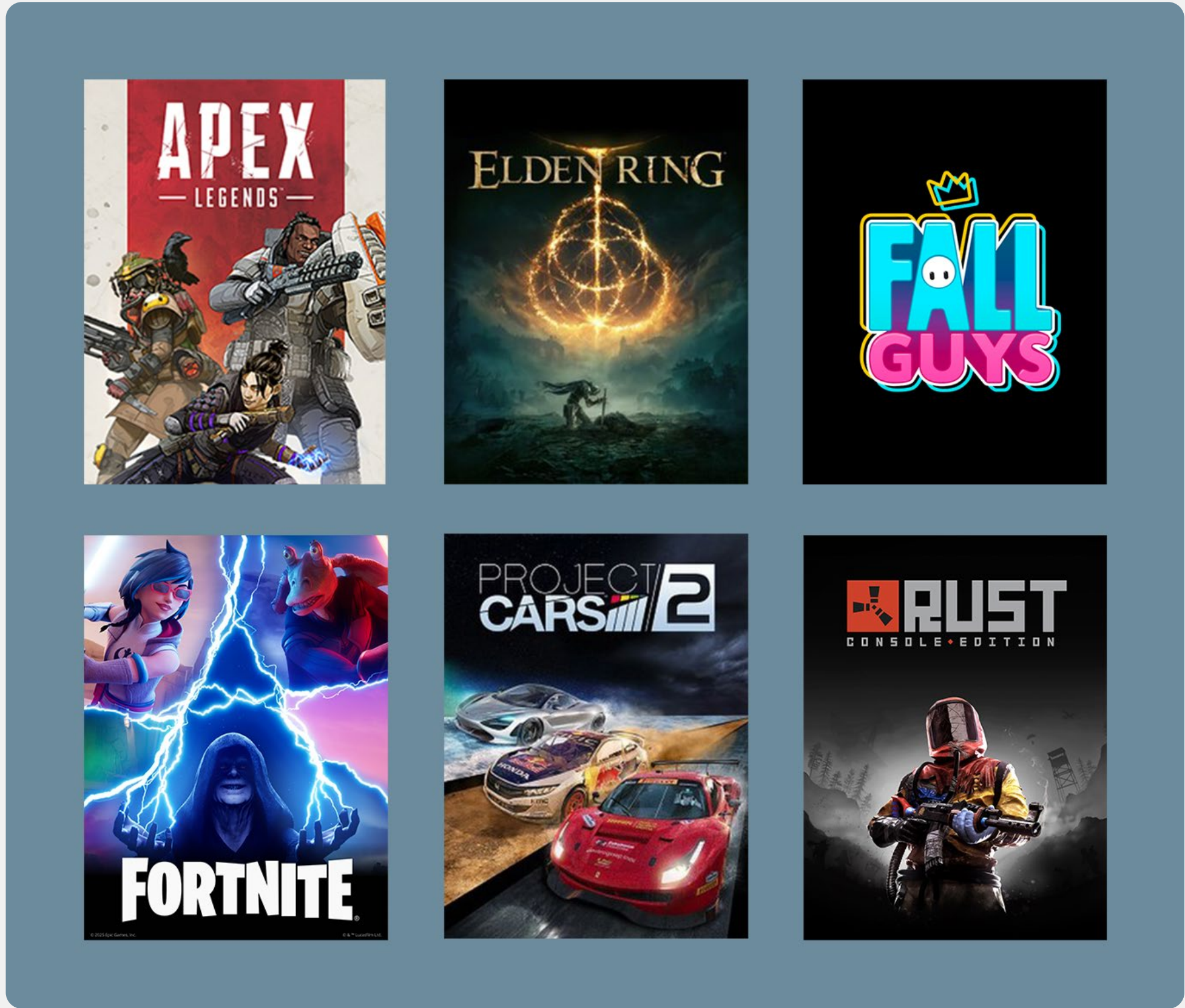
Minecraft is one of the most popular games in the world, and since it's owned and developed by Microsoft itself, it's not surprising that the title has a Windows on Arm version for both the Java Edition and the Bedrock Edition. It's almost a necessity for the Bedrock edition to have support for Arm processors, since it's the universal version of Minecraft rewritten in C++ that is used for consoles and smartphones. The Java Edition stems from the original PC game that was written in Java and has been updated since 2009.

It may seem redundant to offer two versions of Minecraft for Arm users, but the Java Edition is steeped in nearly two decades of traditional x86 PC gaming, and it's where most of Minecraft's PC community exists. Additionally, community-created mods that anyone can install only exist on the Java Edition, and mods are a must-have for many players.

Of course, Prism can emulate the x86 version of Minecraft: Java Edition, and while it is playable, the Arm version offers clearly better performance. When running the game natively, the Acer Swift 14 AI could muster 57 frames per second at 1080p resolution with all other settings set to the minimum. But via emulation, the average framerate was only 45, and frame pacing was far more inconsistent, leading to noticeable stutters. A native version of the Java Edition definitely makes enjoying classic Minecraft easier for Snapdragon X users.



Native Applications Continue to Gain Momentum



Games that use Easy Anti-Cheat

One of the biggest challenges for gaming on Snapdragon X devices outside of performance has been anti-cheat software that requires kernel level OS access, in particular Easy Anti-Cheat, developed by Epic Games and used in many of the most popular multiplayer games in the world. Easy Anti-Cheat doesn't yet have a native port, making it impossible for users of Arm-powered Windows laptops to play Fortnite, Apex Legends, and hundreds of other titles, even if the game itself runs just fine.

However, an Arm version of Easy Anti-Cheat is in the works as of March 2025, and will be available later in the year. Once developers get their hands on this Arm-compatible version of Easy Anti-Cheat and implement it into their games, it will open up a whole new world of fun and easy-to-run games that have millions of players between them.

The Future of Windows and the PC

One of the biggest obstacles in the way of Arm achieving success in the PC market was lack of support for apps, so whittling down the amount of incompatible and poorly performing apps was a must for Qualcomm, Microsoft, and others. Fortunately, steady progress is being made towards making the Windows software ecosystem more friendly to the Snapdragon X family and Arm processors in general.



There were already quite a few developers ready with Arm support for their apps, at least in the form of a public beta, when the Snapdragon X Elite finally debuted in the summer of 2024. That number has only gone up since then, enhancing the experience for Windows on Arm users ranging from the most casual consumers to true professionals. Arm support on these apps will be a normal thing going forward, whether it's Blender, Google Drive, or Proton VPN.

Even in the case that an app doesn't have official Arm support, Microsoft's Prism emulator is able to bridge that gap. Prism can't guarantee peak performance an app would normally have, but it does at least make unsupported apps usable. Even PC gaming, which has been dominated by x86 processors since the very beginning, becomes possible on the Snapdragon X Elite thanks to Prism, a nice bonus for a chip that isn't meant to deliver an amazing gaming experience.

That's just the current state of affairs; things look good for Snapdragon PCs for the foreseeable future too. More developers are planning on making their apps Arm-compatible or enhancing already existing support. Adobe has used Prism as a stopgap for some of its apps, but plans on gradually making the full transition to Arm. Microsoft itself is pushing the Arm ecosystem forward, both by increasing the scope of native Arm support and by improving Prism's compatibility with x86 software.

Establishing a new platform, like Qualcomm and Microsoft have done with the Snapdragon X Elite and Windows 11, can be feast or famine. If things go great and user adoption is swift, developers will be more encouraged to develop Arm ports, which in turn convinces more users to switch to Arm, creating a positive feedback loop. But a negative feedback loop is a threat if the momentum is lost; less users entering the Arm PC ecosystem means less developer interest in improving support for Arm, which would just depress the adoption rate even more.

Fortunately for Qualcomm and Microsoft, the state of Windows on Arm is clearly showcasing momentum and growth to temper any more concerns about mass software compatibility. In just under a year, the Windows on Arm experience has seen greatly improved software compatibility and usability. Now, the focus can begin to shift more towards ironing out bugs and improving performance. It's clear from our experiences that the future is really 'now' and general purpose consumers have no reason to avoid Snapdragon-based Windows platforms in market today.

It's not just about the Snapdragon X family; successfully working out these problems will make a strong foundation for future generations of Arm CPUs for the PC, which we expect to continue to be on equal footing with the x86 platforms going forward.

Important Information About this Report

Contact Information

Signal65 | signal65.com | info@signal65.com

Contributors

Matthew Connatser

Technical Analyst - Signal65

Ken Addison

Client Performance Director - Signal65

Publisher

Ryan Shrout

President/GM - Signal65

Inquiries

Contact us if you would like to discuss this report and Signal65 will respond promptly.

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Signal65 provides research, analysis, advising, and lab services to many high-tech companies, including those mentioned in this paper. Research of this document was commissioned by Qualcomm.

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About Signal65

Signal65 exists to be a source of data in a world where technology markets and product landscapes create complex and distorted views of product truth. We strive to provide honest and comprehensive feedback and analysis for our clients in order for them to better understand their own competitive positioning and create optimal opportunities to market and message their devices and services.



System Configurations

Acer Swift 14 AI	
CPU	Snapdragon X Elite 78-100
Graphics	Qualcomm Adreno X1-85
RAM	16GB LPDDR5X-8448
Storage	1TB Micron 2550 MTFDKBA1T0TGE
Display	14.5" 2560x1600
System BIOS	1.24
Operating System	Windows 11 27863.1000
Windows Power Mode	Best Performance
OEM Power Mode	Performance
Virtualization Based Security	Enabled

Applications Used

Adobe Creative Cloud/Photoshop 26.6/Premiere Pro 25.2	Hitman: World of Assassination	Proton VPN 4.1.10
Cinebench 2024	Minecraft Java Edition 1.21.5	HWInfo64 8.26-5730
DaVinci Resolve 20	Blender 4.4	
PugetBench 1.3.18	Google Drive 107.0.3.0	



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