



## Spend less for faster web browsing and strong everyday performance

By choosing the HP EliteBook 1040 G10 Notebook PC with Intel Core i7-1370P vPro processor instead of the Apple MacBook Pro 14" with an Apple M2 Max 12-core processor

When selecting a new laptop, you're likely weighing a number of considerations: Will this system be able to handle the work I need it to do with ease? Will it be able to keep up with me, or will it make me wait? And, inevitably, will it fit in my budget? These questions become even more important when you're making a purchase not just for yourself but for a staff of hundreds or thousands of employees. For business buyers, security and manageability concerns are also top of mind.

Using the WebXPRT and CrossMark® benchmarks, we tested the performance of two systems: an HP EliteBook 1040 G10 Notebook PC with an Intel® Core™ i7-1370P vPro® processor and an Apple® MacBook Pro® 14" with Apple M2 Max 12-core processor. We found that the Intel Core processor-powered HP system delivered overall better performance with a dramatically lower price tag—a cost savings of \$950. The HP EliteBook 1040 G10 also offered Intel and HP manageability and security features not available on the Apple system. Whether you're buying for a team of one or a team of thousands, this report explores why the HP EliteBook 1040 G10 Notebook PC is worthy of consideration.



### Cut costs

\$950 less expensive\*

### Speed online research

Up to 20% better WebXPRT performance\*

### Enable high productivity

Strong CrossMark performance

\*HP EliteBook 1040 G10 Notebook PC with Intel Core i7-1370P vPro processor vs. Apple MacBook Pro 14" with an Apple M2 Max 12-core processor

# Comparing the HP EliteBook 1040 G10 Notebook PC with the Apple MacBook Pro 14"

Table 1 shows the cost and key features of the two systems we tested. In addition to its substantially lower cost at the time of testing, the HP EliteBook 1040 G10 was also more than three-quarters of a pound lighter than the Apple MacBook Pro 14" and supported Intel vPro and Intel Evo technologies.

Before testing, we changed the Windows Power mode on the HP device to Best Performance; the Apple device offered no such option, so we did not make any settings changes.

Table 1: Features and costs, in USD, of the two systems we tested. Source: Principled Technologies.



**HP EliteBook 1040 G10 Notebook PC**  
with an Intel Core i7-1370P vPro processor  
and Intel Iris Xe graphics running  
Windows 11 Pro



**Apple MacBook Pro 14"**  
with an Apple M2 Max 12-core processor  
and Apple M2 Max 38-core GPU  
running macOS Sonoma

Price	\$2,149.00 <sup>1</sup>	\$3,099.00 <sup>2</sup>
Memory (GB)	32	32
Storage (GB)	512	512
Display	14" 1920 x 1200	14.2" 3024x1964
Surface area (sq. in.)	110.5	107.22
Weight (lb.)	2.75	3.58
Ports	2x Thunderbolt 4 ports 2x USB-A 3.2 ports	3x Thunderbolt 4 ports 1x MagSafe3 port 1x SDXC card
Wi-Fi	Intel Wi-Fi 6E AX211	Wi-Fi 6E (802.11ax)
Bluetooth	Yes	Yes
Intel vPro	Yes	No
Intel Evo	Yes	No

## About the HP EliteBook 1040 G10 Notebook PC

The HP EliteBook 1040 G10 Notebook PC, available with 13<sup>th</sup> Generation Intel Core i5 or i7 processors, is “designed around innovative contextual intelligence experiences.”<sup>3</sup> According to HP, it includes HP Wolf Security for Business, optimizes audio and video, and is “crafted with 90 percent recycled magnesium enclosures.”<sup>4</sup>

To learn more, visit <https://www.hp.com/us-en/shop/pdp/hp-elitebook-1040-14-inch-g10-notebook-pc-wolf-pro-security-edition-p-7z1k8ut-aba-1>.

## About the Intel Core i7-1370P vPro processor

The Intel Core i7-1370P vPro processor inside the HP EliteBook 1040 G10 contains 14 cores (six performance-cores and eight efficient-cores), a max turbo frequency of 5.20 GHz, and 24MB Intel Smart Cache. It also features Intel Deep Learning Boost, a “new set of embedded processor technologies designed to accelerate AI deep learning use cases.”<sup>7</sup> According to Intel, new 13<sup>th</sup> Gen Intel Core i7 processors “power high-end PCs with excellent CPU performance for discrete-level graphics and AI acceleration.”<sup>8</sup>

To learn more, visit <https://www.intel.com/content/www/us/en/products/details/processors/core/i7.html>.

We ran two benchmarks to assess performance:

- **WebXPRT:** A free, industry-standard browser benchmark that compares the performance of web-enabled devices when executing real-world tasks. It contains scenarios based on HTML5, JavaScript, and WebAssembly built to emulate everyday work, including enhancing photos, encrypting notes, graphing sales, and more. A higher score in WebXPRT 4 indicates that a system offers faster performance for web browsing, an activity common in nearly every industry.
- **CrossMark:** “An easy to run native cross-platform benchmark that measures the overall system performance and system responsiveness using models of real-world applications.”<sup>5</sup> It offers a single overall score as well as sub-scores from three scenarios:
  - Productivity, which models tasks such as word processing, manipulating spreadsheets, and web browsing
  - Creativity, which models work around editing and cataloging photos and videos
  - Responsiveness, which utilizes operations from both the productivity and creativity scenarios<sup>6</sup>

To review our detailed methodologies and results, see the [science behind the report](#).





## Get faster web browsing for everyday work

For organizations with staff who work primarily on their laptops, the internet is critical. It enables communication, collaboration, and research, not to mention job-specific tasks such as planning social media and updating websites. Internet use at work is so important that speedy web browsing is practically a requirement for business laptops today.

In our WebXPRT tests, the HP EliteBook 1040 G10 Notebook PC with Intel Core i7-1370P vPro processor performed up to 20 percent better than the Apple MacBook Pro 14" with an Apple M2 Max processor, indicating that it delivered faster web browsing despite its lower price tag. To assess web browsing performance from multiple angles, we ran the test two ways: first with Google Chrome, the most commonly used web browser in the U.S.,<sup>9</sup> and then with each system's native web browser, Microsoft Edge and Safari respectively. The HP EliteBook 1040 G10 won both comparisons, as Figures 1 and 2 show.

### WebXPRT 4 overall scores (Chrome web browser)

*Higher is better*

HP EliteBook 1040 G10 Notebook PC



Apple MacBook Pro 14"

279

Figure 1: WebXPRT 4 overall scores with each system running the Chrome web browser. Higher is better. Source: Principled Technologies.

### WebXPRT 4 overall scores (native web browsers)

*Higher is better*

HP EliteBook 1040 G10 Notebook PC



Apple MacBook Pro 14"

276

Figure 2: WebXPRT 4 overall scores with each system running its native web browser: Edge for the HP system and Safari for the Apple system. Higher is better. Source: Principled Technologies.

## Enable high productivity with strong performance for daily work

Between meetings, multitasking, and the inevitable demands of personal life, focusing on individual work can be challenging: In one Microsoft survey, 68 percent of people complained they don't have enough uninterrupted time to focus during their workdays.<sup>10</sup> Employees don't need the further distraction of waiting for a work laptop to load an application or complete a task. A fast, responsive system removes that barrier to productivity.

As Figure 3 shows, we found that the HP EliteBook 1040 G10 delivered a 4 percent higher overall CrossMark score than the Apple MacBook Pro 14", with larger wins in two out of three scenarios and a slight loss (3 percent) in the third. The largest difference was in the Responsiveness scenario, in which the Intel Core processor-powered HP EliteBook 1040 G10 scored 13 percent higher than the Apple M2 Max processor-powered Apple MacBook Pro 14". When you consider that the HP system is \$950 less expensive than the Apple system, these results make the HP EliteBook 1040 G10 worthy of serious consideration.

### CrossMark ratings

Higher is better

● HP EliteBook 1040 G10 Notebook PC ● Apple MacBook Pro 14"

#### Overall



#### Productivity



#### Creativity



#### Responsiveness



Figure 3: CrossMark ratings. Higher is better. Source: Principled Technologies.

## Maintain security with technologies from HP and Intel

Intel and HP together bring key security features to Intel processor-powered HP notebooks. The HP EliteBook 1040 G10 Notebook PC, with its Intel Core i7-1370P vPro processor, includes technologies such as:

- **HP Wolf Security for Business:** A suite of security technologies that help IT prevent malware, remotely lock and wipe devices, manage risk, and recover quickly after a disaster<sup>11</sup>
- **Intel Transparent Supply Chain:** A "set of tools, policies, and procedures implemented on the factory floor at PC and server manufacturers that help enable enterprises to verify the authenticity and firmware version of systems and their components"—features include digitally signed statements of conformance, component-level traceability, and the Auto Verify tool to help detect tampering<sup>12</sup>
- **Intel vPro platform:** A hardware platform that, in addition to manageability benefits, includes Intel Hardware Shield, "a set of built-in PC protections" with security below the operating system, data and application security, and threat detection capabilities<sup>13</sup>



Guayente Sanmartin, Global Head of Commercial Personal Systems at HP, summarizes the two organizations' security partnership as such:

**"Staying secure in a work anywhere environment is a top priority. HP Wolf Security and Intel vPro work together to lock down against ransomware and phishing attacks. Optional HP security services like Click Enterprise rely on Intel vPro capability to isolate threats and stop them from infecting devices and networks. And HP Unique Endpoint Security Controller works with Intel vPro, Intel Hardware Shield, and HP Wolf Security to provide multiple layers of protection."**<sup>14</sup>

To learn more, visit <https://www.hp.com/us-en/security/products.html> and <https://www.intel.com/content/www/us/en/security/hardware/hardware-security-overview.html>.

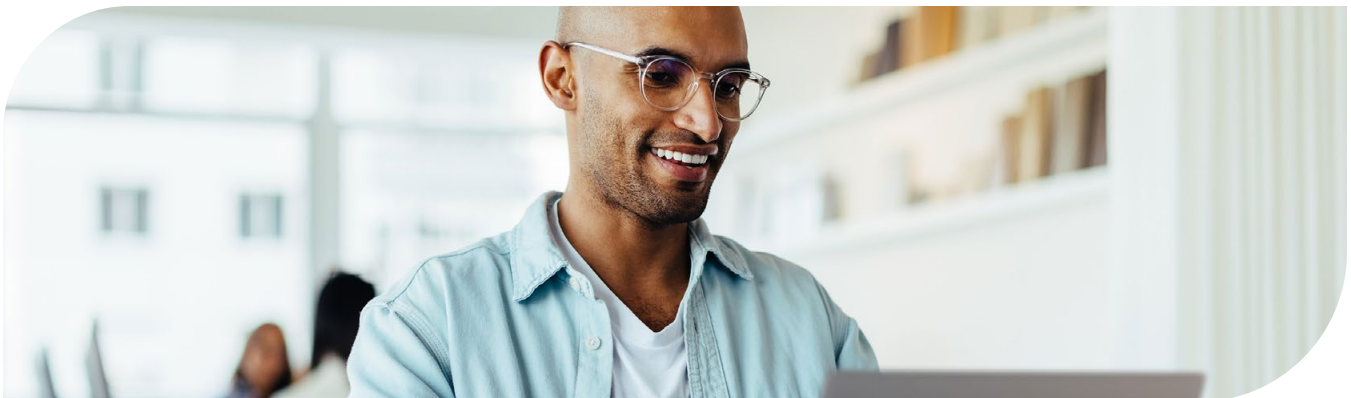
## Help your IT department save time

For large enterprises, managing multi-thousand-device laptop fleets is a significant time commitment. But IT staff are always juggling multiple priorities, from tricky support tickets to company-wide growth initiatives. Laptop deployment and management can't take a backseat, but the less time IT must spend on these basics, the better.

A hybrid environment of both Mac and PC laptops can create additional challenges for IT. They may be able to take advantage of tools, such as Microsoft Intune, that enable management of both Windows and macOS devices. But to effectively support the entire staff, they must be very comfortable with both operating systems. This could increase the cost of training and staffing IT departments.

With its Intel Core i7-1370P vPro processor, the HP EliteBook 1040 G10 Notebook PC also has the benefit of the Intel vPro platform—a technology not available on the Apple MacBook Pro 14". Laptops powered by Intel vPro processors include Intel Active Management Technology (AMT) and Intel Endpoint Management Assistant (Intel EMA). These tools enable IT teams to remotely monitor and manage PCs, a critical capability for organizations with staff working in multiple locations. Among other benefits, Intel says Intel AMT and Intel EMA can enable IT to:

- Perform out-of-band management tasks, allowing for device management over an encrypted connection even when the device is far away
- Diagnose problems with systems more easily with real-time telemetry, so staff can get back to work faster
- Automate patch management for less disruption to everyday work
- Remotely operate a system's keyboard, video, and mouse controls for easier support
- Easier support<sup>15</sup>



## Conclusion

Whether you're selecting a laptop for yourself or making a purchasing decision for a large workforce, price and performance are both top considerations. In our testing, the HP EliteBook 1040 G10 Notebook PC with an Intel Core i7-1370 vPro processor delivered strong performance on two benchmarks with a purchase price almost \$1,000 lower than the Apple MacBook Pro 14" with an Apple M2 Max processor. It also offers the security and manageability features of HP Wolf Security and the Intel vPro platform, among others. For fast web browsing and business performance at a lower price, the Intel vPro processor-powered HP EliteBook 1040 G10 is worth a second look.



1. We recorded these prices from the HP and Apple websites on 9/14/23.
2. We recorded these prices from the HP and Apple websites on 9/14/23.
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Read the science behind this report at <https://facts.pt/A2AnF0d> ►



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