



High-throughput simulation performance

Up to 35% less time to
complete CFD simulations
on Ansys jobs

Handle complex, multi- application workflows more efficiently

Up to 107% more frames
per second rendering in
SPECviewperf 15

Accelerated analysis and modeling

Up to 43% less time to add
a visual asset to a client
presentation in AutoCAD

Dell workstations: Power your toughest workflows

Across real-world engineering, creative, and development workloads, Dell Pro Max mobile workstations delivered multiple performance advantages over competitors

The demands of modern engineering, creative, and development workflows require reliable, high-performance solutions that can keep pace with evolving industry standards. Dell mobile workstations are designed to meet these challenges, offering a compelling combination of power, versatility, and innovation.

We assessed several configurations of Dell™ Pro Max workstations and compared them to similar configurations of devices in each category from HP and Lenovo® (choosing the most apples-to-apples comparison) and found that the Dell Pro Max systems we tested offered significant wins in both industry-standard benchmarks and real-world application testing. Putting powerful workstations into your team's hands can help them breeze through the workday by cutting down on time spent waiting for tasks to process, increasing productivity, and speeding the time to project completion.

Continue reading to find the specific advantages that various configurations of Dell Pro Max workstations provided over competing devices, and their potential impact for real-world professionals.

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About Dell Pro Max and Precision workstations



Dell mobile workstations are built for creators, engineers, software developers, and power users who need great performance, combining the latest Intel® Core™ Ultra or AMD® Ryzen™ AI processors with workstation-grade NVIDIA® RTX™ PRO graphics—or professional-grade Intel and AMD integrated GPUs—to handle complex design, simulation, and AI-accelerated tasks.¹ These mobile workstations emphasize productivity anywhere, offering a range of displays from 14 to 18 inches, fast memory configurations, and high-speed PCIe® SSD storage for smooth multitasking and rapid data access.

Visit the [Dell website](#) to learn more about available Dell Pro Max configurations.

Dell Pro Max 16 with an AMD Ryzen AI 9 HX PRO processor and an NVIDIA Blackwell GPU: Unlock new possibilities

The Dell Pro Max 16 with an AMD Ryzen AI 9 HX PRO processor and NVIDIA Blackwell GPU suits power users, technical engineers and creators who create, design, analyze, or build complex simulations—and need that performance wherever they work.

For this comparison, we equipped 16-inch Dell Pro Max, HP ZBook 8 G1i, and Lenovo ThinkPad® P16s mobile workstations with the configurations that these kinds of power users and tech engineers would need: high-performance CPUs, discrete NVIDIA GPUs, 64 GB of memory, and a minimum of 1 TB of storage. (It is worth noting that the only discrete GPU the HP ZBook 8 G1i offers is the Ada Generation NVIDIA GPU.²) We selected comparable devices and equipped them with the best available specifications.

Dell Pro Max 16

with a 12-core, 24-thread AMD Ryzen AI 9 HX PRO 370 processor, an NVIDIA RTX PRO 1000 Blackwell Generation Laptop GPU with 8 GB of VRAM, and 64 GB of 8,000 MT/s LPDDR5X memory

HP ZBook 8 G1i

with a 16-core, 16-thread Intel Core Ultra 9 285H processor, an NVIDIA RTX 500 Ada Generation Laptop GPU with 4 GB of VRAM, and 64 GB of 5,600 MT/s SODIMM DDR5 memory

Lenovo ThinkPad P16s Gen 4

with a 16-core, 16-thread Intel Core Ultra 7 265H processor, an NVIDIA RTX PRO 1000 Blackwell Generation Laptop GPU with 8 GB of VRAM, and 64 GB of 6,400 MT/s SODIMM DDR5 memory

Note that the graphs in this report use different scales to keep a consistent size. Please be mindful of each graph's data range as you compare.

Powerful benchmark results

Higher **Cinebench** scores indicate stronger overall processing performance, especially for demanding tasks that benefit from using multiple cores. Tasks such as content creation, simulations, and complex software workflows can benefit from stronger processing performance. Unfortunately, we were unable to quantify the HP ZBook 8 G1i mobile workstation's GPU capabilities because Cinebench 2026, which runs more intense workloads than Cinebench 2024, doesn't support Ada Generation GPUs.³

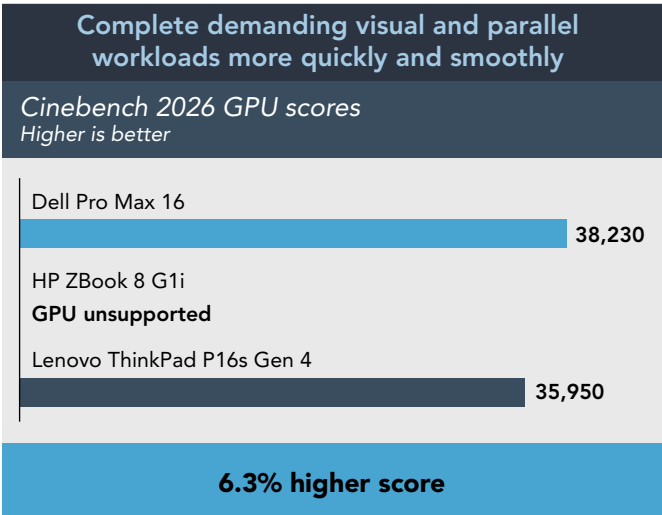


Figure 1: Cinebench 2026 GPU results. Higher is better. Source: PT.

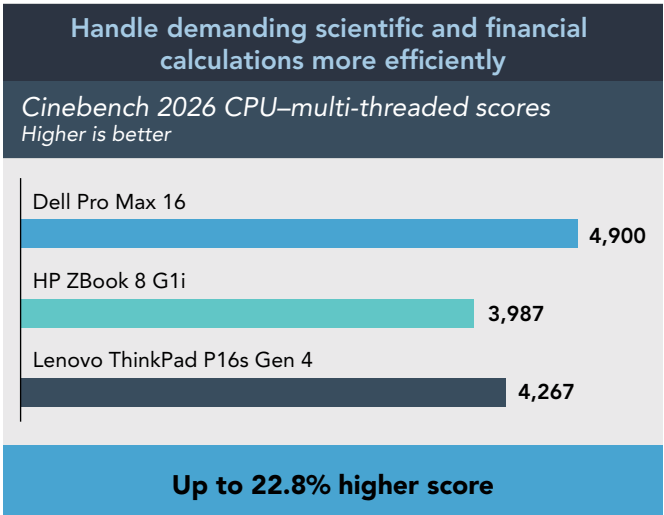


Figure 2: Cinebench 2026 CPU multi-threaded results. Higher is better. Source: PT.

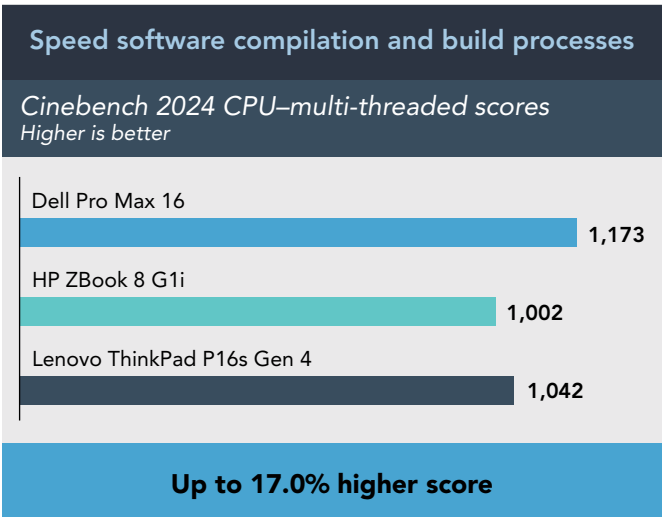


Figure 3: Cinebench 2024 CPU multi-threaded results. Higher is better. Source: PT.

Higher **SPECviewperf** scores, measured in frames per second (FPS), indicate stronger graphics performance within the professional applications represented by each workload. In practical terms, higher scores mean complex 3D models animate more smoothly, rotate more quickly, and respond with less lag when you're manipulating them onscreen. Each workload win reflects improved rendering speed and more fluid navigation in real-world professional software.

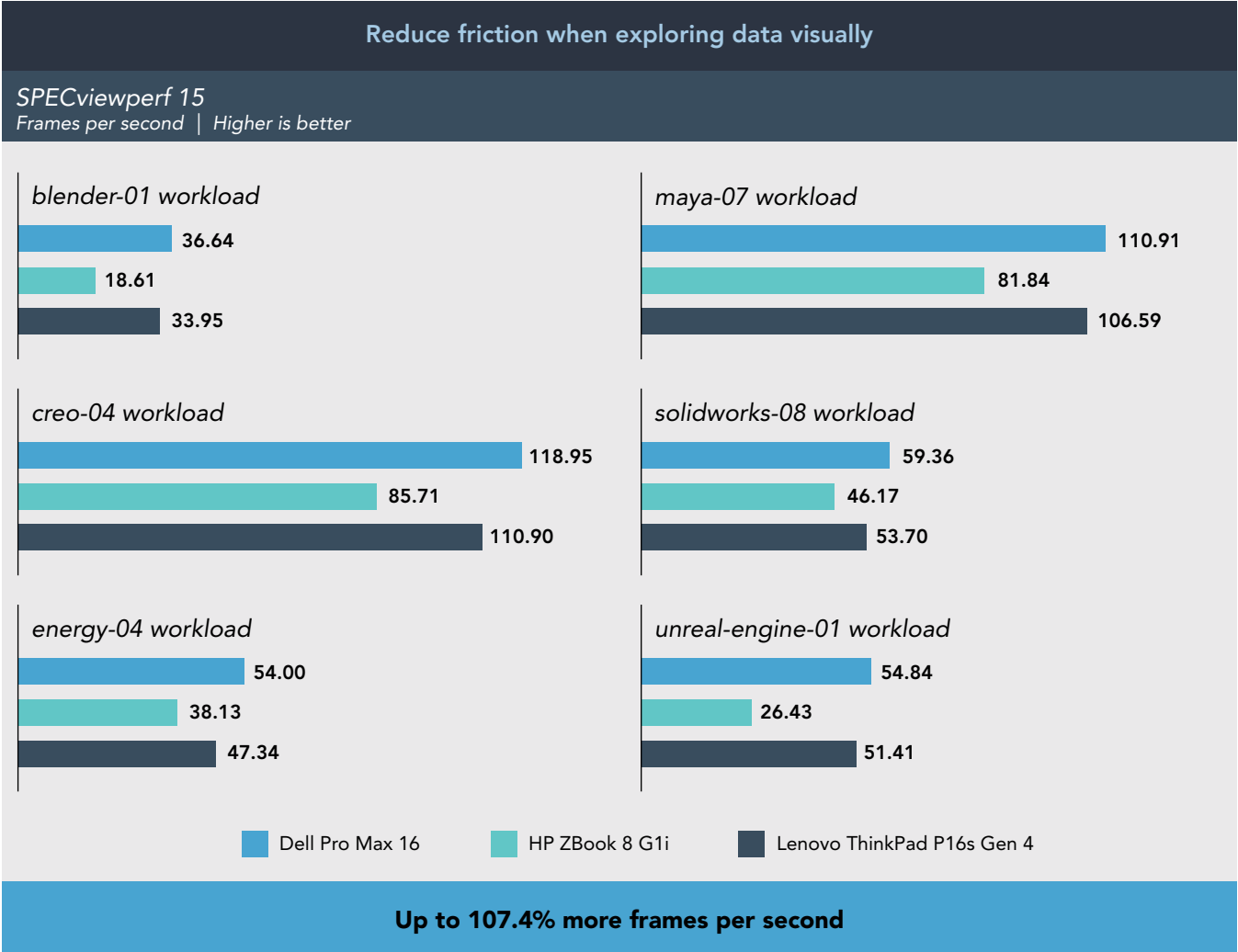


Figure 4: SPECviewperf 15 results. Higher is better. Source: PT.

Higher **SPECworkstation** scores, measured in samples per second, reflect faster performance in data- or pixel-intensive workloads. In real-world use, higher scores translate to quicker completion of tasks such as 3D modeling, video encoding, image processing, or engineering simulations. Systems that perform well in this benchmark also tend to handle multiple applications simultaneously with greater efficiency and responsiveness.

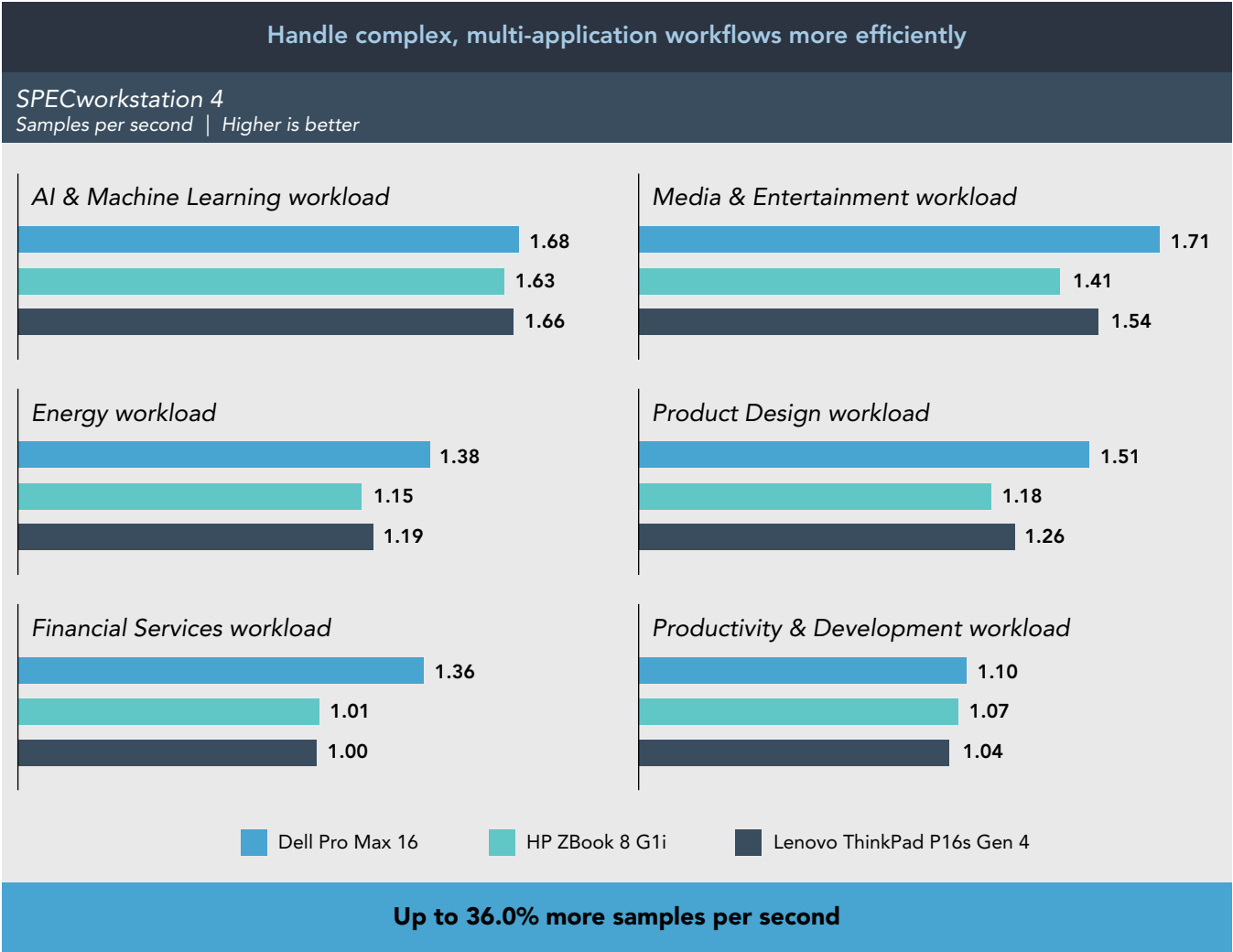


Figure 5: SPECworkstation 4 results. Higher is better. Source: PT.

Real-world application results

In addition to running benchmarks, we also performed and timed several representative tasks in a range of real-world applications. We found that this Dell Pro Max 16 hardware configuration completed AutoCAD, SOLIDWORKS, and Oracle® Crystal Ball tasks in less time than the HP ZBook and Lenovo ThinkPad mobile workstations we tested.

Design and drafting professionals depend on **AutoCAD** to create precise 2D and 3D drawings, technical schematics, and layout plans that drive manufacturing and construction workflows. We completed the following tasks:

- **Import IGES/cylinder head assembly:** We loaded a complex mechanical engine component (a cylinder head assembly) into AutoCAD. This is typically done for mechanical design review, to add dimensions or annotations, to create drawings from 3D geometry, or to use the model in a larger assembly.
- **Render kitchen scene:** We turned a 3D kitchen drawing into a realistic image that looks like a photograph of the finished space. Teams might complete render tasks like this to create visuals for proposals or approvals, evaluate design choices, or move technical drafting to visual storytelling.

While all three mobile workstations completed the .iges file transfer task in roughly the same timeframe, the Dell Pro Max 16 edged out the competition in the more complex 3D visualization task. This means that Dell Pro Max 16 can make a big difference on the most complex tasks, speeding up demanding workflows that engineers complete again and again for quicker time to project completion.

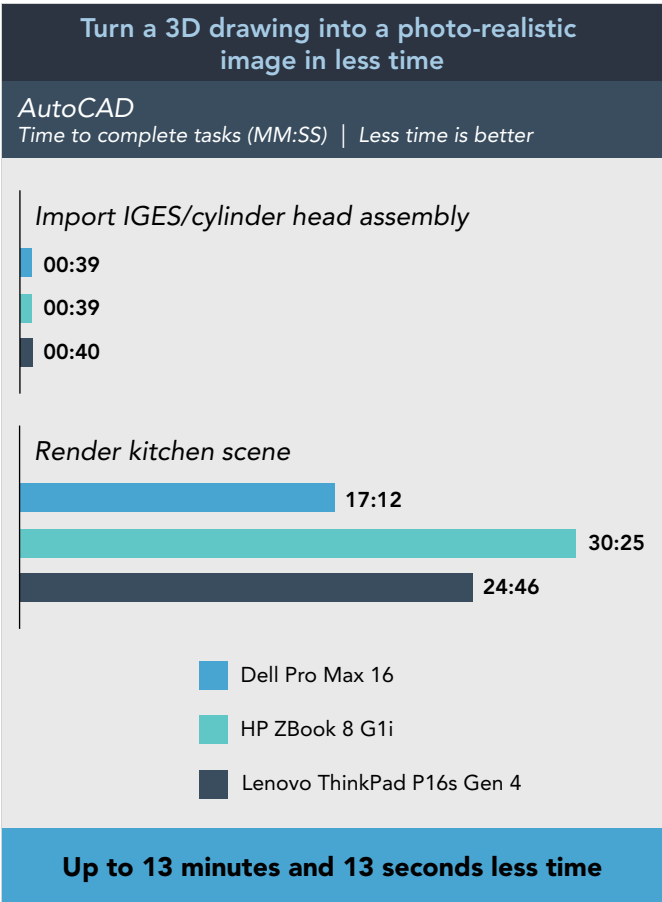


Figure 6: Time to complete two tasks in AutoCAD. Lower is better. Source: PT.

SOLIDWORKS enables CAD and engineering teams to manage complex designs, evolve ideas into products, and simulate real-world behavior in virtual test environments. We chose two common SOLIDWORKS tasks to show the performance advantages the Dell Pro Max 16 brings to this work compared to the HP ZBook and Lenovo ThinkPad mobile workstations:

- **Calculate mass/high accuracy:** We computed physical properties of a part. Teams use this data when accuracy is critical for engineering, manufacturing, or validation decisions.
- **Visualize/render assembly:** We turned a complete product assembly into a photo-realistic image that looks like the finished product. This is valuable for marketing and sales visuals, customer presentations and proposals, and concept reviews and design sign-offs.

As with the AutoCAD tasks, the Dell Pro Max 16 completed the 3D visualization task faster than the competition. Task frequency varies by role and development stage; some users may render images far more frequently than they perform mass calculations, and vice versa.

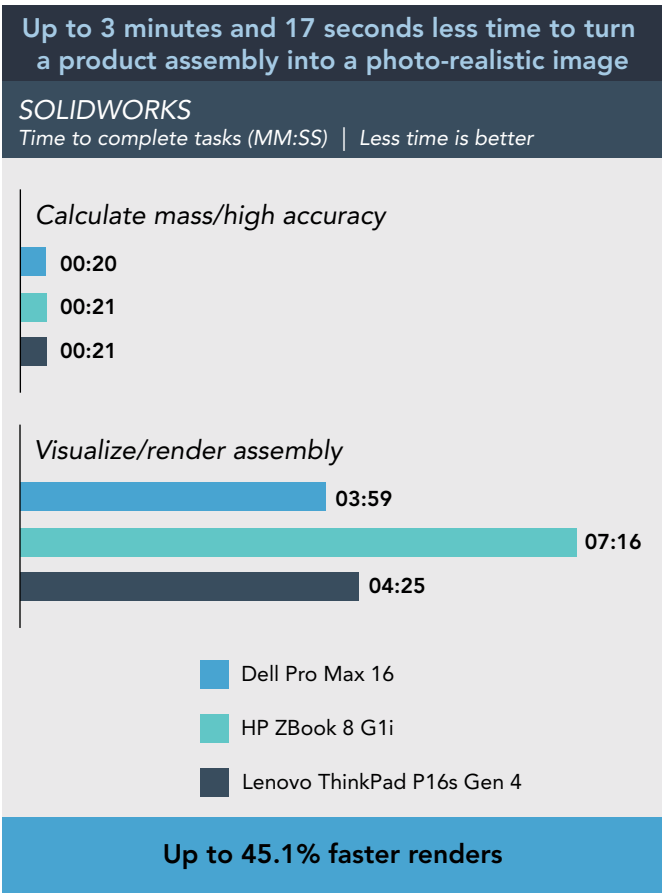


Figure 7: Time to complete two tasks in SOLIDWORKS. Lower is better. Source: PT.

Oracle Crystal Ball is a spreadsheet-based application for risk analysis, Monte Carlo simulation, and financial optimization, delivered as an add-in for Microsoft Excel. According to Oracle, Crystal Ball provides “unparalleled insight into the critical factors affecting risk” and helps users “make the right tactical decisions to reach... objectives and gain a competitive edge—even in an uncertain market.”⁴

To evaluate performance, we measured how long each mobile workstation took to complete three Oracle Crystal Ball models:

- **Portfolio allocation revisited (optimization):** Optimizes a financial portfolio by balancing risk, return, and additional variables.
- **Inventory system (optimization):** Models a continuous review and reorder inventory policy, accounting for lead times on outstanding orders.
- **Sales projection (trend chart):** Simulates three years of sales data and generates a trend chart to analyze forecast relationships.

While the Dell Pro Max 16 advantages in this Oracle Crystal Ball comparison amount to only a few seconds per run, you would rarely perform these tasks in isolation. For demanding computations, modeling, and simulations, even modest time savings can compound, resulting in smoother and more efficient workflows. For analysts running Monte Carlo models, faster Crystal Ball runs mean less waiting between iterations and quicker decision-making on risk, forecast, and inventory scenarios.

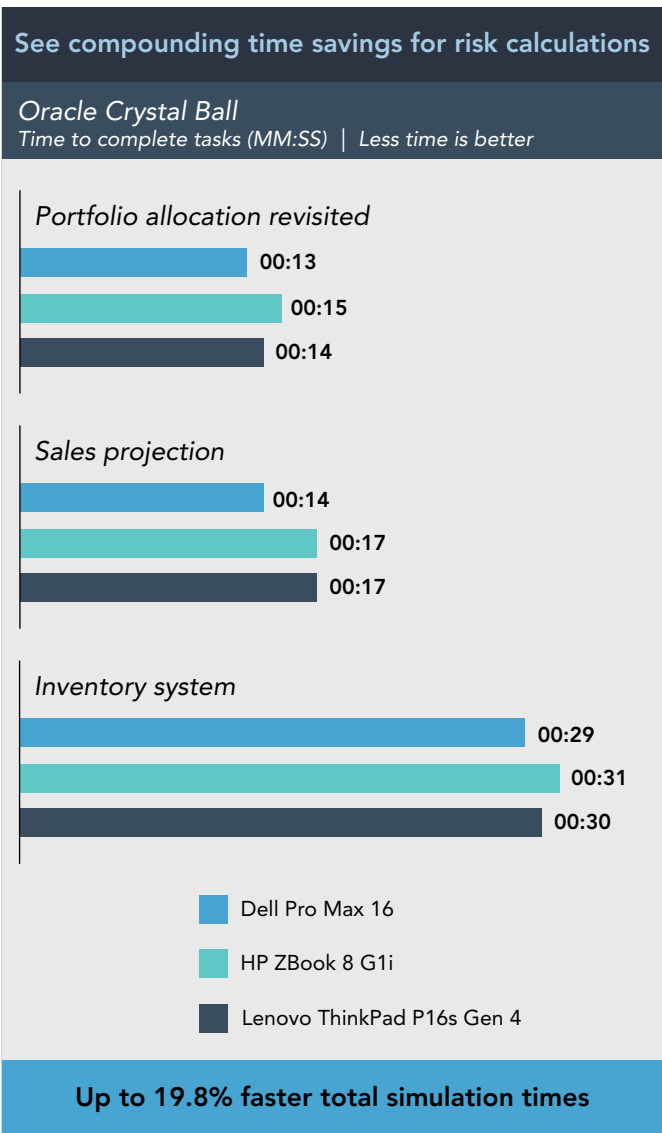


Figure 8: Time to complete three tasks in Oracle Crystal Ball. Lower is better. Source: PT.

Dell Pro Max 16 with an Intel Core Ultra 9 processor and an NVIDIA Blackwell GPU: Make the most of your investment

This Dell Pro Max 16 configuration fits the needs of tech engineers and power users whose productivity depends on reliability, certified graphics, and parallel processing, but who don't need top-end simulation or massive GPU memory.

We equipped 16-inch Dell Pro Max, HP ZBook X, and Lenovo ThinkPad P16v mobile workstations with the same high-performance Intel Core Ultra 9 285H processors, NVIDIA RTX PRO 2000 Blackwell Generation Laptop GPUs, and 1 TB of storage. The main difference between these systems was memory type and speed, because the Dell Pro Max 16 offers higher memory speed than the competitors:

Dell Pro Max 16	HP ZBook X G1i	Lenovo ThinkPad P16v Gen 3
with 128 GB of 6,400 MT/s CSODIMM DDR5 memory	with 128 GB of 5,600 MT/s SODIMM DDR5 memory	with 128 GB of 5,600 MT/s CSODIMM DDR5 memory

We highlight only the results where meaningful differences emerged. For a full breakdown of our findings, see the [science behind the report](#).

Powerful benchmark results

As we expected, all three workstations delivered comparable results in the **Cinebench** GPU and single-threaded CPU tests, reflecting similar performance in lightly threaded and graphics-focused workloads. Notably, however, the Dell Pro Max 16 pulled well ahead of the HP ZBook X G1i in the Cinebench 2026 CPU multi-threaded benchmark. This advantage in multi-threaded performance can translate into smoother multitasking, faster completion of professional and technical workloads, and improved efficiency for content-creation applications that can fully leverage multiple CPU cores.

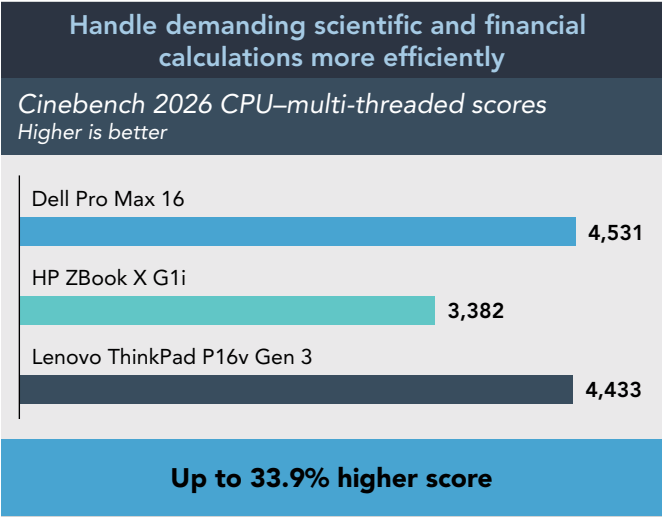


Figure 9: Cinebench 2026 (CPU multi-threaded) results. Higher is better. Source: PT.

SPECviewperf reports performance in frames per second (FPS), with higher scores showing stronger graphics performance in the professional applications that each workload represents. While all three workstations delivered broadly comparable performance across most SPECviewperf 15 workloads, the Dell Pro Max 16 consistently scored higher than the Lenovo ThinkPad P16v Gen 3. We observed the most pronounced advantages in the workloads enscape-01 (4.5 percent), solidworks-08 (5.2 percent), and snx-05 (7.8 percent), highlighting measurable gains in graphics-intensive professional use cases.

SPECworkstation reports performance in samples per second, with higher scores reflecting faster execution of data- or pixel-intensive workloads. Across most workloads, the three systems reached near parity, though here, the Dell Pro Max 16 consistently outscored the HP ZBook X G1i. The largest performance advantages appeared in Financial Services (9.1 percent) and Product Design (10.4 percent), with an additional lead in Productivity & Development (5.6 percent). These wins highlight the Dell system’s strength in compute-heavy and multitasking-intensive professional scenarios.

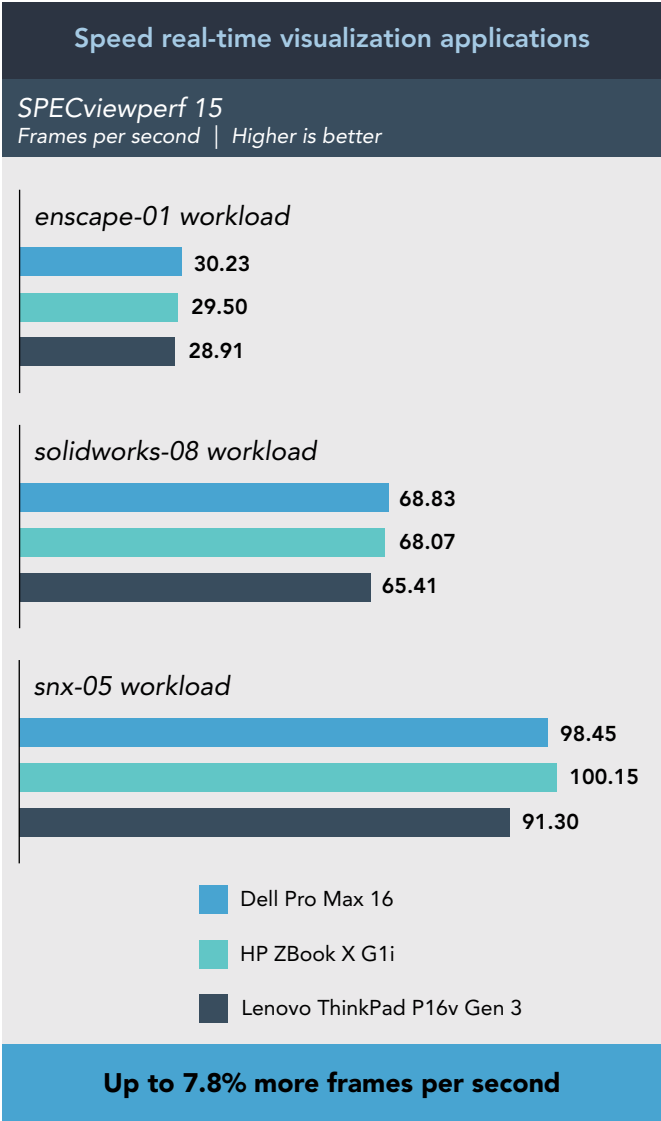


Figure 10: SPECviewperf 15 results. Higher is better. Source: PT.

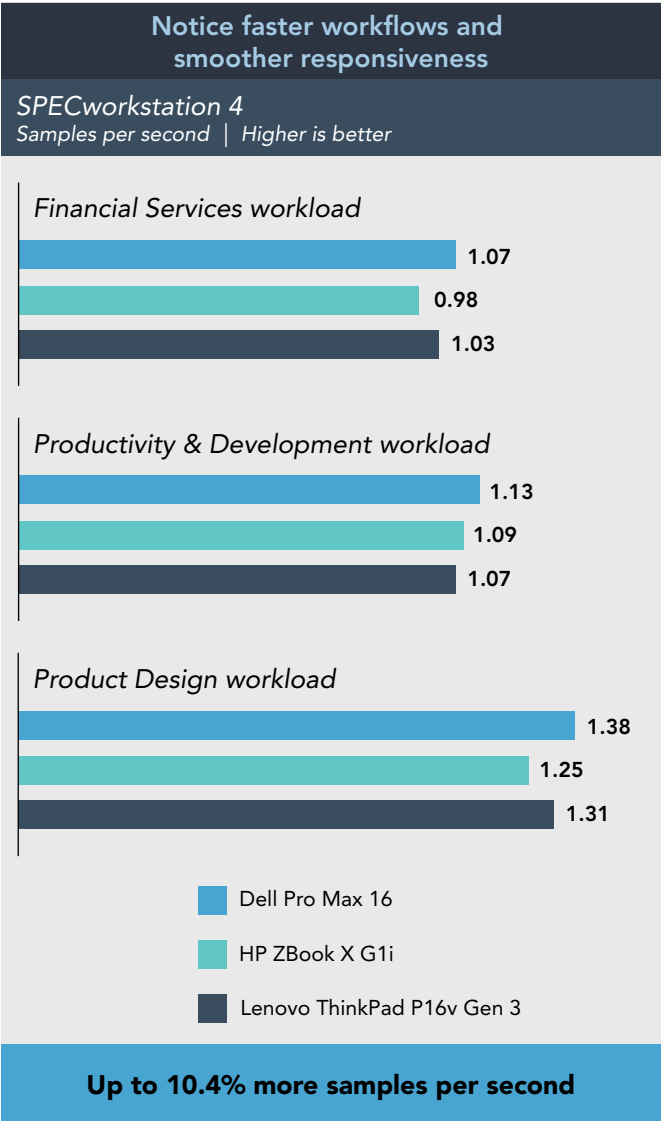


Figure 11: SPECworkstation 4 results. Higher is better. Source: PT.

Real-world application results

We also timed tasks in real-world applications for this comparison. This Dell Pro Max 16 hardware configuration completed hands-on AutoCAD and SOLIDWORKS tasks in roughly the same amount of time as the identically configured HP ZBook and Lenovo ThinkPad mobile workstations. We note the key exceptions below.

Product designers, architects, and others depend on **AutoCAD** to create precise 2D and 3D drawings, technical schematics, and layout plans that drive manufacturing and construction workflows. To evaluate the systems' performance, we completed the following tasks in AutoCAD:

- **Orthographic section plane:** We created a section plane through a complex mechanical engine component (a cylinder head assembly) in AutoCAD. This workflow allows users to reveal the internal structure of 3D objects and generate 2D section drawings, capabilities that are critical for mechanical design.
- **Render kitchen scene:** We rendered a 3D kitchen model into a photorealistic image representing the finished space. Designers use this type of visualization to support client proposals or approvals, evaluate design options, and transform technical drawings into compelling visual narratives.

All three mobile workstations revealed the internal structure of a 3D object in roughly the same timeframe. However, in the more demanding 3D visualization task, the Dell Pro Max 16 delivered a performance advantage over the Lenovo system, saving over eight minutes compared to the HP system. Saving over 8 minutes per render can lead to faster project completion times, as engineers must complete renders multiple times over the course of a project.

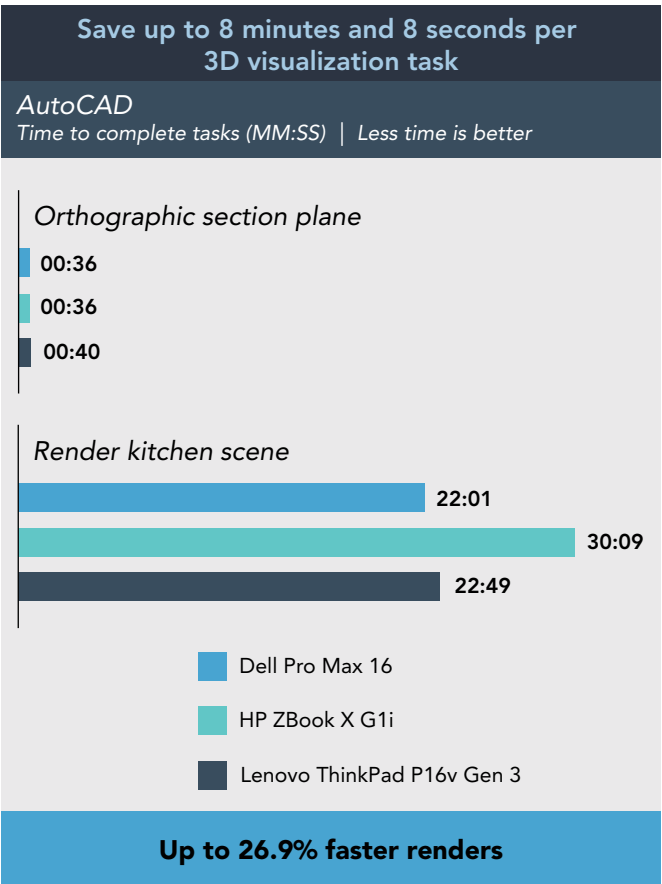


Figure 12: Time to complete two tasks in AutoCAD. Lower is better. Source: PT.

SOLIDWORKS helps CAD and engineering teams manage complex designs, transform ideas into production-ready products, and simulate real-world behavior in virtual test environments. To evaluate performance, we completed three common SOLIDWORKS workflows: import IGES/engine, calculate mass/high accuracy, and visualize/render assembly. (For more information about these tests, see page 8.) Among these tasks, import IGES/engine delivered the most notable advantage for the Dell Pro Max 16. Although the performance win measured only one to six seconds, it could represent a meaningful efficiency gain for daily engineering workflows where users frequently import large or complex files. (For the rest of our SOLIDWORKS results, see the [science behind the report](#).) While a savings of 6 seconds may seem inconsequential, this can mean significant productivity gains for engineers who use SOLIDWORKS routinely and complete tasks like this again and again.

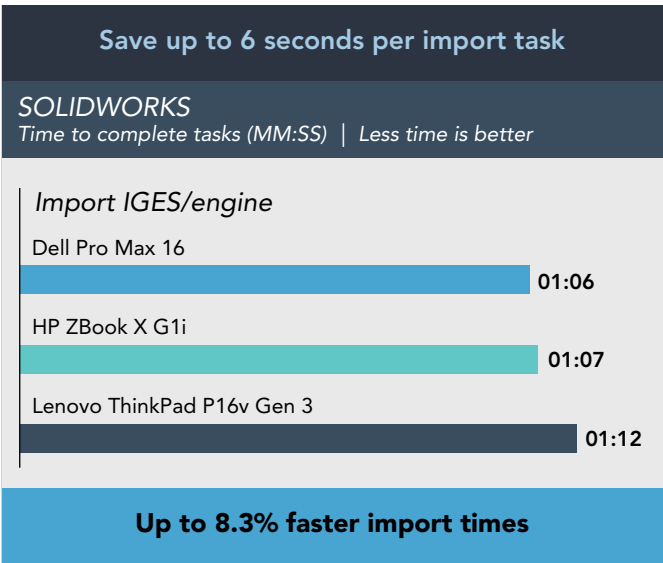


Figure 13: Time to complete one task in SOLIDWORKS. Lower is better. Source: PT.

Dell Pro Max 16 Plus with NVIDIA RTX PRO GPU: Conquer supercharged workloads from anywhere

The Dell Pro Max 16 Plus with NVIDIA RTX PRO GPU is a good fit for advanced tech engineering and product design professionals who deal with real-time visualization of complex models, massive CAD assemblies, finite element analysis (FEA), and computational fluid dynamics (CFD). When cloud compute isn't practical due to latency, cost, privacy, or regulation, this level of workstation can meet the needs of defense engineers, aerospace contractors, infrastructure planners, and regulated industry professionals, as well as high-end content creators.

For this comparison, we compared 16-inch mobile workstations equipped with very high-end configurations: 24-core, 24-thread Intel Core Ultra 9 285HX CPUs, 24GB NVIDIA RTX PRO 5000 Blackwell Generation Laptop GPUs, 128 GB of memory, and a minimum of 1 TB of storage. The main difference among the workstations was in the memory, because the Dell Pro Max 16 Plus offers a faster memory speed than the competing devices:

Dell Pro Max 16 Plus

with 128 GB of CAMM Dual Channel memory with a speed of 6,400 MT/s

HP ZBook Fury G1i

with 128 GB of SODIMM DDR5 memory with a speed of 5,600 MT/s (running at 4,000 MT/s)

Lenovo ThinkPad P16 Gen 3

with 128 GB of SODIMM DDR5 memory with a speed of 5,600 MT/s (running at 4,000 MT/s)



Powerful benchmark results

The Dell Pro Max 16 Plus outperformed the other laptops across **Cinebench** tests, showcasing its overall stronger multi-threaded processing and GPU performance. This gives it a boost for demanding tasks for complex software workflows, including content creation, simulations, and more.

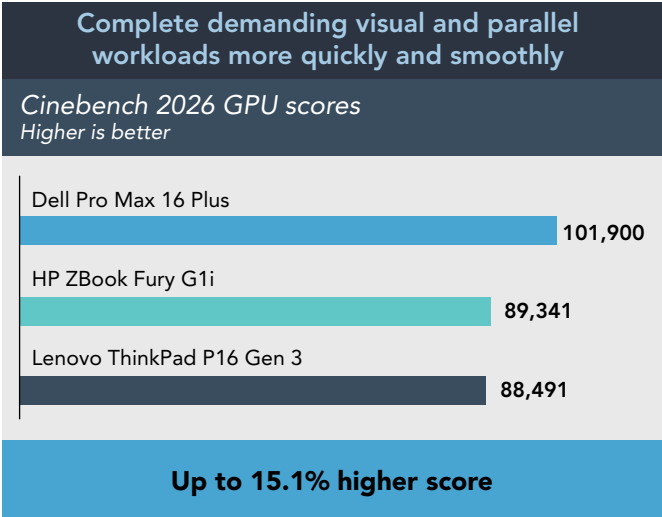


Figure 14: Cinebench 2026 GPU results. Higher is better. Source: PT.

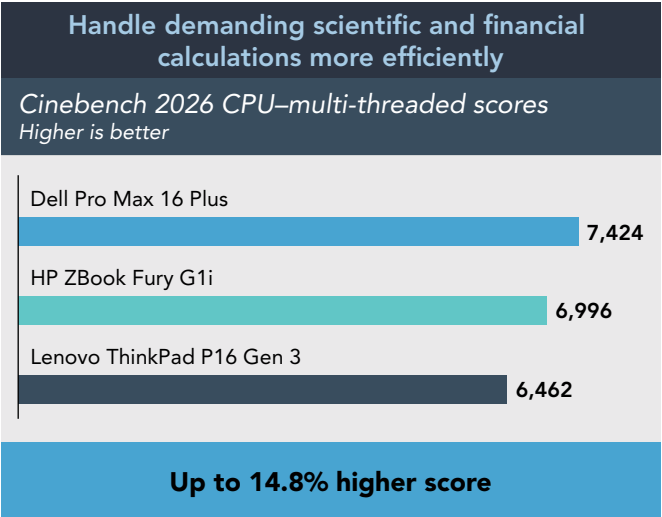


Figure 15: Cinebench 2026 CPU multi-threaded results. Higher is better. Source: PT.

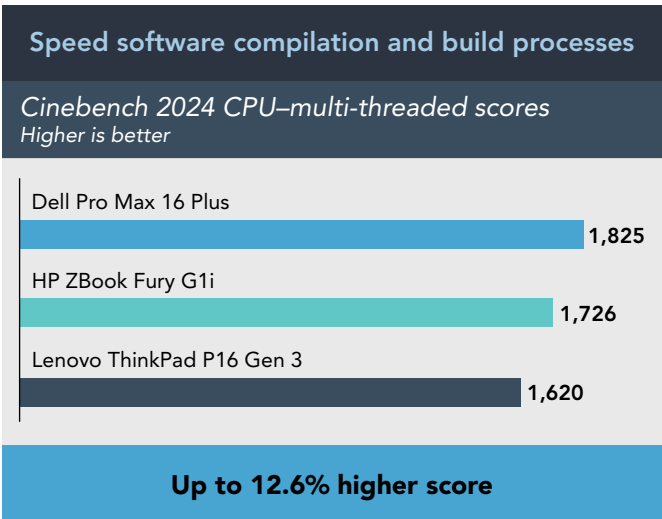


Figure 16: Cinebench 2024 CPU multi-threaded results. Higher is better. Source: PT.

3D graphics performance

The Dell Pro Max 16 Plus had big 3D graphics performance wins in **SPECviewperf 15**, beating both competitors in the 3ds Max, Blender, Energy, and Enscape workloads and achieving significant wins against the ThinkPad P16 Gen 3 across the board. Higher scores mean complex 3D models animate more smoothly, rotate more quickly, and respond with less lag when you're manipulating them on screen.

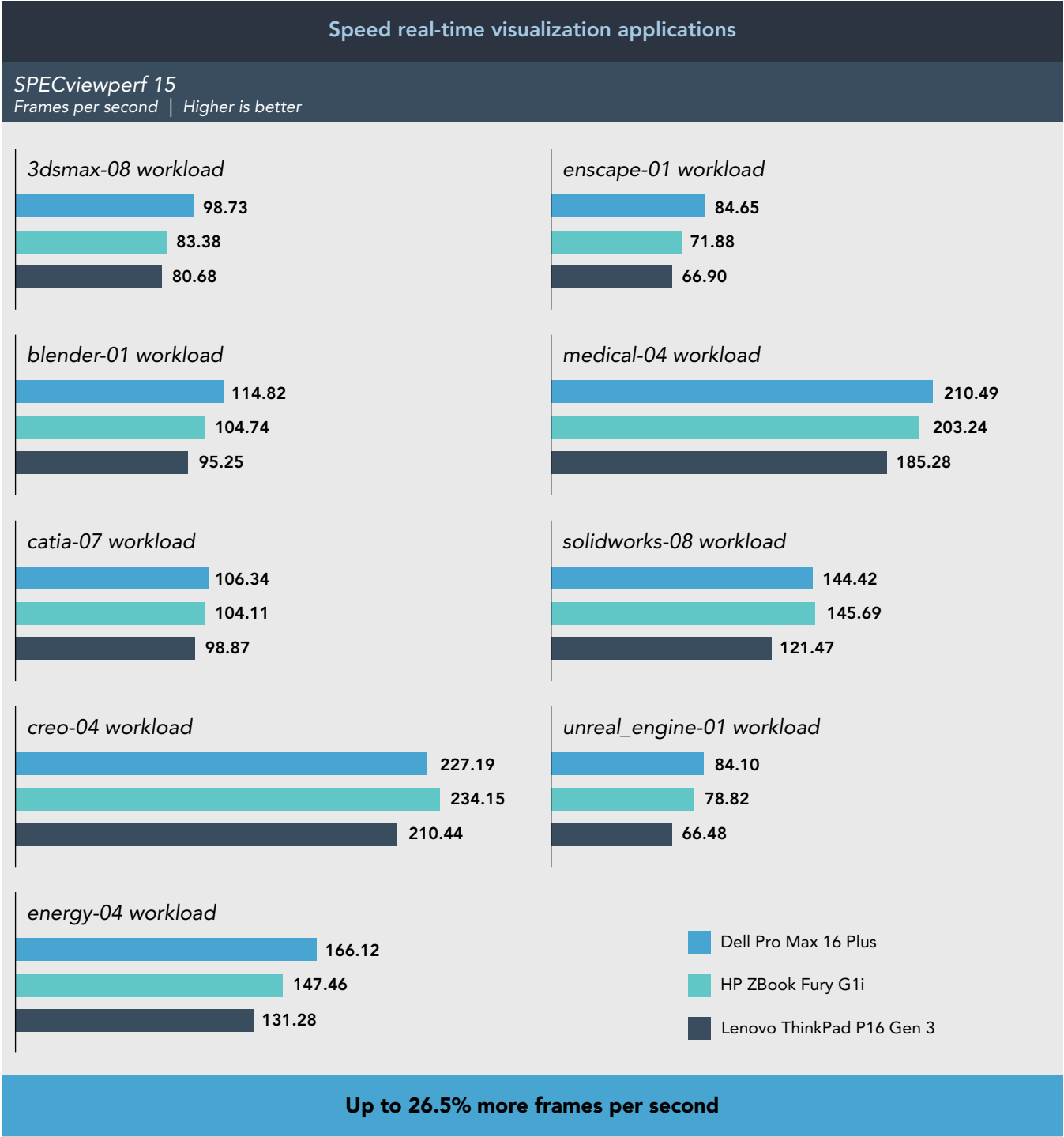


Figure 17: SPECviewperf 15 results. Higher is better. Source: PT.

The Dell Pro Max 16 Plus also had strong wins in **SPECworkstation 4**, reaching up to 13.6 percent more samples per second. Higher scores can translate to quicker completion of tasks such as 3D modeling, video encoding, image processing, or engineering simulations.

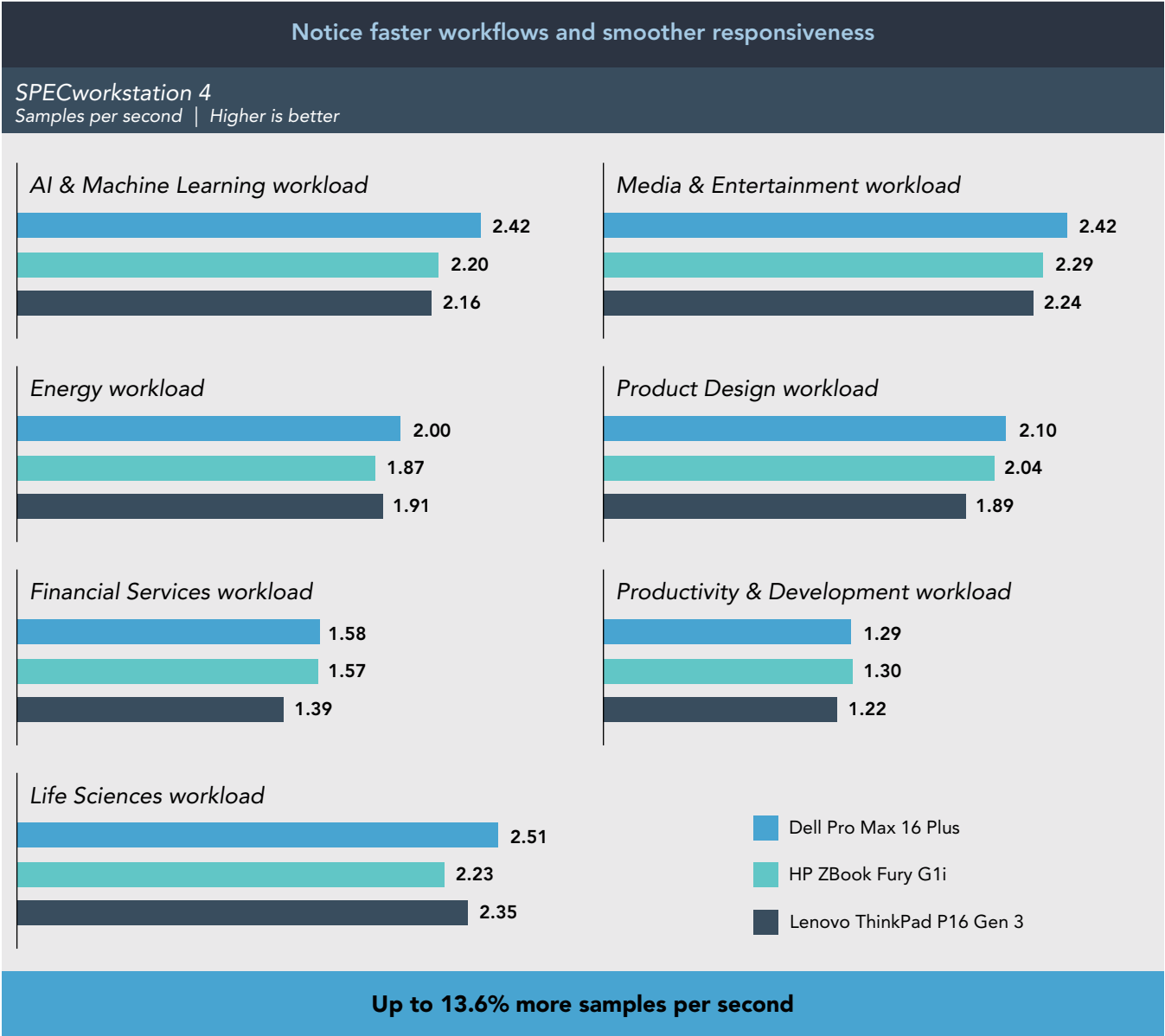


Figure 18: SPECworkstation 4 results. Higher is better. Source: PT.



Real-world application results

Across real-world application tests, the Dell Pro Max 16 Plus had faster load times and renderings and better rendering results than its competition.

SOLIDWORKS helps CAD and engineering teams manage complex designs, transform ideas into production-ready products, and simulate real-world behavior in virtual test environments. The Dell Pro Max 16 Plus saved up to 32 seconds per load time for a single visualize/render assembly workload, providing a quicker and more productive experience for engineers.

We also ran 3D computational fluid dynamics (CFD) simulations against different hardware solvers (single precision GPU, double precision GPU, double precision CPU) in **Ansys Fluent**. Virtual prototyping saves time and resources, as engineers can optimize their designs for fluid dynamics without having to physically prototype products multiple times in the design process. The Dell Pro Max 16 Plus also saved as much as 29 seconds completing a CFD simulation in Ansys Fluent, which engineers use to simulate, analyze, and optimize fluid flow for engineering projects. By speeding up CFD design iterations, engineers can complete their projects faster and move onto the next task.

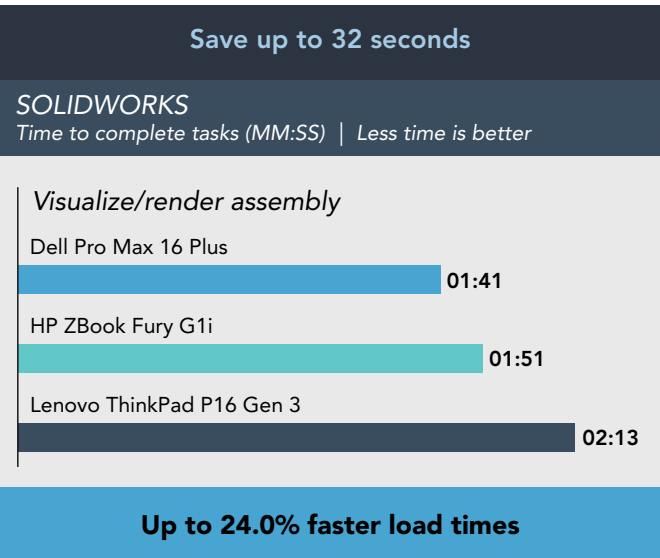


Figure 19: Time to complete tasks in SOLIDWORKS. Less time is better. Source: PT.

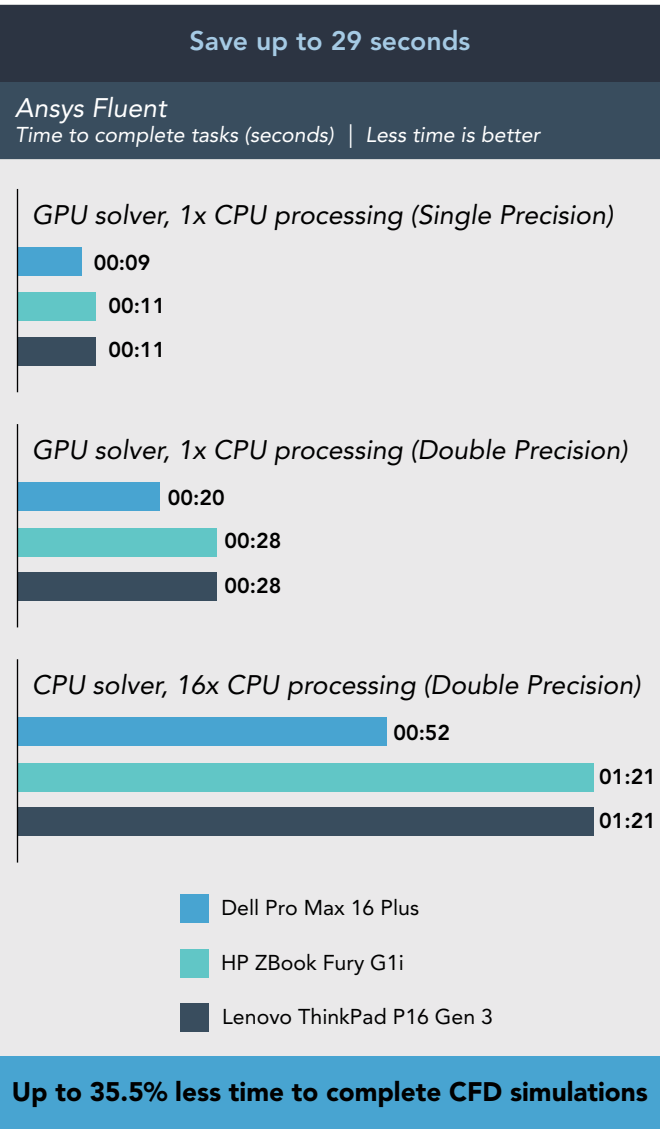


Figure 20: Time to complete tasks in Ansys Fluent. Less time is better. Source: PT.

In **Computer-aided three-dimensional interactive application (CATIA)**, which engineers use to design complex, large-scale products in automotive, aerospace, and industrial machinery industries, the Dell Pro Max 16 Plus processed more samples per second for better rendering results. The CATIA task we tested involved completing a full 3D-scene GPU render of an engine assembly model we imported into the software. For engineers completing these demanding tasks repeatedly throughout the workday, speedier rendering times can add up to significant time savings across iterations, leading to faster project completion times.

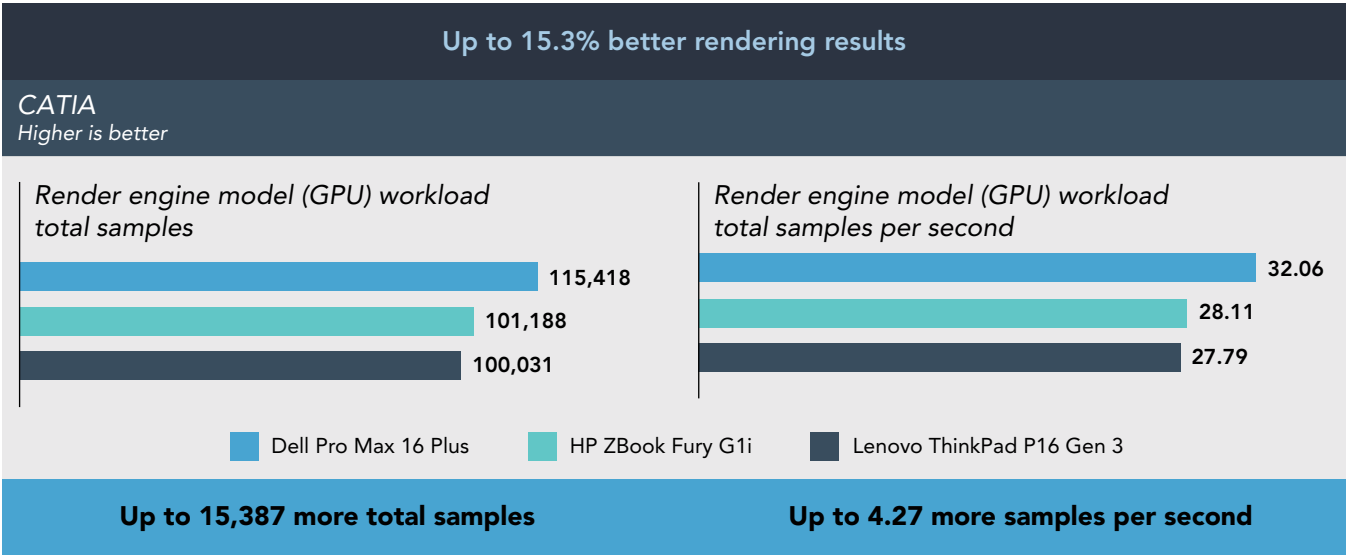


Figure 21: CATIA testing results. Higher is better. Source: PT.



Dell Pro Max 18 Plus: Large screen poised to handle your biggest challenges

The Dell Pro Max 18 Plus is the most powerful laptop in the Pro Max line, offering a large 18-inch screen and on-device AI capabilities. According to Dell, the Pro Max 18 Plus can “effortlessly handle large data sets, run AI-enhanced applications, and enjoy seamless content creation, inclusive collaboration, and energy-efficient performance.”⁵

For this comparison, we did not test a Lenovo device because they do not offer an 18-inch laptop. We equipped the 18-inch Dell Pro Max 18 Plus and the HP Fury G1i with the following:

Dell Pro Max 18 Plus

with an Intel Core Ultra 9 285HX vPro® (24 cores) CPU, an NVIDIA RTX PRO 5000 Blackwell GPU, and 128 GB of 6,400MT/s DDR5 memory

HP ZBook Fury G1i

with an Intel Core Ultra 9 285HX vPro (24 cores)CPU, an NVIDIA RTX PRO 5000 Blackwell GPU, and 128 GB of SODIMM DDR5 memory with a speed of 5,600 MT/s (running at 4,000 MT/s)

Powerful industry-standard benchmarks

Across the benchmarks we tested, the Dell Pro Max 18 Plus outperformed its HP Fury G1i 18 competitor, achieving stronger multi-threaded CPU performance in **Cinebench** testing, which can indicate better general app performance. This could mean increased productivity across a wide range of apps, helping users complete tasks in less time.

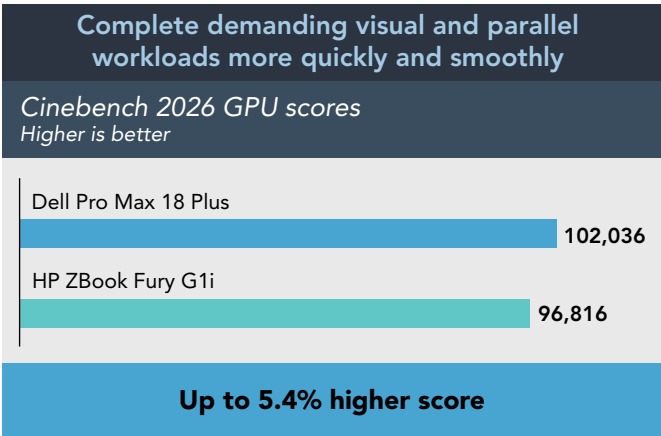


Figure 22: Cinebench 2026 GPU results. Higher is better. Source: PT.

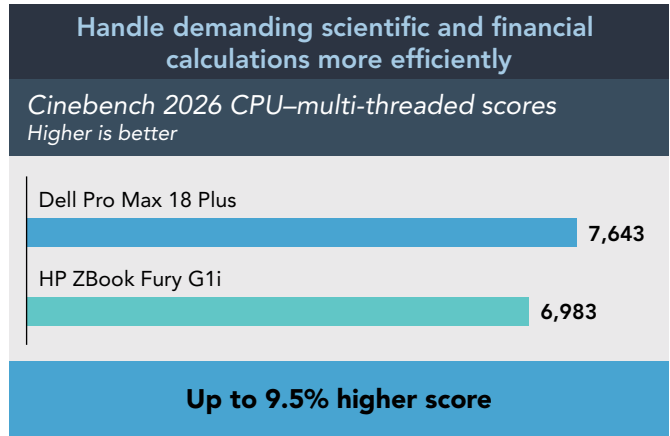


Figure 23: Cinebench 2026 CPU multi-threaded results. Higher is better. Source: PT.

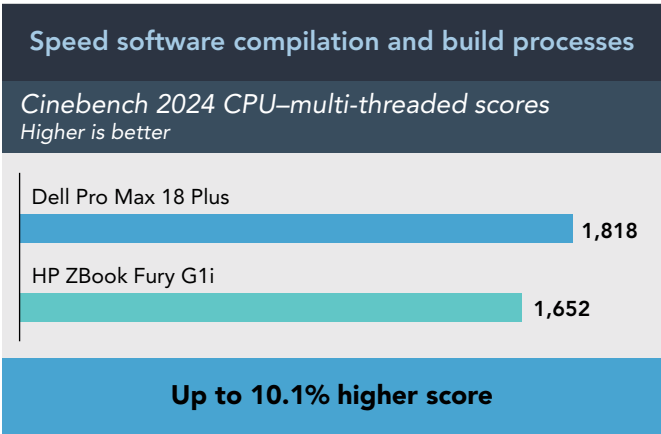


Figure 24: Cinebench 2024 CPU multi-threaded results. Higher is better. Source: PT.

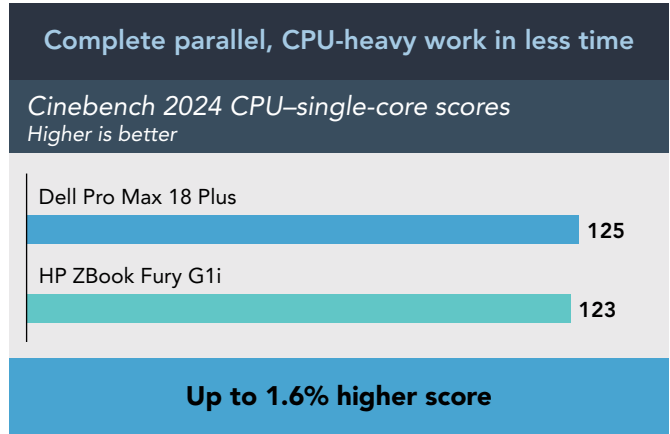


Figure 25: Cinebench 2024 CPU single-core results. Higher is better. Source: PT.

The Pro Max 18 Plus also handled significantly more frames and samples per second on **SPECviewperf 15** and **SPECworkstation 4**, showing that it can speed real-time visualization and handle complex workflows faster.

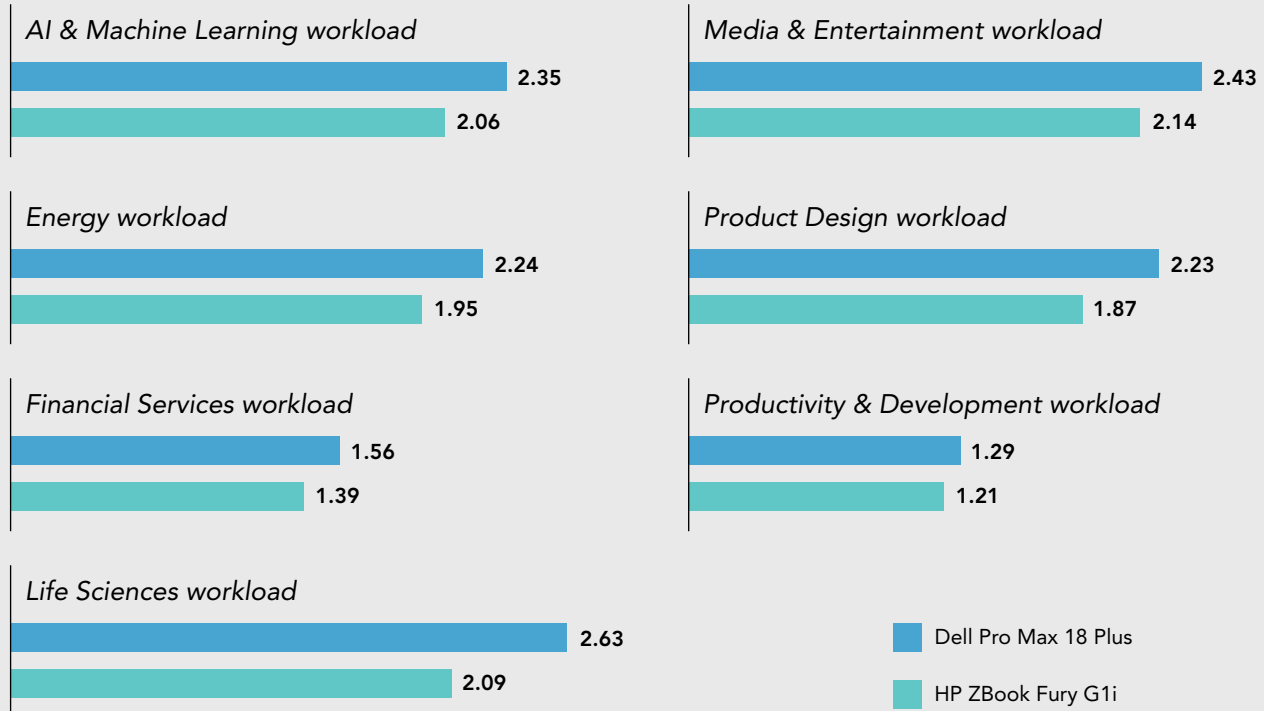


Figure 26: SPECviewperf 15 results. Higher is better. Source: PT.

Handle complex workflows more efficiently

SPECworkstation 4

Samples per second | Higher is better



Up to 25.8% more samples per second

Figure 27: SPECworkstation 4 results. Higher is better. Source: PT.

Real-world applications

Across taxing rendering and design applications, the Dell Pro Max 18 Plus achieved faster performance than the HP Fury G1i, cutting the time it takes to complete routine tasks in **SOLIDWORKS**, **CATIA**, and **Ansys Fluent**.

As we describe in the Pro Max 16 results section above, engineers complete these demanding tasks over and over again throughout the course of a project, which means that productivity gains for routine tasks become meaningful over time.

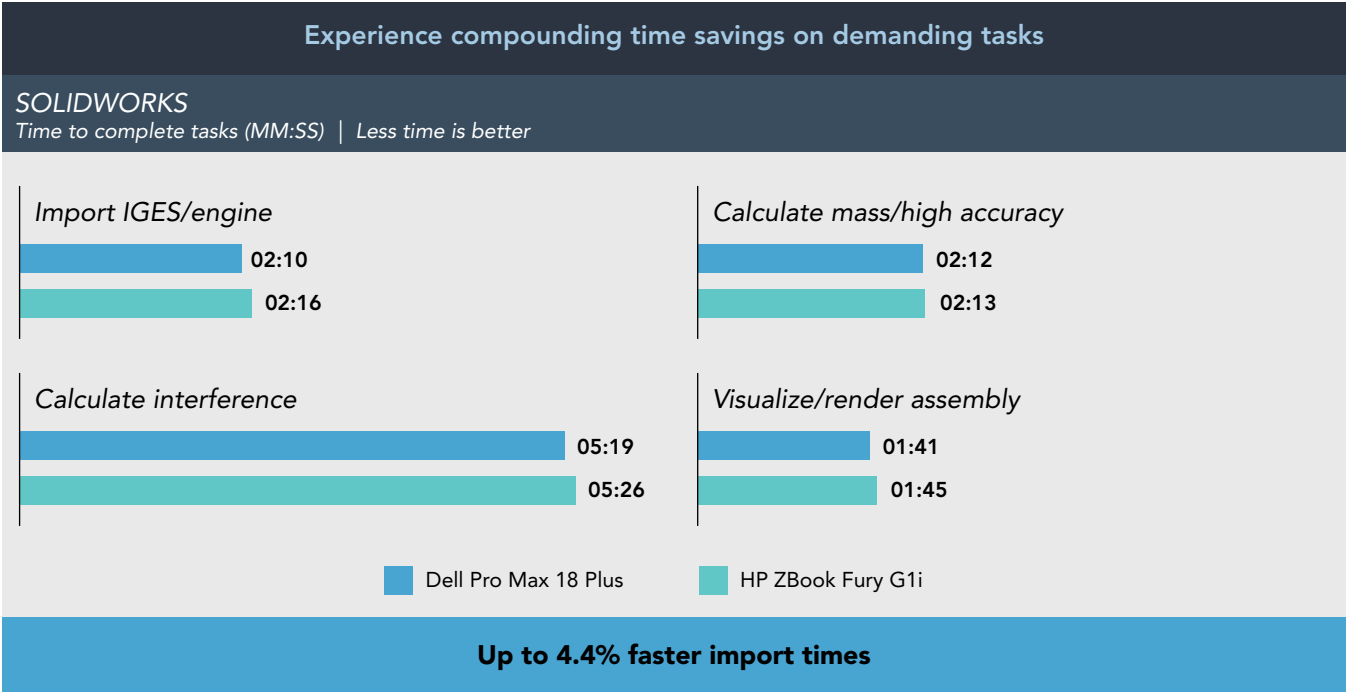


Figure 28: Time to complete tasks in SOLIDWORKS. Lower is better. Source: PT.

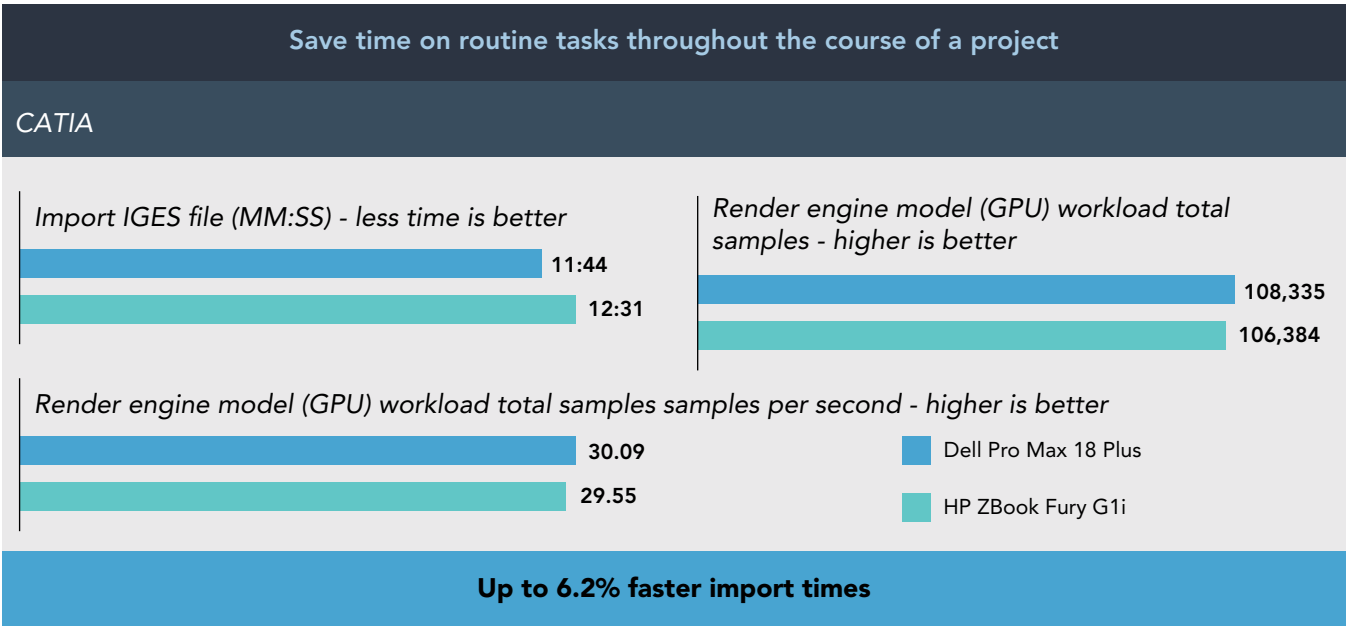


Figure 29: CATIA testing results. Less time is better and more samples are better. Source: PT.

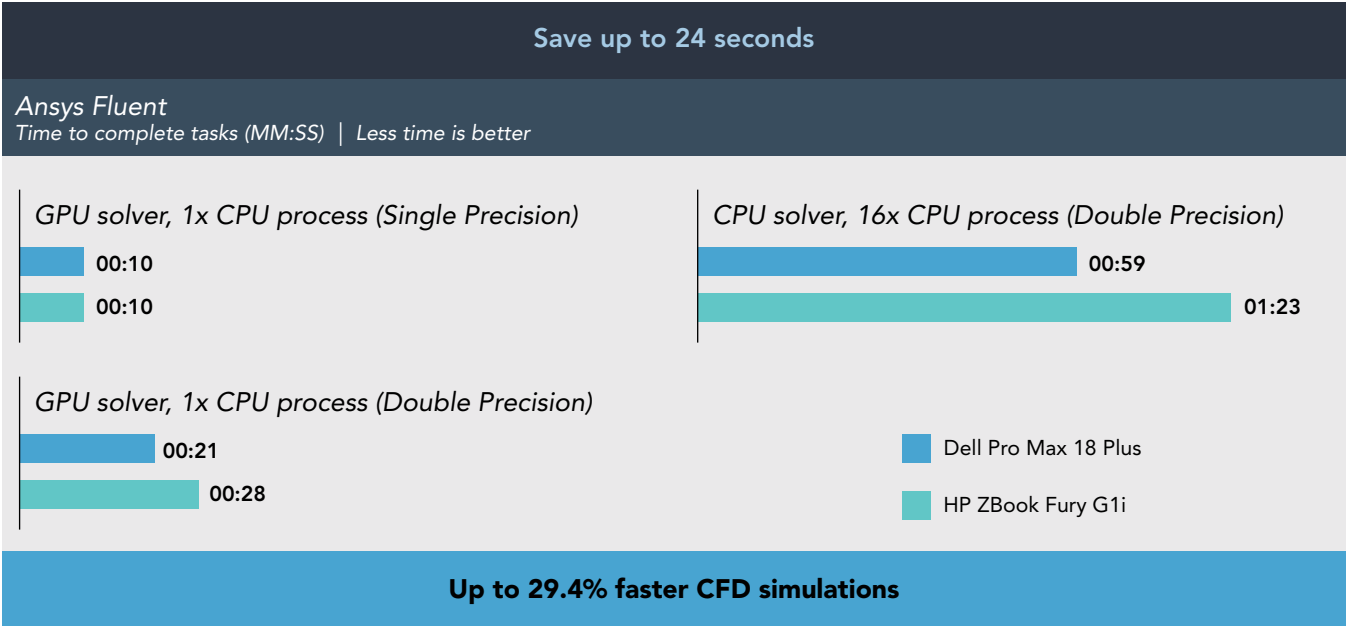


Figure 30: Time to complete tasks in Ansys Fluent. Lower is better. Source: PT.

Dell Pro Max 16 Premium: Design-forward performance and battery life on the go

The Dell Pro Max 16 Premium is a powerful tool for creators who prioritize design-forward performance and battery life. According to Dell, the Pro Max 16 Premium delivers “cutting-edge AI PCs with dedicated engines for exceptional performance, extended battery life, and powerful on-device AI tools.”⁶

For this comparison, we evaluated two 16-inch systems and equipped the Dell Pro Max 16 Premium and the Lenovo P1 Gen 8 with the following:

Dell Pro Max 16 Premium

with an Intel Core Ultra 9 285H CPU, 64 GB of 8,400 MT/s DDR5 memory, and an NVIDIA RTX PRO 3000 Blackwell GPU

Lenovo P1 Gen 8

with an Intel Core Ultra 9 285H CPU, 64 GB of 7,467 MT/s DDR5 memory, and an NVIDIA RTX PRO 2000 Blackwell GPU

Powerful industry-standard benchmarks

Across the benchmarks we tested, the Dell Pro Max 16 Premium outperformed the Lenovo P1 Gen 8, achieving stronger GPU performance on **Cinebench**, as well as more frames per second on **SPECviewperf 15**, showing that it can speed real-time visualization for creators. (For more details on these benchmarks and what they mean for end users, see page 3.)

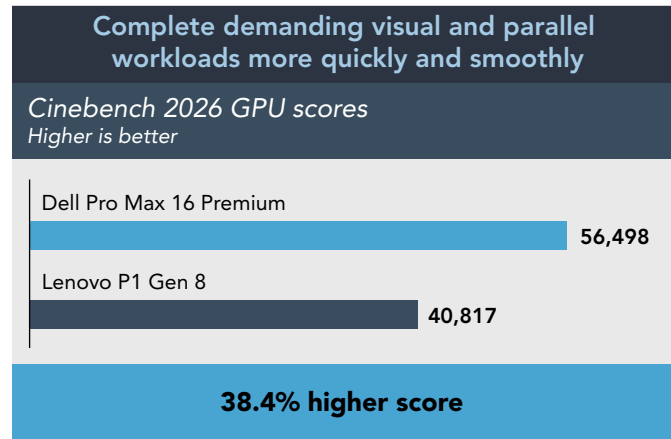


Figure 31: Cinebench 2026 results. Higher is better. Source: PT.

Speed real-time visualization applications

SPECviewperf 15

Frames per second | Higher is better



Up to 95.2% more frames per second

Figure 32: SPECviewperf 15 results. Higher is better. Source: PT.

Real-world applications

Video editors and creators work routinely in **Adobe® Premiere®**, and they're frequently left waiting on their system to complete tasks like video encoding before they can move onto the next step and get the video in client hands.

The three tasks we tested in Adobe Premiere were encoding (exporting/rendering) a 5 minute Premiere project as a 4k video file, doing the same as a 1080p video file, and generating proxies.

Generating proxies involves a quick encoding pass on the raw videos in a project that makes them smaller/ lower-resolution so they are easier to work with in the editor, which cuts down on lag while scrubbing through uncompressed video in the editing pane. These lower quality previews speed iterations, but the full project final video uses the full raw video source files.

Across these three real-world tasks we performed in Adobe Premiere, the Dell Pro Max 16 Premium had a slight performance edge over the Lenovo P1 Gen 8. But even a few seconds can make a difference when you've been waiting on your video render for minutes.

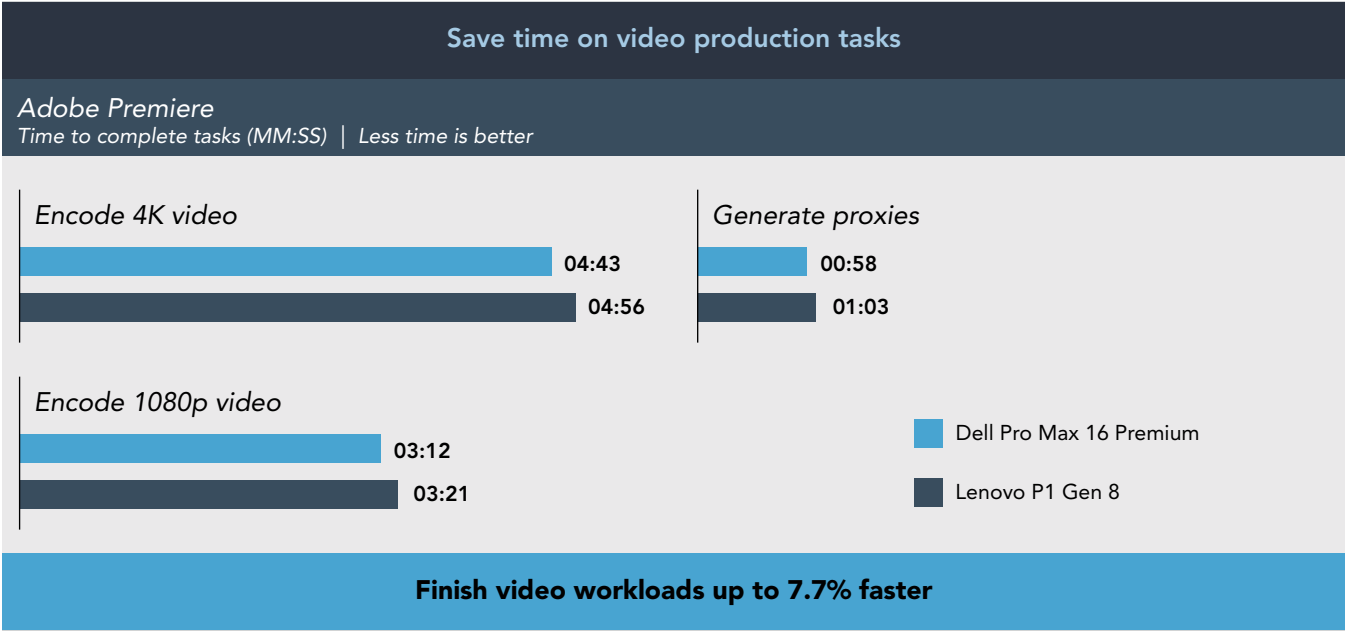


Figure 33: Time to complete tasks in Adobe Premiere. Lower is better. Source: PT.

Dell Pro Max 14 Premium: Portability with design-forward performance

Creators and engineers looking for workstation performance in a more portable package can select the Dell Pro Max 14 Premium laptop. According to Dell, the Dell Pro Max 14 Premium, is “a sleek, modern 14-inch laptop that combines style, exceptional performance, and advanced on-device AI.”⁷

For this comparison, we tested two 14-inch systems and equipped the Dell Pro Max 14 Premium and the HP ZBook Ultra G1a with the following:

Dell Pro Max 14 Premium

with an Intel Core Ultra 9 285H CPU, 64 GB of 8,400 MT/s DDR5 memory, and an NVIDIA RTX PRO 2000 Blackwell GPU

HP ZBook Ultra G1a

with an AMD Ryzen AI MAX+ PRO 395 CPU, 128 GB of 8,000 MT/s DDR5 memory, and integrated AMD Radeon™ 8060S graphics

Powerful industry-standard benchmarks

On **Cinebench**, the Dell Pro Max 14 Premium achieved a 7.7 percent higher CPU score vs. the HP ZBook Ultra G1a; the HP system crashed during the GPU score testing (likely due to a compatibility issue with the AMD iGPU systems). On **SPECviewperf 15**, the Dell Pro Max 14 Premium achieved up to 130.4 percent higher frames-per-second scores, highlighting its ability to speed real-time visualization for creators.

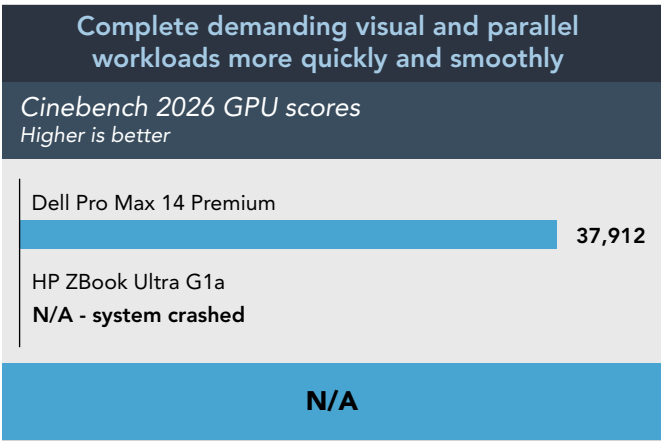


Figure 34: Cinebench 2026 GPU results. Higher is better. Source: PT.

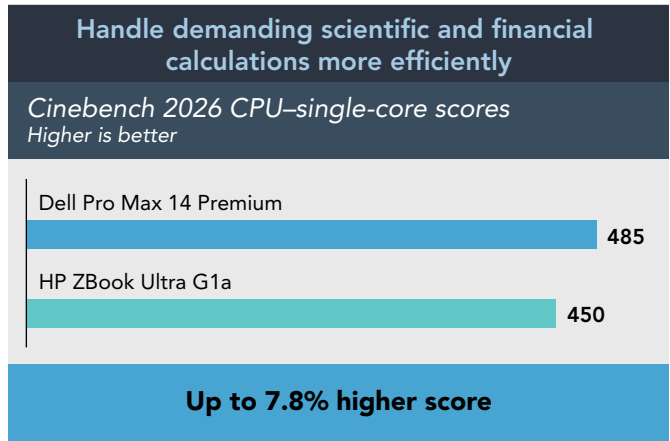


Figure 35: Cinebench 2026 CPU single-core results. Higher is better. Source: PT.

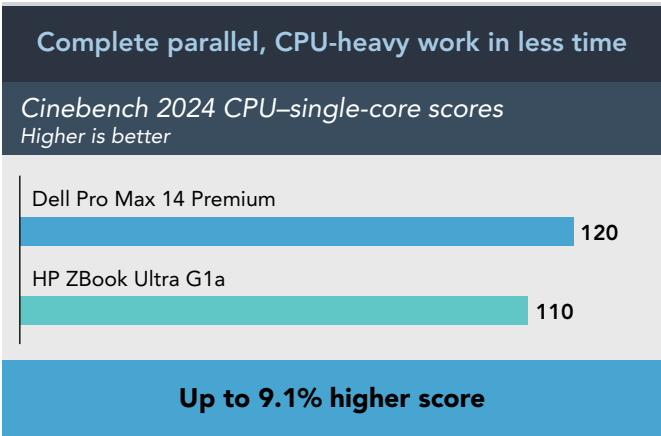
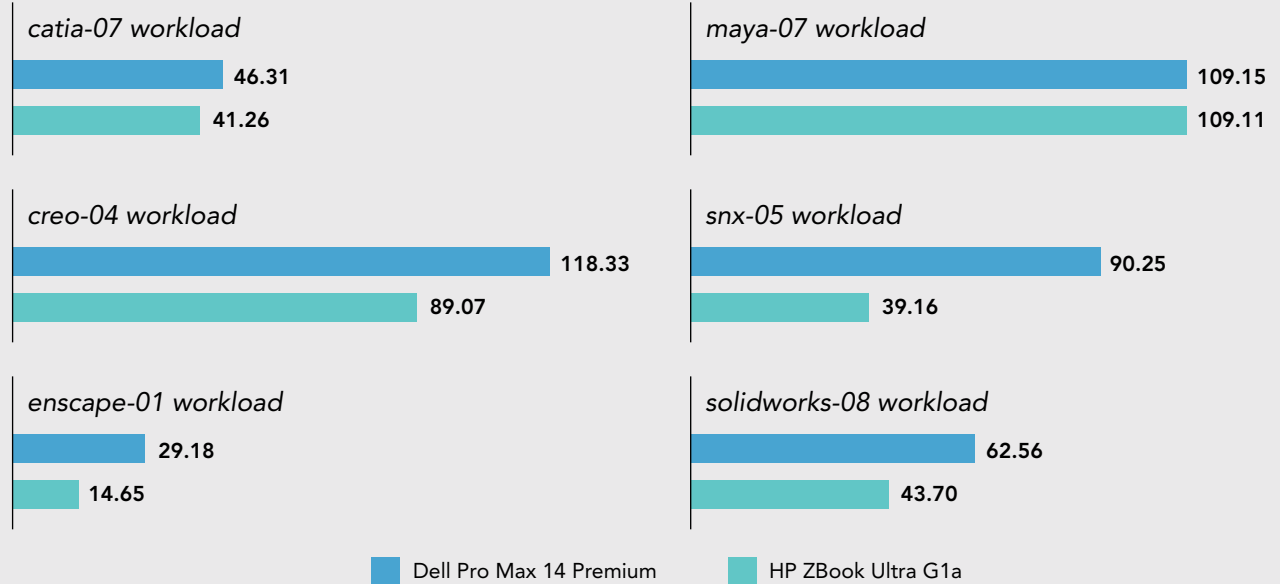


Figure 36: Cinebench 2024 CPU single-core results. Higher is better. Source: PT.

Speed real-time visualization applications

SPECviewperf 15

Frames per second | Higher is better



Up to 130.4% more frames per second

Figure 37: SPECviewperf 15 results. Higher is better. Source: PT.

Real-world applications

Video creators often use **Adobe Premiere** or **DaVinci Resolve** to produce video. In two real-world apps for rendering and video encoding, Adobe Premiere and DaVinci Resolve, the Dell Pro Max 14 Premium sped up tasks compared to the HP ZBook Ultra G1a by as much as 49.3 percent. Encoding videos is a lengthy process that creators may do frequently, so a powerful system that can shave time off system-based tasks can let them get back to the creative parts even faster.

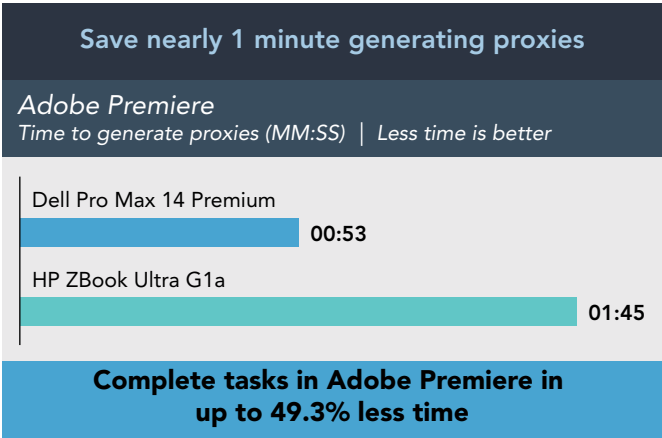


Figure 38: Time to complete a task in Adobe Premiere. Lower is better. Source: PT.

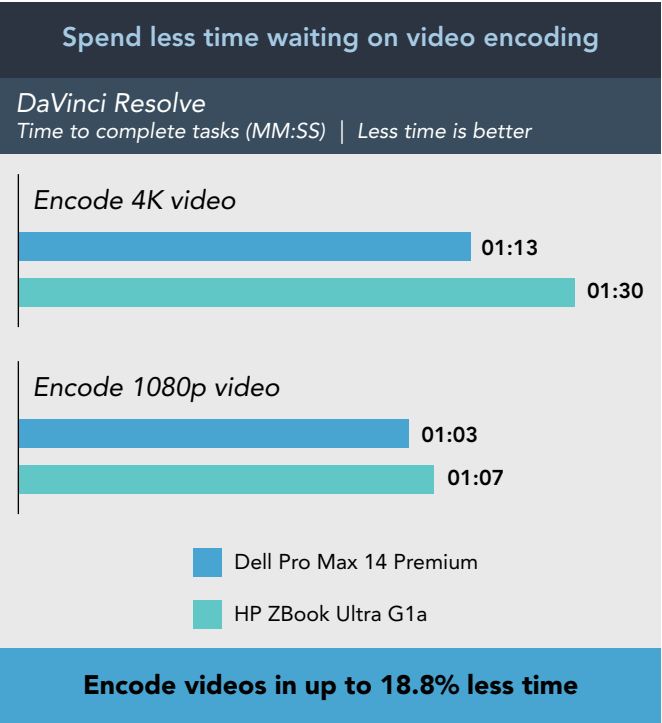


Figure 39: Time to complete tasks in DaVinci Resolve. Lower is better. Source: PT.

Dell Pro Max 14 with AMD UMA: Prioritizing battery efficiency

Creators who need to prioritize battery efficiency and cost over raw power can choose to equip their Dell Pro Max 14 with AMD Unified Memory Architecture (UMA) instead of a dedicated GPU. With AMD UMA, CPU and GPU share memory, which can result in lower latency for certain workloads (e.g., light AI, video processing, or integrated workflows).

For this comparison, we tested the following configurations of three 14-inch systems: the Dell Pro Max 14, HP ZBook 8 G1as, and Lenovo ThinkPad 14s Gen 6.

Dell Pro Max 14	HP ZBook 8 G1as	Lenovo ThinkPad P14s Gen 6
with an AMD Ryzen AI 9 HX PRO 370 CPU, 64GB 8,000 MT/s DDR5 memory, and Radeon 890M integrated graphics	with an AMD Ryzen AI 9 HX PRO 375 CPU, 64GB 5,600 MT/s DDR5 memory, and Radeon 890M integrated graphics	with an AMD Ryzen AI 9 HX PRO 370 CPU, 64GB 5,600 MT/s DDR5 memory, and Radeon 890M integrated graphics

Powerful industry-standard benchmarks

Across the benchmarks we tested, the Dell Pro Max 14 with AMD UMA outperformed both the HP and Lenovo systems, achieving up to 14.4 percent higher **Cinebench** scores vs. the Lenovo ThinkPad P14s Gen 6. On **SPECviewperf 15** and **SPECworkstation 4**, the Dell Pro Max 14 achieved consistently stronger scores than both competitors, showing it was better able to handle complex workloads efficiently.

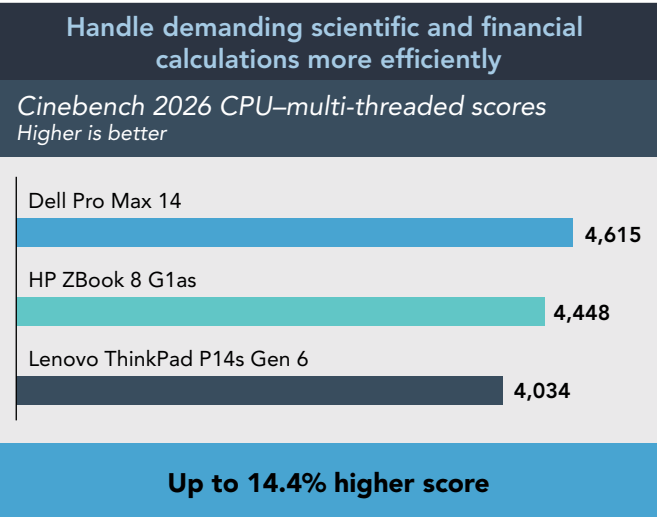


Figure 40: Cinebench 2026 CPU multi-threaded results. Higher is better. Source: PT.

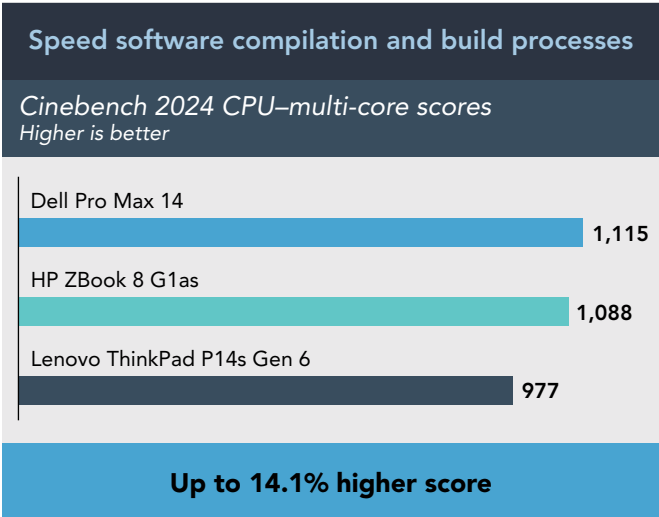
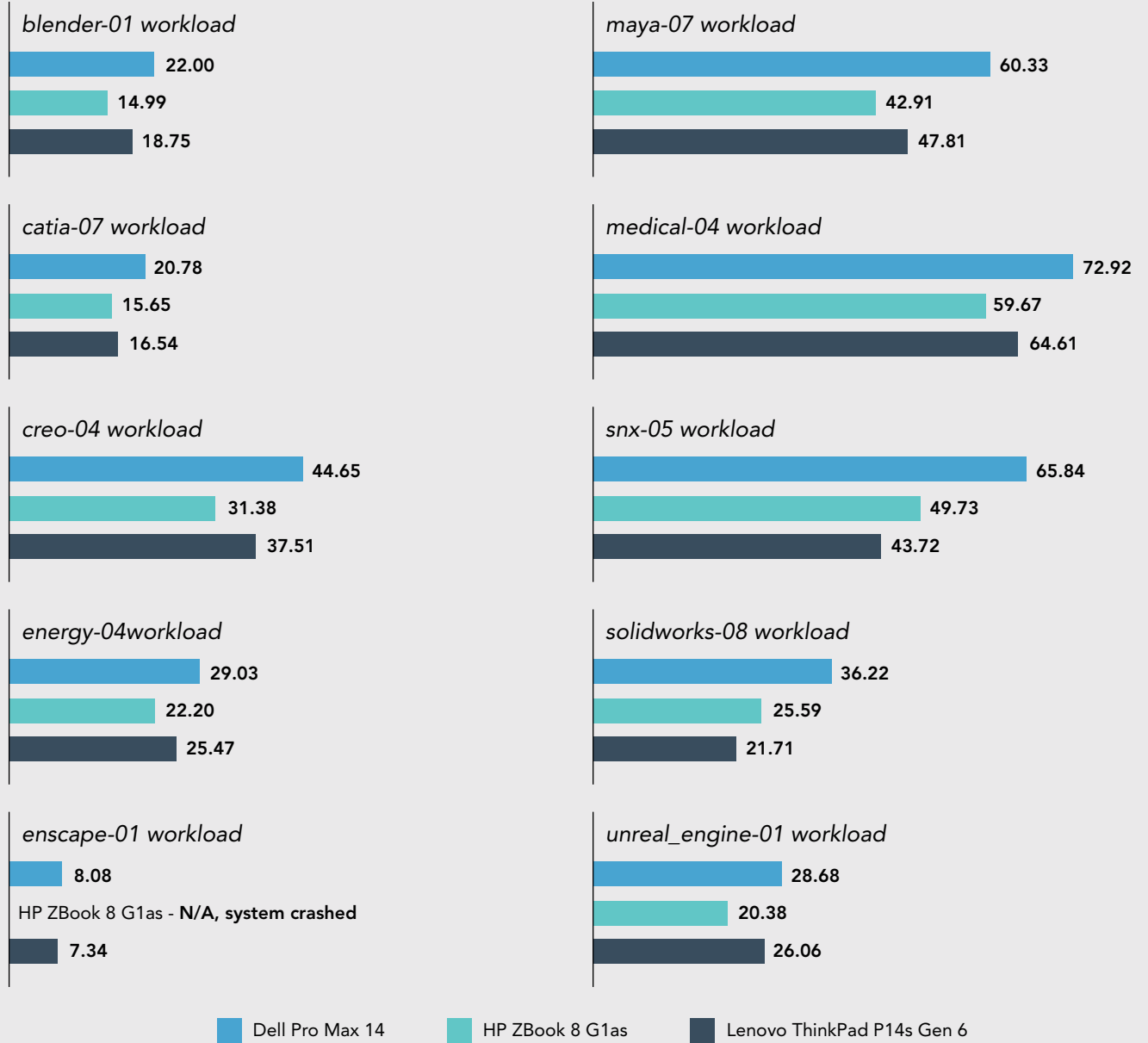


Figure 41: Cinebench 2024 CPU multi-core results. Higher is better. Source: PT.

Speed real-time visualization applications

SPECviewperf 15

Frames per second | Higher is better

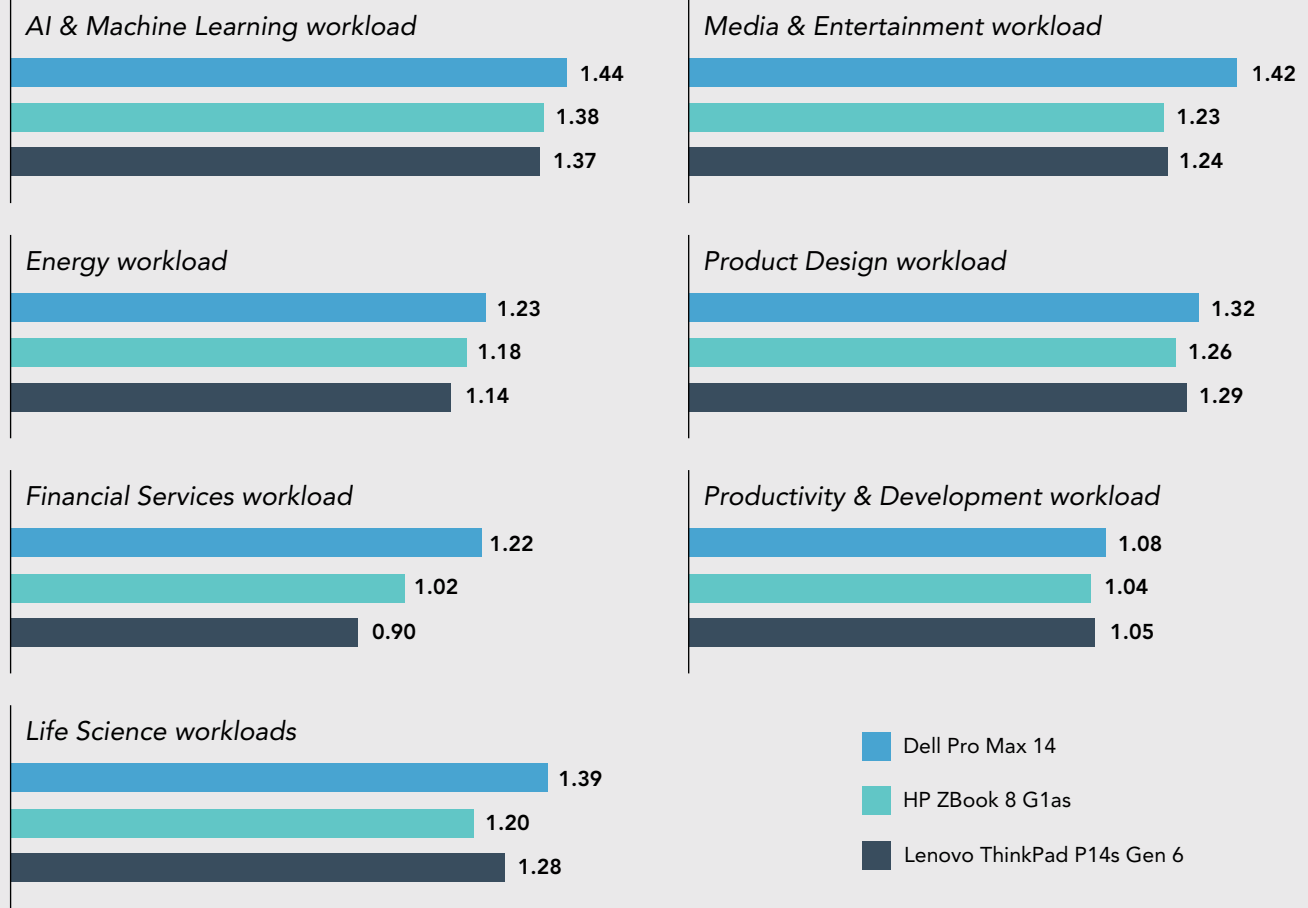


Up to 66.8% more frames per second

Figure 42: SPECviewperf 15 results. Higher is better. Source: PT.

Handle complex workflows more efficiently

SPECworkstation 4 samples per second
Higher is better



Up to 35.5% more samples per second

Figure 43: SPECworkstation 4 results. Higher is better. Source: PT.

Real-world applications

We timed how long it took to build Unreal Engine 5 from source code. This would be relevant to any game developer working in a game that uses Unreal Engine 5 (one of the most ubiquitous game engines in the world), particularly a programmer who would need to recompile parts of the engine after making code changes.

On this real-world **C++ compilation** workload, the Dell Pro Max 14 with AMD UMA outperformed both of its competitors, showing that it could provide quicker performance for routine tasks on software development tasks such as building Unreal Engine. Speeding up software development means a quicker time to project completion so developers can move on to the next project.

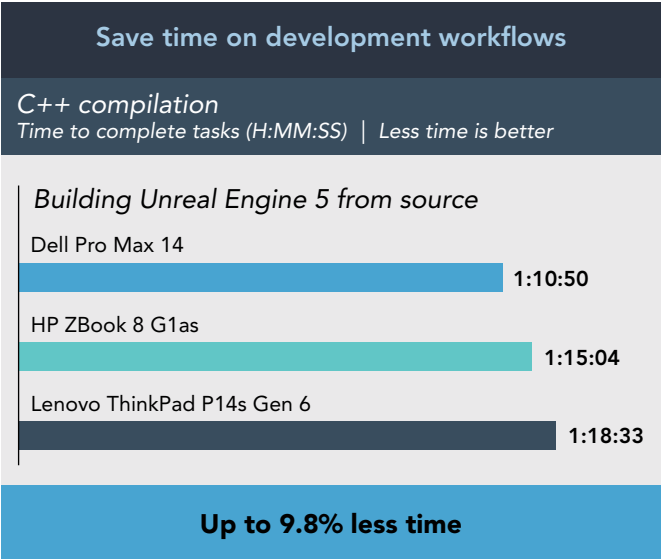


Figure 44: C++ compilation results. Lower is better. Source: PT.

Dell Pro Max 16 with AMD UMA: Where performance and efficiency meet

For those seeking a larger screen size, the Dell Pro Max 16 is also available with AMD UMA, helping customers who want to prioritize cost and efficiency over maximum performance.

For this comparison, we tested two systems and configured the 16-inch Dell Pro Max 16 and Lenovo ThinkPad P16s Gen 4 systems as follows:

Dell Pro Max 16

with an AMD Ryzen AI 9 HX PRO 370 CPU, 64GB 8,000 MT/s DDR5 memory, and Radeon 890M integrated graphics

Lenovo ThinkPad P16s Gen 4

with an AMD Ryzen AI 9 HX PRO 370 CPU, 64GB 5,600 MT/s DDR5 memory, and Radeon 890M integrated graphics

Powerful industry-standard benchmarks

Across the benchmarks we tested, the Dell Pro Max 16" with AMD UMA outperformed the Lenovo system, achieving up to 14.5 percent higher **Cinebench** scores vs. the Lenovo ThinkPad P16s Gen 4. On **SPECviewperf 15** and **SPECworkstation 4**, the Dell Pro Max 16 also scored consistently higher across workloads, with a particularly notable advantage in the Financial Services workload.

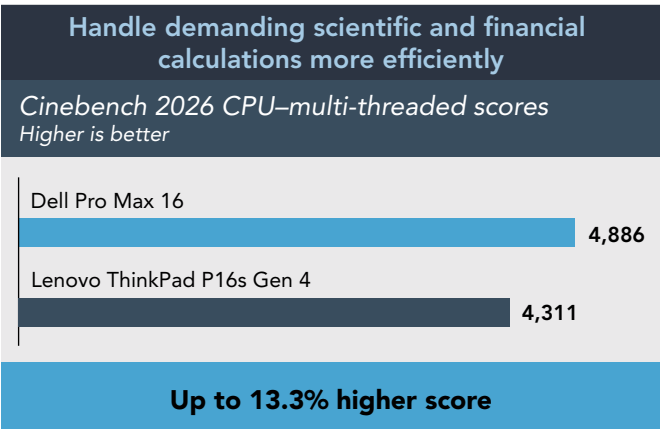


Figure 45: Cinebench 2026 CPU multi-threaded results. Higher is better. Source: PT.

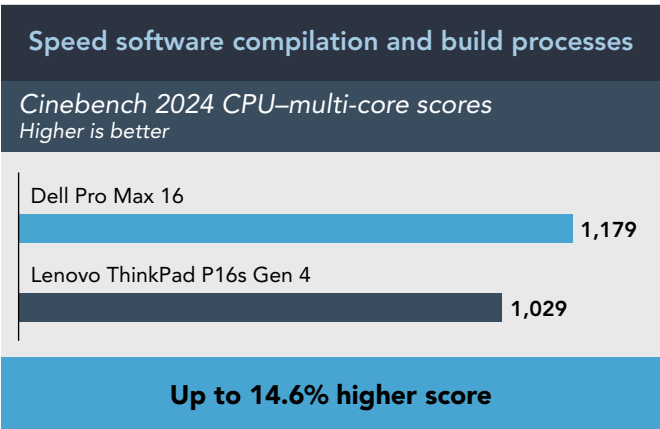


Figure 46: Cinebench 2024 CPU multi-core results. Higher is better. Source: PT.

Speed real-time visualization applications

SPECviewperf 15

Frames per second | Higher is better



Up to 18.8% more frames per second

Figure 47: SPECviewperf 15 results. Higher is better. Source: PT.

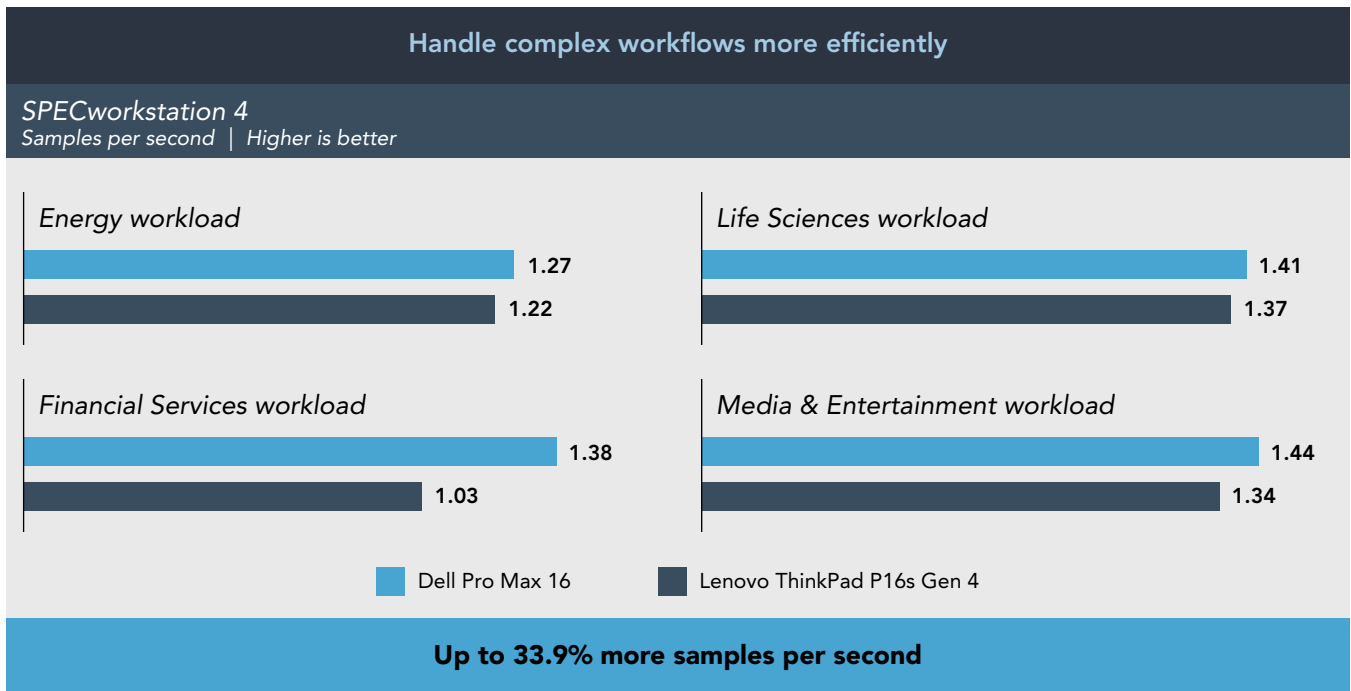


Figure 48: SPECworkstation 4 results. Higher is better. Source: PT.

Real-world applications

On a real-world **C++ compilation** workload, the Dell Pro Max 16 with AMD UMA outperformed its competitor by 7.9 percent, showing that it could provide quicker performance for these kinds of tasks and ultimately speed up project completion times.

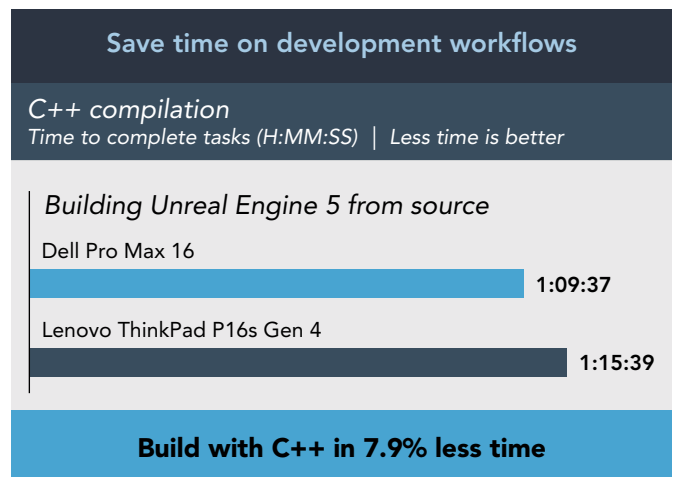


Figure 49: C++ compilation results. Lower is better. Source: PT.

Dell Pro Max 14 with Intel UMA: Balancing battery efficiency and cost

Power users balancing performance, battery efficiency, and cost have another option for unified memory architecture with Dell Pro Max 14 and Intel UMA.

For this comparison, we equipped the 14-inch Dell Pro Max 14, HP ZBook 8 G1i, and Lenovo ThinkPad P14s Gen 6 with the following:

Dell Pro Max 14

with an Intel Core Ultra 7 265H CPU, 32GB 7,467 MT/s DDR5 memory, and Intel Arc™ Pro 140T integrated graphics

HP ZBook 8 G1i

with an Intel Core Ultra 7 265H CPU, 32GB 6,400 MT/s DDR5 memory, and Intel Arc Pro 140T integrated graphics

Lenovo ThinkPad P14s Gen 6

with an Intel Core Ultra 7 265H CPU, 32GB 5,600 MT/s DDR5 memory, and Intel Arc 140V integrated graphics

Powerful industry-standard benchmarks

On **SPECviewperf 15** and **SPECworkstation 4**, the Dell Pro Max 14 with Intel UMA significantly outperformed the Lenovo ThinkPad P14s Gen 6, achieving scores up to 149.4 percent higher.

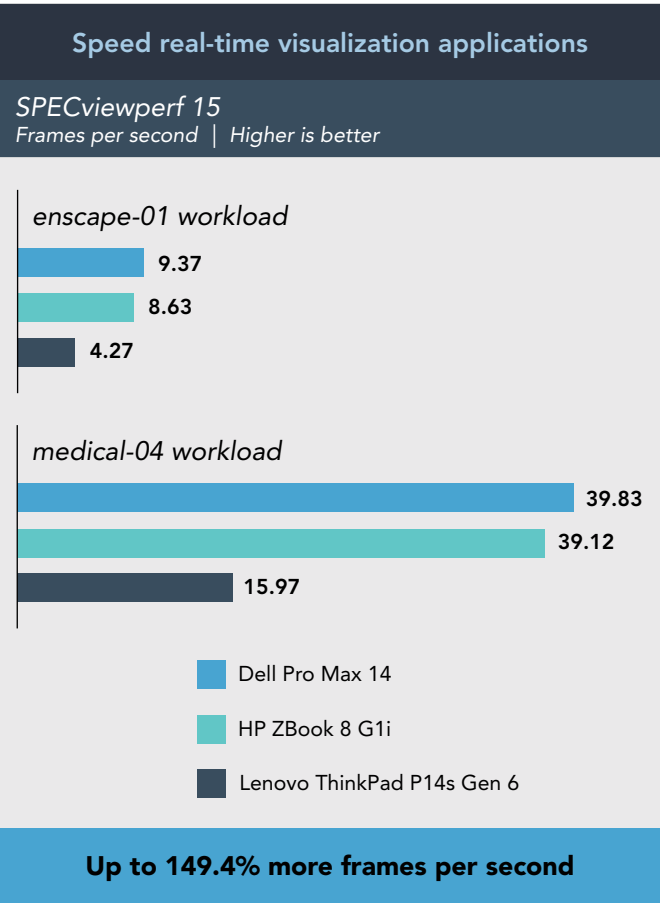


Figure 50: SPECviewperf 15 results. Higher is better. Source: PT.

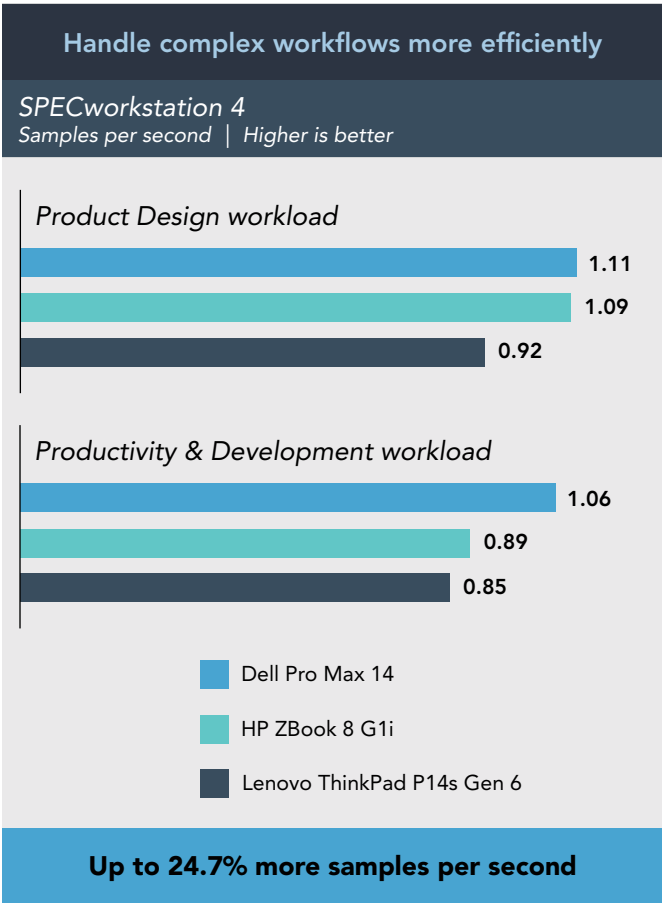


Figure 51: SPECworkstation 4 results. Higher is better. Source: PT.

Real-world applications

We tested a synthetic workload/benchmark (HammerDB TPROC-H) that runs a fixed set of complex analytics queries against a big dataset that represents real-world OLAP/business intelligence analytics workloads. This workload mimics the kind of analytics and reporting business intelligence teams would run against their data warehouse to answer business questions. On this **SQL workload**, the Dell Pro Max 14 with Intel UMA completed queries in up to 7.6 percent less time than its competitors, showing that it could provide quicker performance for analytics, ultimately leading to greater agility in decision making.

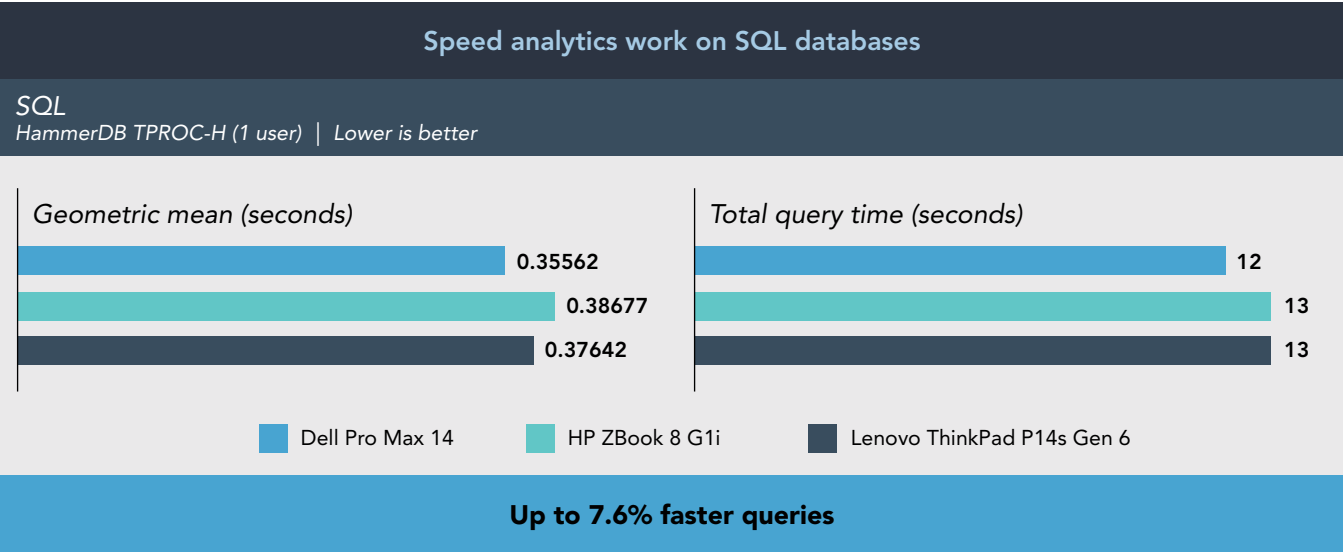


Figure 52: SQL workload results. Lower is better. Source: PT.

Conclusion

For professionals who require speed and reliability, Dell Pro Max workstations deliver more robust performance across a range of demanding tasks—up to 35.5 percent less time on Ansys Fluent CFD simulations, up to 107.4 percent more frames per second in SPECviewperf 15, and up to 13 minutes and 13 seconds faster AutoCAD rendering in our tests. With consistently competitive or better processing times and advanced features, these workstations provide the power you need for complex workflows.

For professionals seeking a dependable and efficient computing solution, Dell Pro Max systems stand out as versatile and capable options that could shave significant time off repeated tasks such as 3D rendering and developing simulations to design new products, helping get demanding projects across the finish line faster.

-
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This project was commissioned by Dell Technologies.

Read the science behind the report ►

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How we created this report

A PT team, which includes the contributors we've listed and others, created this report and performed the technical work behind it. We used AI for some organization tasks such as generating tables from data across spreadsheets.



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