

# New Principled Technologies study compares HP notebooks to key competitors in general, AI, and battery life performance

*The HP ProBook 445, EliteBook 645, and EliteBook 845 G11 Notebook PCs achieved higher benchmark scores and longer battery life vs. comparable competitor laptops*

SAN JOSE, CA, UNITED STATES, November 5, 2024 /EINPresswire.com/ -- With hybrid and remote work models becoming more common and AI technologies changing the pace of work, the business world is rapidly evolving. Decision-makers now face important choices when it comes to PC and processor combinations for their workforce. To help narrow their options, Principled Technologies (PT) put three sets of Windows 11 Pro PCs to the test.

In the first comparison, PT tested an AMD Ryzen 7 processor-powered HP ProBook 445 G11 Notebook PC, an Intel Core Ultra 7 processor-powered Dell Latitude 3450 laptop, and an Intel Core Ultra 7 processor-powered Lenovo ThinkPad E14 Gen 6 laptop. The second comparison pitted an AMD Ryzen 7 PRO processor-powered HP EliteBook 645 G11 Notebook PC against a Dell Latitude 5450 laptop and a Lenovo ThinkPad L14 Gen 5 laptop, both of which featured an Intel vPro with Intel Core Ultra 7 processor. Finally, in the third comparison, PT tested an AMD Ryzen 7 PRO processor-powered HP EliteBook 845 G11 Notebook PC, as well as an Intel vPro with Intel Core Ultra 7 processor-powered Dell Latitude 7450 laptop and an Intel vPro with Intel Core Ultra 7 processor-powered Lenovo ThinkPad T14 Gen 5 laptop. In each comparison, PT used performance, productivity, and AI benchmarks. PT also ran battery life tests and user experience tests focusing on surface temperatures and acoustic output under load.

The report on the first comparison states, "Our hands-on system responsiveness and battery life



A Principled Technologies report graphic with a red header and a photo of a woman working on a laptop. The main headline reads: "HP ProBook 445 G11 Notebook PC: Save time and help increase overall productivity". Below this, it states: "We compared everyday performance, battery life, and user experiences on an AMD Ryzen 7735U processor-powered HP ProBook 445 G11 to those of two Intel Core Ultra 7 processor 155U-based Dell and Lenovo laptops". To the right, a smaller text block explains: "As models of where we work continue to evolve, greater overall productivity and extended battery life continue to be in high demand. These priorities make the PC and processor combo you choose for yourself or your team more important than ever. Earlier this year, HP launched the 14-inch ProBook 445 G11 Notebook PC powered by next-gen Zen 3+ AMD® Ryzen™ premium laptop processors. What can this duo provide that others can't? In our hands-on system responsiveness and battery life tests, the 14-inch HP ProBook 445 G11 Notebook PC with an 8-core AMD Ryzen™ 7035 Series processor and integrated AMD Radeon™ Graphics received higher CPU- and GPU-focused benchmark scores and provided longer battery life in productivity and video-conferencing scenarios than 12-core Intel® Core™ Ultra 7 processor-based Dell™ and Lenovo® laptops. Read on for more details."

The graphic also features three icons with corresponding text:

- Speed machine learning inference workloads**: Up to 163.1% higher Geekbench AI ONNX DirectML (GPU inference score)\*
- Collaborate longer**: 5 hr 38 min of unplugged power during a Microsoft Teams meeting
- Get more done unplugged**: Up to 11 hr 50 min of battery life\*\*

Footnote: \*vs. Intel Core Ultra 7 processor 155U-powered Lenovo ThinkPad E14 Gen 6 laptop. \*\*Precision Battery Life Benchmark results in Windows 11 Pro. Best power efficiency power mode.

HP ProBook 445 G11 Notebook PC: Save time and help increase overall productivity November 2024

HP ProBook 445 G11 Notebook PC: Save time and help increase overall productivity

tests show that investing in 14-inch HP ProBook 405 Series Notebook PCs powered by next-gen AMD Ryzen 7035 Series processors could help set up your workforce for success. We found an AMD Ryzen 7735U processor-powered HP ProBook 445 G11 Notebook PC could help speed machine learning inference workloads and provide long battery life in unplugged productivity and collaboration scenarios.”

In the second comparison report, PT writes that the HP EliteBook 645 G11 Notebook PC could “help set up your workforce for success. We found that an HP EliteBook 645 G11 Notebook PC with an 8-core AMD Ryzen PRO 7735U processor received higher benchmark scores, provided longer battery life, and ran cooler and quieter under load than 12-core Intel vPro with Intel Core Ultra 7 processor 165U-based Dell Latitude 5450 and Lenovo ThinkPad L14 Gen 5 laptops.”

As for the third comparison, PT reports, “Above all, the PC and processor combo you invest in must empower your team to embrace emerging AI technologies, complete projects as quickly as possible, and provide enough battery life to sustain work when outlets are unavailable. In our hands-on system responsiveness and battery life tests, we found that a 14-inch HP EliteBook 845 G11 Notebook PC powered by an 8-core AMD Ryzen 7 PRO 8840U processor provided all-day battery life, a comfortable user experience, and received higher CPU- and GPU-focused benchmark scores compared to 12-core Intel Core Ultra 7 processor 165U-based Dell Latitude 7450 and Lenovo ThinkPad T14 Gen 5 laptops.”

To learn more, read about the first comparison: <https://facts.pt/BwkrHT6>, the second comparison: <https://facts.pt/ZMBE2pk>, and the third comparison: <https://facts.pt/rhwlW9S>.

About Principled Technologies, Inc.  
Principled Technologies, Inc. is the leading provider

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

### Help users boost productivity with HP EliteBook 645 G11 Notebook PCs

We compared general and AI performance, battery life, and user experiences on an AMD Ryzen 7 PRO 7735U processor-powered HP EliteBook 645 G11 to those of two Intel Core Ultra 7 processor 165U-based Dell and Lenovo laptops

As productivity-boosting artificial intelligence (AI) technologies change the face of business, the Windows 11 Pro PC and processor model you choose for you and your team are more important than ever. Earlier this year, HP launched the 14-inch EliteBook 645 G11 Notebook PC powered by Zen 3+ AMD® Ryzen™ premium laptop processors. What benefits can this combo deliver that its competitors can't?

In our hands-on tests, the 14-inch HP EliteBook 645 G11 Notebook PC with an 8-core AMD Ryzen 7035 Series PRO mobile processor received higher general and AI performance benchmark scores, provided longer battery life, and delivered better physical experiences than 12-core Intel® vPro® with Intel Core™ Ultra 7 processor-based Dell™ and Lenovo® laptops.

**Boost general productivity**  
Up to 19.3% higher PassMark PerformanceTest 11 score

**Supercharge machine learning workloads**  
Up to 154.6% higher Geekbench AI ONNX DirectML GPU inference score

**Accomplish more unplugged**  
Up to 10 hr 22 min of battery life\*

This project was commissioned by HP and AMD. \*MobileMark 30 battery life results in Windows 11 Pro best power efficiency power mode.

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

### HP EliteBook 845 G11 Notebook PC: Empower anywhere work for high-producing teams

We compared day-to-day performance, battery life, and user experiences on an AMD Ryzen 8840U processor-powered HP EliteBook 845 G11 to those of two Intel Core Ultra 7 processor 165U-based Dell and Lenovo laptops

Artificial intelligence (AI) is changing the pace—and face—of business. That makes the PC and processor combo you choose for yourself or your team more important than ever. Earlier this year, HP launched the 14-inch EliteBook 845 G11 Notebook PC powered by next-gen Zen 4 technology-based AMD® Ryzen™ premium laptop processors. How does this powerful combination compare to Intel® Core™ Ultra processor-based AI PCs on the market?

In our hands-on system responsiveness and battery life tests, the 14-inch HP EliteBook 845 G11 Notebook PC with an 8-core AMD Ryzen 8040 Series PRO mobile processor delivered more than a full day's worth of battery life and received higher CPU- and GPU-focused benchmark scores than 12-core Intel vPro® with Intel Core Ultra 7 processor-based Dell™ and Lenovo® laptops. Read on for the full story.

**Boost everyday performance**  
Up to 66.1% higher PassMark PerformanceTest 11 score

**Be productive unplugged**  
Up to 12 hr and 13 min of battery life\*

**Supercharge AI-centric workflows**  
Up to 167.1% higher Geekbench AI ONNX DirectML GPU inference score

This project was commissioned by HP and AMD. \*MobileMark 30 battery life results in Windows 11 Pro best power efficiency power mode.

HP EliteBook 845 G11 Notebook PC: Empower anywhere work for high-producing teams
November 2024

## HP EliteBook 845 G11 Notebook PC: Empower anywhere work for high-producing teams

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).

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