



Fast-track your advanced workflows with the space-efficient HP Z2 SFF G1i AI workstation

Compared to an identically configured Dell Pro Max Slim, the compact HP desktop performed better on a range of compute-intensive benchmarks



Jumpstart 3D rendering tasks

With an 8.8% higher Blender (The Junk Shop) score

Facilitate 3D modeling and animation

With a 6.6% higher SPECcapc® for Maya score

Energize simulation tasks

With a 14.1% higher SPECworkstation® 4.0 (Life Sciences) score

Workstation specs alone don't always tell the whole story. We compared two identically configured small form factor (SFF) desktop systems: the **HP Z2 SFF G1i** and the **Dell® Pro Max Slim**. Both desktops contained Intel® Core™ Ultra 9 285K processors, 64 GB of DDR5 memory, 1 TB of NVMe® PCIe® SSD storage, and NVIDIA RTX™ 4000 SFF Ada Generation graphics.

To evaluate performance differences from multiple perspectives, we used an on-device, AI-enabled art creation tool and ran several compute- and graphics-intensive benchmarks on both workstations:

- **Amuse 3.1 AI art creation tool:** We generated a high-resolution image and a 2-second video to assess on-device GenAI-assisted content creation performance.
- **Blender benchmark:** We executed three workloads to measure hardware capabilities across different 3D rendering scenarios.
- **SPECcapc for Maya benchmark:** We tested CPU performance using a variety of models and animations.
- **SPECworkstation 4.0 benchmark:** We evaluated AI accelerator, CPU, graphics, and storage performance through workflows representative of real-world industry applications.

In all of these comparisons, we found that the HP Z2 SFF G1i outperformed its identically configured Dell counterpart. Read on to learn more.

Accelerate graphics-intensive work from brainstorming to execution

From 3D modeling and simulation to advanced visualization, high-performance workstations enable creators and engineers to tackle demanding workflows with ease. When every second matters, even small performance gains can make a big difference. With more powerful desktops, teams can iterate faster, solve problems more efficiently, and push the boundaries of design and innovation without being slowed down by hardware limitations.

To assess each desktop's capability for on-device GenAI-assisted content creation tasks, we used the **Amuse 3.1 AI art tool** to generate both images and videos.¹ While it might seem intuitive that video generation will take longer than image generation, our testing revealed the opposite. The reason lies in the models Amuse 3.1 employs:

- **Image generation** uses a model optimized for fine-grained detail and photorealism, prioritizing quality.
- **Video generation** uses a model tuned for rapid output, sacrificing some complexity for efficiency.²

While a few seconds saved here and there may not seem very important, these content creation efforts are often not one-and-done tasks. Faster turnaround times mean more time to explore ideas and get polished projects out the door faster.

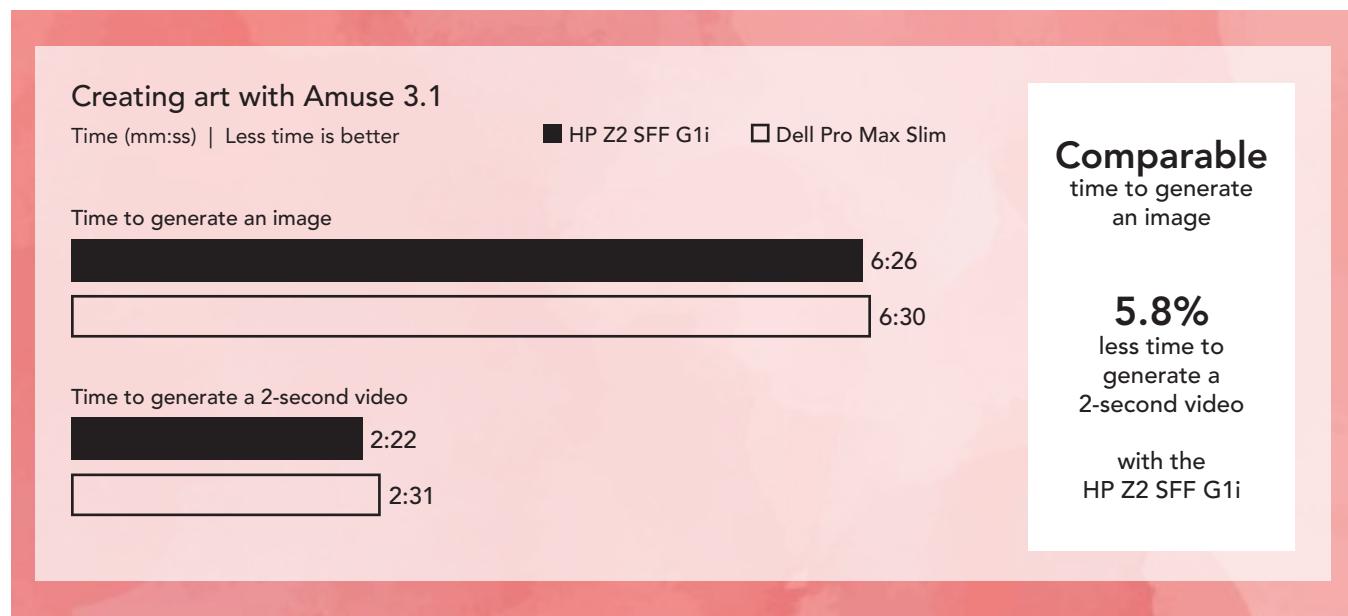


Figure 1: Amuse 3.1 art generation results. Source: PT.

Note: 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.

To measure hardware capabilities across different 3D rendering scenarios, we executed three workloads in the **Blender benchmark**. Each of the Blender workloads stresses the hardware in different ways, so you can reference the score that best aligns with your workflow:

- **Monster** uses the EEVEE engine for real-time rendering performance of high-resolution frames and animations.
- **The Junk Shop** uses the Cycles engine to render a complex 3D splash screen, pushing the desktop's limits with heavy geography and high-resolution textures.
- **Classroom** uses the Cycles engine for realistic lighting and shading.³

Higher samples per minute in these Blender 3D scene comparisons translate to faster renders in these scenarios.

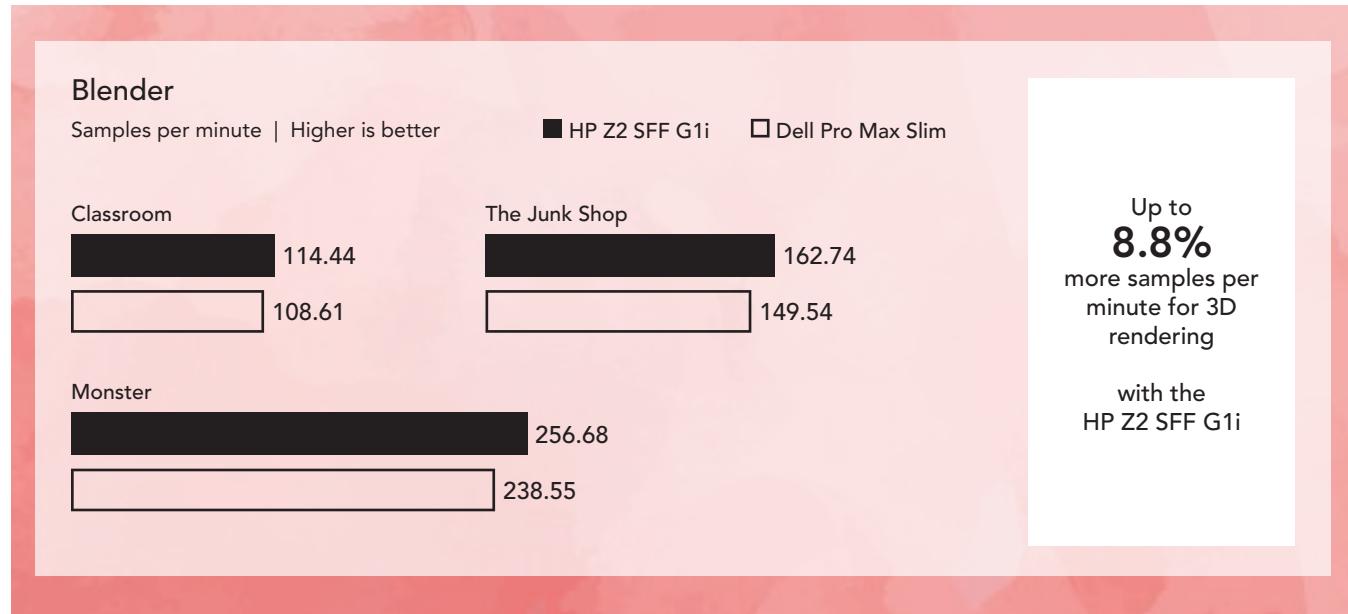


Figure 2: Blender benchmark results. Source: PT.

Autodesk® Maya is a leading tool for creating realistic 3D characters and special effects for films, animations, and games. The **SPECapc for Maya benchmark** measures system performance across a range of common Maya tasks using 11 models and animations. If your organization works in gaming or media and entertainment, you're likely already familiar with Maya. Even if you don't use Maya directly, these results serve as an excellent proxy for other compute- and graphics-intensive applications used for image generation, editing, and rendering.

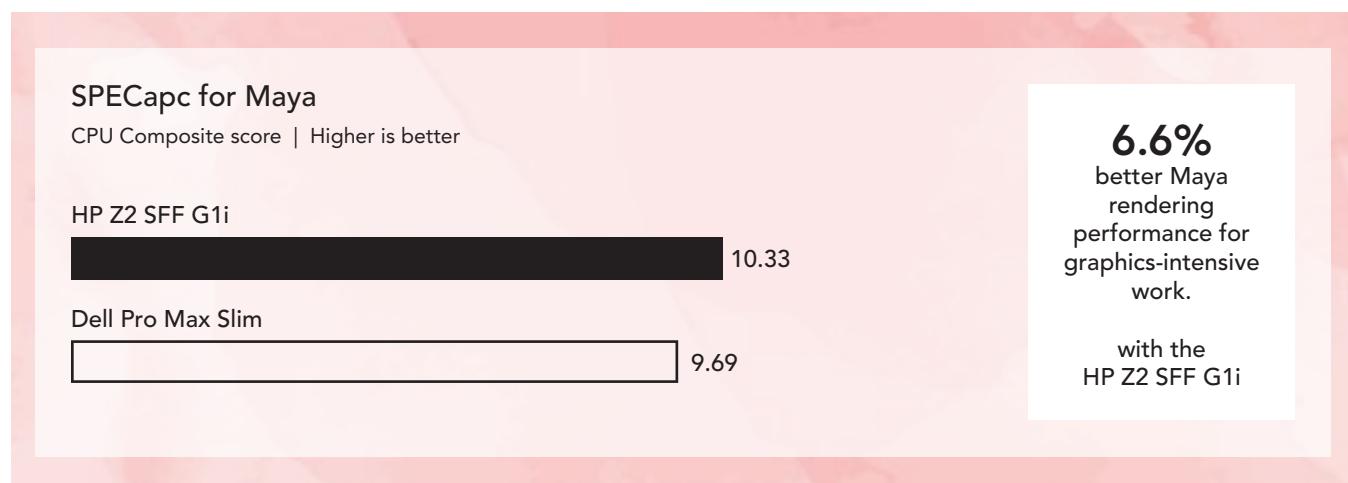


Figure 3: SPECapc for Maya benchmark results. Source: PT.

No single performance metric can fully predict real-world user experience or overall value. The **SPECworkstation 4.0 benchmark** provides a more holistic view by measuring AI accelerator, CPU, graphics, and storage performance across multiple industry-specific workflows.

Higher scores in these verticals translate to faster and more efficient task execution for specialized teams—helping them complete complex projects with greater speed and productivity.

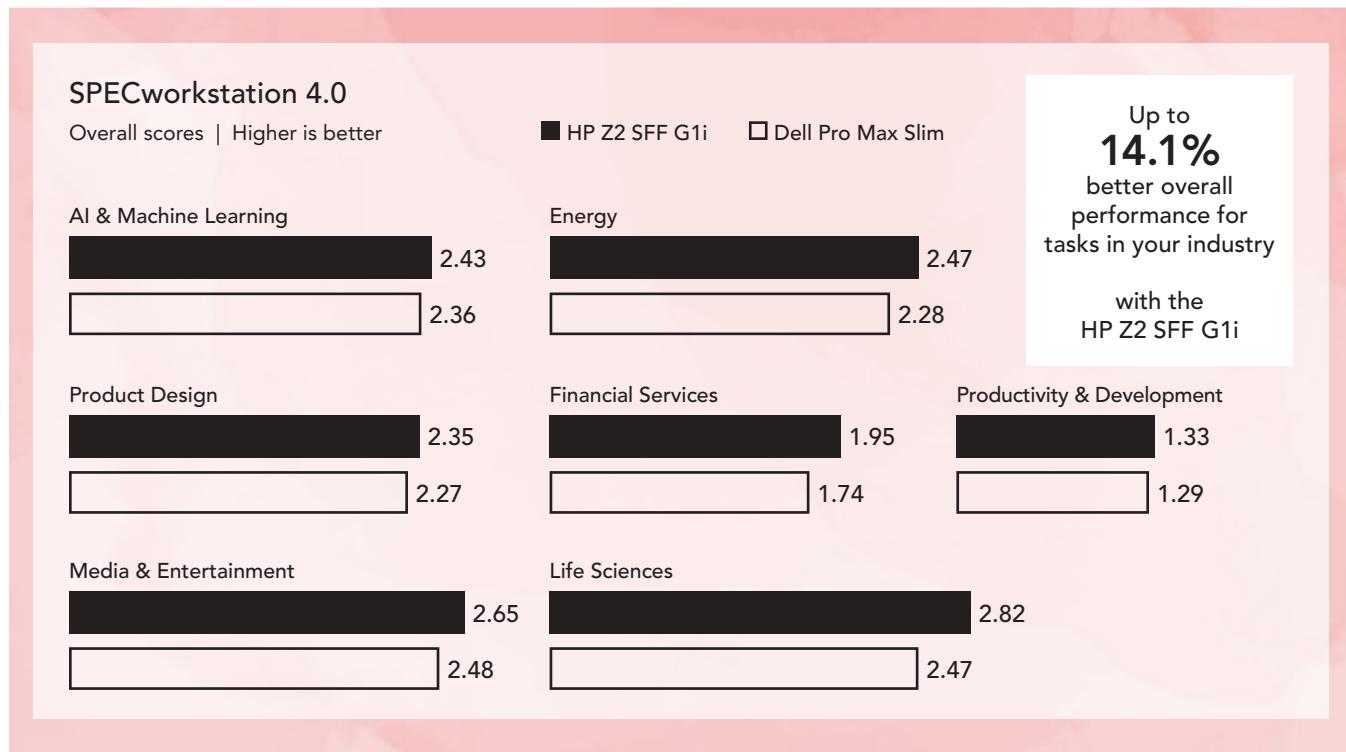


Figure 4: SPECworkstation 4.0 benchmark scores. Source: PT.

About the HP Z2 SFF G1i AI workstation

The tagline for this compact workstation is “Tower Power At a Third of the Size.”⁴ In addition to featuring new Intel Core Ultra K-series CPUs and low-profile NVIDIA RTX™ graphics, this small form factor workstation is rack-mountable and can be placed horizontally or vertically. Plus, HP makes it easy to swap graphics and memory with tool-less interior access.

♦ [Learn more](#)

About the Intel Core Ultra 9 285K processor

The Intel Core Ultra 9 285K processor has 24 CPU cores (8 performance and 16 efficient) with 24 threads, 36M cache, and a max turbo frequency of 5.7 GHZ. It also comes with integrated Intel® graphics and the Intel AI Boost NPU rated at 13 peak TOPS (Int8).⁵ This Series 2 processor is purpose-built “to unlock new levels of intelligent performance for the most demanding daily tasks.”⁶

♦ [Learn more](#)

Conclusion

We compared compute- and graphics-intensive performance on HP Z2 SFF G1i and Dell Pro Max Slim workstations equipped with identical Intel® Core™ Ultra 9 285K processors, NVIDIA RTX™ 4000 SFF Ada Generation graphics, 64 GB of memory, and 1 TB of storage. We found that the HP Z2 SFF G1i received higher benchmark scores in 3D rendering and animation as well as industry-specific scenarios. For space-constrained creative and technical professionals tackling 3D rendering projects, or anyone tackling other compute- or graphics-intensive work, the HP Z2 SFF G1i is a solid choice.

1. AMD, "Introducing The World's First BF16 NPU Model for SD 3.0 Medium – Try Now in Amuse 3.1," accessed December 15, 2025, <https://www.amd.com/en/blogs/2025/worlds-first-bf16-sd3-medium-npu-model.html>.
2. AMD, "Introducing The World's First BF16 NPU Model for SD 3.0 Medium – Try Now in Amuse 3.1."
3. Blender, "Asset Bundles," accessed December 15, 2025, <https://www.blender.org/download/demo-files/>.
4. HP, "HP Z2 SFF G1i," accessed December 16, 2025, <https://www.hp.com/us-en/workstations/z2-small-form-factor.html>.
5. Intel, "Intel Core Ultra 8 Processor 285K," accessed December 15, 2025, <https://www.intel.com/content/www/us/en/products/sku/241060/intel-core-ultra-9-processor-285k-36m-cache-up-to-5-70-ghz/specifications.html>.
6. Intel, "Intel® Core™ Ultra Desktop Processors (Series 2) Product Brief," accessed December 15, 2025, <https://www.intel.com/content/www/us/en/products/docs/processors/core-ultra/core-ultra-desktop-processors-series-2-brief.html>.

Read the science behind this report ►



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This project was commissioned by HP.