

# Principled Technologies study shows the HP Elite SFF 805 G9 Desktop PC can boost performance and energy efficiency

*In tests with general, graphics, and AI workloads, this AMD Ryzen PRO processor-powered SFF desktop outperformed a Dell OptiPlex SFF Plus Desktop*

PALO ALTO, CA, UNITED STATES, November 4, 2024 /EINPresswire.com/ -- Organizations increasingly work with enormous amounts of data. Even as they help make sense of these data, AI and ML technologies can add extra resource burdens. PT writes, “the more effectively your teams can transform data such as edge data, medical records, POS metrics, and security footage into actionable insights, the more likely you can be to meet and exceed your long-term goals.” Commercial desktops that can empower users to complete day-to-day tasks more quickly, crunch through graphics-heavy workloads in less time, or handle more AI work can be a boon to workforces. Plus, devices that use less power as they run can help organizations’ bottom lines.

When Principled Technologies (PT) tested HP Elite SFF 805 G9 Desktop PCs with AMD Ryzen PRO 8000G Series processors, they found that they outperformed similarly configured Dell OptiPlex SFF Plus Desktops with Intel vPro with Intel Core processors on general performance, graphics-heavy, and AI workloads. They achieved a 3DMark Time Spy overall score up to 244.6 percent higher than the competitors, as well as a Geekbench AI Quantized score up to 408.4 percent higher. According to the report, “These findings suggest AMD Ryzen PRO 8000G Series processor-powered HP Elite SFF 805 G9 Desktop PCs can help you transform business data into actionable insights.”

Additionally, the HP Elite SFF 805 G9 Desktop PCs also consumed less power during a resource-intensive video call presentation. The study explains, “Decreasing the amount of energy your systems use during resource-intensive tasks can help your company save money and reduce



**Use less energy—and get a performance boost**

We measured general, graphics, and AI performance and monitored power consumption while running resource-intensive workloads on HP Elite SFF 805 G9 Desktop PCs powered by AMD Ryzen PRO processors and Dell OptiPlex SFF Plus Desktops powered by Intel vPro with Intel Core processors

Whether your organization is ready to add artificial intelligence (AI) innovations and machine learning (ML) workloads to your operations or not, the increasing amount of data across industries is a game changer. And the more effectively your teams can transform data such as edge data, medical records, POS metrics, and security footage into actionable insights, the more likely you can be to meet and exceed your long-term goals. The introduction of a neural processing unit (NPU) to traditional CPU and GPU computer architectures is also a potential game changer. An NPU, at its low-energy-consumption core, can help accelerate AI and ML workloads. Moving forward, this makes it imperative to choose the right combination of processor components and RAM for your commercial desktops.

In our hands-on tests, we used industry-standard benchmarks to compare small form factor (SFF) AMD Ryzen™ processor-powered HP Elite and Intel® Core™ processor-powered Dell™ OptiPlex™ commercial desktop systems. We found that HP Elite SFF 805 G9 Desktop PCs powered by an AMD Ryzen PRO 8600G or 8700G processor with built-in Ryzen AI NPU outperformed Dell OptiPlex SFF Plus Desktops with an Intel vPro® with Intel Core i5-14500 or i7-14700 processor in all comparisons. We also found that both versions of the AMD Ryzen 8000 Series PRO processor-powered HP Elite SFF 805 G9 Desktop PC we tested used less energy than either Intel vPro with Intel Core processor-powered Dell OptiPlex SFF Plus Desktop during resource-intensive video call presentations.

 <p><b>Consume less power during resource-intensive activities</b></p> <p>Up to 28.8% less power consumption during a 30-minute Microsoft Teams presentation*</p> <p><small>This project was commissioned by HP and AMD.</small></p>	 <p><b>Empower graphics-intensive workloads</b></p> <p>Up to 244.6% higher 3DMark® Time Spy overall score**</p>	 <p><b>Run AI and ML applications more efficiently</b></p> <p>Up to 408.4% higher Geekbench AI Quantized score**</p>
---	--	---

\* HP Elite SFF 805 G9 Desktop PC powered by an AMD Ryzen 7 PRO 8700G processor and 16GB RAM vs. Dell OptiPlex SFF Plus Desktop powered by Intel vPro with Intel Core i5-14500 processor and 16GB RAM.

\*\* HP Elite SFF 805 G9 Desktop PC powered by an AMD Ryzen 7 PRO 8700G processor and 32GB RAM vs. Dell OptiPlex SFF Plus Desktop powered by Intel vPro with Intel Core i7-14700 processor and 32GB RAM.

Use less energy—and get a performance boost November 2024

Use less energy—and get a performance boost

your carbon footprint. Such tasks include modeling 3D figures, rendering an MRI scan, running a complex financial algorithm, and sharing material during a video call.” The HP Elite SFF 805 G9 Desktop PCs consumed up to 28.8 percent less power during these tests.

To learn more, read the report <https://facts.pt/ajyZXcZ>. See infographics on the configurations’ results at <https://facts.pt/XcMTaOA> and <https://facts.pt/pSta8lN>.

About Principled Technologies, Inc.  
Principled Technologies, Inc. is the leading provider of technology marketing and learning & development services.

Principled Technologies, Inc. is located in Durham, North Carolina, USA.  
For more information, please visit [www.principledtechnologies.com](http://www.principledtechnologies.com).

Sharon Horton  
Principled Technologies, Inc.  
[press@principledtechnologies.com](mailto:press@principledtechnologies.com)  
Visit us on social media:

[Facebook](#)  
[X](#)  
[LinkedIn](#)  
[YouTube](#)

**HP Elite SFF 805 G9 Desktop PC: Maximize performance while using less power**

We measured general, graphics, and AI performance and monitored power consumption while running a resource-intensive workload on an HP Elite SFF 805 G9 Desktop PC powered by an AMD Ryzen™ 7 PRO 8700G processor and a Dell® OptiFlex™ SFF Plus Desktop powered by an Intel® vPro™ with Intel® Core™ i7-14700 processor.

Both small form factor (SFF) desktops contained 32 GB of RAM and 1 TB of SSD storage. 32 GB of RAM is appropriate for engineers, scientists, artists, and other professionals, and useful for AI integration.

**Enhance everyday experiences**  
Provide PerformanceTop 11 combined CPU, 3D, and 2D graphics, storage, and memory test profiles to increase user and analyst productivity.

**Speed complex tasks**  
While your workflow is probably not playing games on these systems, faster 3DMax™ Time Spy scores can translate to faster response times from graphical software, financial analysis programs, spreadsheet operations, applications, and product design and development software.

**Accelerate decision-making**  
Qualcomm AI uses the predictions computed by a single-precision float32 model and a quantized score using faster and precision to evaluate real-world AI performance. The Edge Precision score uses float32 precision and the Quantized score approximates precision. To see testing, we used the Open Neural Network Exchange (ONNX) AI framework and Intel® AI Accelerator for machine learning on Windows.

**Reduce electricity use and costs**  
Running a system at low temperatures during resource-intensive tasks can help your company save money and reduce your carbon footprint. Such tasks include modeling 3D figures, rendering an MRI scan, running a complex financial algorithm, and so on. For this test, sharing material during a 30-minute video call with four participants.

Power consumption during a video meeting presentation (PowerDown) is lower (3.1W) than the Dell OptiFlex SFF Plus Desktop (4.6W).

Learn more at <https://facts.pt/0706eV>

**Principled Technologies**  
Copyright © 2024 Principled Technologies, Inc. All rights reserved. All trademarks are the property of their respective owners. HP, Intel, AMD, and Dell are trademarks of their respective owners.

Infographic: HP Elite SFF 805 G9 Desktop PC: Maximize performance while using less power



**Increase productivity and consume less energy with an HP Elite SFF 805 G9 Desktop PC**

We measured general, graphics, and AI performance and monitored energy consumption while running a resource-intensive workload on an HP Elite SFF 805 G9 Desktop PC powered by an AMD Ryzen™ 5 PRO 8600G processor and a Dell™ OptiPlex™ SFF Plus Desktop powered by an Intel® vPro® with Intel Core™ i5-14500 processor.

Both small form factor (SFF) desktops contained 16 GB of RAM and 512 GB of SSD storage. 16 GB of RAM is adequate for standard business professionals who tend to have several programs open and running.

**Boost day-to-day performance**

PassMark PerformanceTest 11 combined CPU, 2D and 3D graphics, storage, and memory test performance metrics to test overall desktop usage.

Device	Score
HP Elite SFF 805 G9 Desktop PC	11,000
Dell OptiPlex SFF Plus Desktop	10,500

**Power graphics-heavy workloads**

While your workflow is probably not playing games on these systems, better 3DMax® Time Stp scores can translate to faster response times from graphics-heavy financial analysis programs, generating spreads, calculations, and product design and development software.

Device	Score
HP Elite SFF 805 G9 Desktop PC	1,100
Dell OptiPlex SFF Plus Desktop	1,050

**Run AI and ML applications more efficiently**

Geekbench AI tests the prediction component of a single-process ResNet-50 model and a quantized version of the same model to evaluate real-world AI performance. The Single Precision score requires Intel® QAT processor and Quantized score requires Intel® processor. For our testing, we used the Open Neural Network Exchange (ONNX) AI framework and DlibML AI backend for machine learning on Windows.

Device	Score
HP Elite SFF 805 G9 Desktop PC	1,100
Dell OptiPlex SFF Plus Desktop	1,050


**Consume less energy**

Decreasing the amount of energy your system uses during meetings that take call helps your company save money and reduce your carbon footprint. Our tests include recording 3D figure rendering at 60 FPS, running a complex financial algorithm, and so we did for the test during material during a 30-minute video call with four participants.

Device	Power Consumption (W)
HP Elite SFF 805 G9 Desktop PC	11.0
Dell OptiPlex SFF Plus Desktop	10.5

1. PassMark Software, "PerformanceTest," accessed September 27, 2024. <https://www.passmark.com/Products/PerformanceTest.aspx>  
2. Geekbench AI, "Geekbench AI 1.1," accessed September 27, 2024. <https://www.geekbench.com/Products/Geekbench-AI.aspx>  
3. Geekbench AI, "Geekbench AI workloads," accessed September 26, 2024. <https://www.geekbench.com/Products/Geekbench-AI-workloads.aspx>

Learn more at <https://hpe.com/go/2024EV>



**Increase productivity and consume less energy with an HP Elite SFF 805 G9 Desktop PC**

This press release can be viewed online at: <https://www.einpresswire.com/article/757581254>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2024 Newsmatics Inc. All Right Reserved.