

Study shows HP ZBook 8 G1a delivers performance advantages vs. comparable Lenovo and Dell mobile workstations

Principled Technologies compared general productivity, computer vision, & content creation performance on three systems with AMD Ryzen AI 300 Series processors

PALO ALTO, CA, UNITED STATES,
January 29, 2026 /EINPresswire.com/ --

As demanding applications in high-performance fields continue to grow more and more demanding, so do teams' expectations of their workstations. To measure the real-world gains users could expect from investing in AMD Ryzen AI 300 Series processor-powered HP ZBook 8 G1a Mobile Workstations, third party Principled Technologies (PT) ran a battery of benchmarks comparing its performance to that of similarly configured Lenovo ThinkPad P14s and Dell Pro Max 14 mobile workstations. The HP ZBook 8 G1a delivered wins in a range of areas, including:

- Rendering a 3D scene over a minute faster
- Completing industry-specific workflows up to 13.2% faster
- Saving up to 32 minutes exporting CAD graphics

The report notes that: "Our hands-on testing shows that investing in the HP ZBook 8 G1a Mobile Workstation powered by an AMD Ryzen™ AI 9 HX PRO 375 processor brings real-world gains. Across a variety of benchmarks, the 14-inch HP ZBook 8 G1a consistently finished ahead of



Principled Technologies®

A Principled Technologies report: Hands-on testing. Real-world results.

Expedite complex workflows with an HP ZBook 8 G1a Mobile Workstation

We compared this system's general productivity, computer vision, and content creation performance to that of comparable AMD Ryzen™ AI 9 HX PRO 370 processor-based Lenovo and Dell mobile workstations

As the size and breadth of demanding applications in high-performance fields continue to grow, so do workstation expectations. The HP ZBook 8 G1a Mobile Workstation delivers pro-level performance with next-gen AMD Ryzen™ AI 300 Series processors. These processors contain CPU, GPU, and neural processing unit (NPU) architecture, which accelerates AI and machine learning (ML) workloads. A characteristic of the system that can play an important role with AI-enhanced workloads is how many trillions of operations per second (TOPS) an NPU is rated for.

The highest NPU TOPS-rated AMD Ryzen™ AI 300 Series processor available with the HP ZBook 8 G1a Mobile Workstation is the AMD Ryzen™ AI 9 HX PRO 375 processor, at 55 NPU TOPS. That's 5 NPU TOPS more than you'd get with Lenovo® ThinkPad® P14S Gen 6 and Dell™ Pro Max 14 mobile workstations, which contain, at the highest level, AMD Ryzen™ AI 9 HX PRO 370 processors (50 NPU TOPS). That difference showed up when we compared the performance of these three systems on several different AI-related benchmarks, where the HP system came out on top. Read on to learn more.

Boost productivity	Accelerate industry-specific workflows	Export Revit files in less time
Up to 10.3% faster CPU multi-core performance based on Cinebench 2024 results	Up to 13.2% higher SPECworkstation® 4.0 (Energy) results	Up to 32 minutes and 9 seconds faster based on Revit® 2024 RFO Benchmark (DWG) results

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Expedite tasks with an HP ZBook 8 G1a Mobile Workstation

“And,” the report concludes, “while some of the wins were small, others were significant. For example, based on the Revit 2024 RFO Benchmark results, you could save between 3 minutes and over half an hour, per export, depending on the file format. When you spend your days tackling time-sensitive tasks, any advantage, especially those based on real-world usage, can make a big difference.”

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

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