



## Promote higher productivity with fast web browsing and strong performance for everyday work

In our tests, an HP Dragonfly Notebook PC G4 scored higher on WebXPRT and CrossMark than an Apple MacBook Air 13"

Just as chefs need sharp knives and well-calibrated ovens to prepare their dishes, office and knowledge workers need fast, responsive laptops to accomplish their work. It's particularly critical that devices function well for web browsing and basic office tasks, which form the basis of many users' daily work. But for IT teams selecting devices for their next fleet upgrade, the options can be overwhelming. Which device—and which operating system—will best serve a large, distributed staff?

We used a web-browsing benchmark and a productivity benchmark to assess the performance of an HP Dragonfly Notebook PC G4 enabled by a 10-core Intel® Core™ i7-1365U vPro™ processor and an Apple® MacBook Air® 13" enabled by an Apple M2 eight-core processor. We found that the Intel processor-powered HP notebook performed similarly or better on both benchmarks while offering a comparable cost. The HP Dragonfly Notebook PC G4 also provided key manageability and security features from HP and the Intel vPro platform. For laptop buyers seeking a system that will enable high productivity for their staff, the Intel processor-powered HP Dragonfly Notebook PC G4 brings some key advantages.

### Win with faster web browsing

Up to 15% better WebXPRT performance\*

### Boost performance for enhanced productivity for a comparable cost

Up to 10% higher CrossMark® performance\*

\*HP Dragonfly Notebook PC G4 with an Intel Core i7-1365U vPro processor vs. Apple MacBook Air 13" with an Apple M2 8-core processor

# Comparing the HP Dragonfly Notebook PC G4 with the Apple MacBook Air 13"

Table 1 covers key features of the systems we tested, as well as their cost as of September 14, 2023. Notably, the HP Dragonfly Notebook PC G4 offered a larger number of ports than the Apple MacBook Air 13". It also supported both Intel vPro and Intel Evo, technologies not available on the Apple MacBook Air.

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 cost, in USD, of the two systems we tested. Source: Principled Technologies.



**HP Dragonfly Notebook PC G4**  
with a 10-core Intel Core i7-1365U vPro processor and Intel Iris Xe graphics running Windows 11 Pro



**Apple MacBook Air 13"**  
with an Apple M2 eight-core processor and Apple M2 10-core GPU running macOS Sonoma

Price	\$1,775.00 <sup>1</sup>	\$1,799.00 <sup>2</sup>
Memory	16 GB	16 GB
Storage	1 TB	1 TB
Display	13.5" (diagonal) BrightView OLED UWVA 3k2k (3000x2000), 400 nits	13.6" (diagonal) LED-backlit display with IPS technology; 2560x1664 native resolution at 224 pixels per inch, 500 nits
Surface area	100.57 square inches	101.27 square inches
Weight	2.57 lb.	2.68 lb.
Ports	2x Thunderbolt 4 (USB-C) ports 1x USB Type-A port 5Gbps signaling rate 1x HDMI 2.1 port 1x stereo headphone/ microphone combo jack	2x Thunderbolt 4 (USB-C) ports 1x MagSafe 3 port 1x 3.5 mm headphone jack
Wi-Fi	Intel Wi-Fi 6E AX211 (2x2)	Wi-Fi 6E (802.11ax)
Bluetooth	Yes	Yes
Intel vPro	Yes	No
Intel Evo	Yes	No

To assess performance, we ran two benchmarks: WebXPRT 4 and CrossMark.

WebXPRT is 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 WebXPRT 4 score indicates that a system offers faster performance for web browsing, an activity common in nearly every industry.

CrossMark is “an easy to run native cross-platform benchmark that measures the overall system performance and system responsiveness using models of real-world applications.”<sup>3</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; and Responsiveness, which utilizes operations from both the Productivity and Creativity scenarios.<sup>4</sup>

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

### About the HP Dragonfly Notebook PC G4

We tested the HP Dragonfly Notebook PC G4, part of the HP Elite Dragonfly series. According to HP, the “elegant and highly portable” Dragonfly laptops offer upgraded cameras, a new 3:2 display with larger trackpad, and HP Dynamic Noise Leveling with AI-based noise reduction, among other features.<sup>5</sup>

To learn more, go to <https://www.hp.com/us-en/shop/mdp/hp-dragonfly-businesssolutions-tab4-module2-hpelitedragonfly>.

### About the Intel Core i7-1365U vPro processor

The Intel Core i7-1365U vPro processor powering the HP Dragonfly Notebook PC G4 offers 10 cores (two performance-cores and eight efficient-cores), a max turbo frequency of 5.20 GHz, and 12MB 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>6</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>7</sup>

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





## Speed online research and exploration

Internet users in 2023 spend an average of over six hours online every day.<sup>8</sup> For many people, much of that online time is for work, as they use the internet to research new technologies, gather data on competitive products, or update corporate social media. The internet is so critical for business today that laptops for office workers must deliver fast web browsing.

In both of our tests with WebXPRT 4, the HP Dragonfly Notebook PC G4 with an Intel Core i7-1365U vPro processor scored higher than the Apple MacBook Air 13" with an Apple M2 processor. We first ran the benchmark with Chrome, because it is the most commonly used web browser in the United States.<sup>9</sup> Then, we ran it a second time with each device's native browser: Edge on the HP system and Safari on the Apple system. Scoring 11 percent higher on the Chrome test and 15 percent higher on the native browser test, the HP Dragonfly Notebook PC G4 consistently came out on top.

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

*Higher is better*

HP Dragonfly Notebook PC G4



Apple MacBook Air 13"

274

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 Dragonfly Notebook PC G4



Apple MacBook Air 13"

269

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.

## Increase system responsiveness to boost productivity

For users who rely on their laptops to do their jobs, a slow system has the potential to severely inhibit productivity. Time spent waiting for applications to respond or pages to load is time wasted. To maximize their output, employees need laptops that can work at their pace rather than hold them back.

We used the CrossMark benchmark to assess how the HP and Apple systems might perform on everyday work tasks. The HP Dragonfly Notebook PC G4 performed better than the Apple MacBook Air 13" overall and on the Productivity and Responsiveness tests, delivering about the same performance on the Creativity test. With the Intel processor-powered HP Dragonfly Notebook PC G4 also coming in at a slightly lower cost, these results offer a compelling argument for increased productivity if you choose the HP device.

### CrossMark ratings *Higher is better*

● HP Dragonfly Notebook PC G4    ● Apple MacBook Air 13"

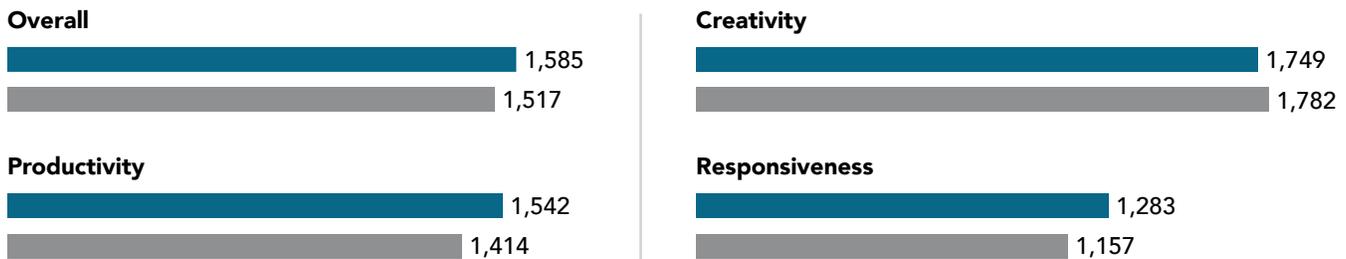


Figure 3: CrossMark ratings. Higher is better. Source: Principled Technologies.

## Keep systems secure from the factory onward

Intel and HP bring together a range of technologies to enhance security for business users. 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>10</sup>*

The HP Dragonfly Notebook PC G4, with its Intel Core i7-1365U vPro processor, benefits from many of these technologies. Key elements include:

- **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 vPro platform:** A hardware platform that, in addition to offering 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>12</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>13</sup>

For more information, 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>.

## Unlock modern management capabilities

For enterprises with thousands of employees, each with their own work system, laptop management can be a substantial time commitment. The more time IT teams can save on basic device deployment and management, the more time they have to handle thorny support tickets and work on enterprise-wide initiatives, ultimately helping the rest of the staff boost productivity.

IT teams working in hybrid Mac and PC environments face an additional challenge: managing systems with two different operating systems. While some manageability tools, such as Microsoft Intune, allow for management of both Windows and macOS devices, inevitable challenges come with a heterogenous IT environment. IT and support staff must be deeply familiar with multiple operating systems and how common applications work within those operating systems, which could increase the cost of training and staffing.

The Apple MacBook Air we tested also lacked a manageability component that the HP device brought to the table: the Intel vPro platform. Laptops powered by Intel vPro processors, such as the HP Dragonfly Notebook PC G4 we tested, 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<sup>14</sup>



## Conclusion

No one wants to spend time waiting on their laptop. In our testing with the WebXPRT 4 and CrossMark benchmarks, the HP Dragonfly Notebook PC G4, enabled by an Intel Core i7-1365U vPro processor, delivered faster performance than an Apple MacBook Air 13", enabled by an Apple M2 eight-core processor. With the additional benefits of security and manageability features from HP and Intel, enterprise laptop buyers may wish to take a close look at the HP Dragonfly Notebook PC G4.

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Read the science behind this report at <https://facts.pt/WrzDj3d> ►



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