Executive summary

Unleash the power to create with the faster HP Z4 G5 Workstation Desktop PC

Get stronger performance vs. a previous-generation HP Z4 G4 Workstation PC

When your team has demanding tasks to complete—from photo or video editing, to 3D modeling, to AI-powered workflows—outdated laptops or workstations could be extending the time it takes to complete projects. By arming your creators and developers with powerful HP Z4 G5 workstations with Intel® Xeon® w3-2425 processors, you can help them unleash their creative potential and move on to their next big ideas.

At Principled Technologies, we compared the new HP Z4 G5 Workstation Desktop PC to its predecessor, the HP Z4 G4, on various AI tasks including medical imaging and language processing, as well as general productivity tasks, CPU and GPU performance, 3D modeling tasks, and creative workflows in Adobe® Creative Cloud®. Packed with the latest technology, including a new Intel Xeon w3-2425 processor, the HP Z4 G5 sped up content creation, increased everyday performance, and handled AI tasks faster than the older model.

Our results show that any teams that create content, complete 3D building designs, or use AI for medical imaging could likely see a boost in performance by investing in the new HP Z4 G5 Workstation Desktop PC.

Move projects to completion faster

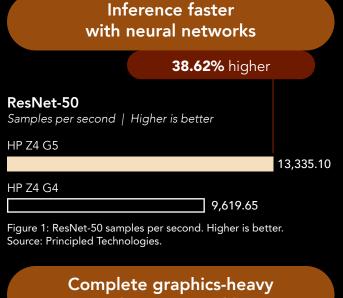with 23% better performance in PugetBench for After Effects

Finish 3D models faster

with 31% better performance in Maxon Redshift

Inference faster with neural networks

with 38% better performance in ResNet-50

Speed up demanding tasks, from AI workloads to 3D rendering

AI tasks aren't one-size-fits-all—so we tested four different types of AI workloads to show how the HP Z4 G5 can improve performance over previous-gen systems across a wide range of AI tasks. (Figures 1 and 2 show the results from just two of the workloads—read the full report for more data.) Our results show that the new HP Z4 G5 Workstation Desktop PC can speed up inference on image classification, speech recognition, image segmentation, and text analysis— which could give your team an AI edge.
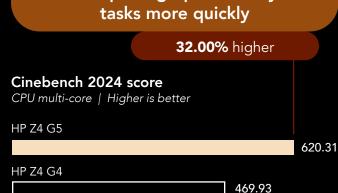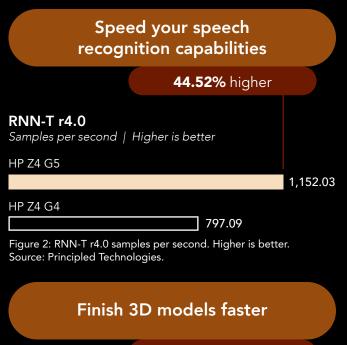
It's not just AI users who stand to benefit from the processing power the HP Z4 G5 has to offer. Teams with graphics-heavy tasks, like engineers who render complex models or video creators working with animation, can rely on the HP Z4 G5 workstation with Intel Xeon w3-2425 processor to keep their work moving smoothly. Figures 3 and 4 show the results of just two of the everyday and content creation workloads we tested.

Inference faster with neural networks

38.62% higher

ResNet-50
Samples per second | Higher is better

HP Z4 G5
13,335.10

HP Z4 G4
9,619.65

Figure 1: ResNet-50 samples per second. Higher is better. Source: Principled Technologies.

Speed your speech recognition capabilities

44.52% higher

RNN-T r4.0
Samples per second | Higher is better

HP Z4 G5
1,152.03

HP Z4 G4
797.09

Figure 2: RNN-T r4.0 samples per second. Higher is better. Source: Principled Technologies.

Complete graphics-heavy tasks more quickly

32.00% higher

Cinebench 2024 score
CPU multi-core | Higher is better

HP Z4 G5
620.31

HP Z4 G4
469.93

Figure 3: Cinebench 2024 CPU multi-core scores. Higher numbers are better. Source: Principled Technologies.

Finish 3D models faster

31.38% lower

Maxon Redshift
Render time (mm:ss) | Lower is better

HP Z4 G5
2:44

HP Z4 G4
3:59

Figure 4: Maxon Redshift results. Lower render times are better. Source: Principled Technologies.

Read the report at https://facts.pt/mBqMeZ6 ▶

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This project was commissioned by HP.