



The science behind the report:

Discover faster web performance at a lower cost with the HP Elite Mini 800 G9 Desktop PC powered by a 13th Gen Intel Core processor

This document describes what we tested, how we tested, and what we found. To learn how these facts translate into real-world benefits, read the report [Discover faster web performance at a lower cost with the HP Elite Mini 800 G9 Desktop PC powered by a 13th Gen Intel Core processor](#).

We concluded our hands-on testing on October 10, 2023. During testing, we determined the appropriate hardware and software configurations and applied updates as they became available. The results in this report reflect configurations that we finalized on October 4, 2023 or earlier. Unavoidably, these configurations may not represent the latest versions available when this report appears.

Our results

To learn more about how we have calculated the wins in this report, go to <http://facts.pt/calculating-and-highlighting-wins>. Unless we state otherwise, we have followed the rules and principles we outline in that document.

Table 2: Results of our testing.

	HP Elite Mini 800 G9 Desktop PC	Apple Mac mini	Percentage difference
WebXPRT 4 Chrome vs Chrome web browser			
Overall Score - Median (higher is better)	307	285	7.72%
Photo Enhancement (ms) lower is better	283	245	-15.51%
Organize Album using AI (ms) lower is better	1172	1796	34.74%
Stock Option Pricing (ms) lower is better	71	76	6.58%
Encrypt Notes and OCR Scan (ms) lower is better	714	726	1.65%
Sales Graph (ms) lower is better	180	242	25.62%
Online Homework (ms) lower is better	1539	1248	-23.32%

	HP Elite Mini 800 G9 Desktop PC	Apple Mac mini	Percentage difference
WebXPRT 4 Edge vs Safari web browser			
Overall Score - Median (higher is better)	320	274	16.79%
Photo Enhancement (ms) lower is better	281	298	5.70%
Organize Album using AI (ms) lower is better	1202	1791	32.89%
Stock Option Pricing (ms) lower is better	70	103	32.04%
Encrypt Notes and OCR Scan (ms) lower is better	580	484	-19.83%
Sales Graph (ms) lower is better	178	226	21.24%
Online Homework (ms) lower is better	1478	1518	2.64%
CrossMark			
Overall Rating (Higher is better) - Median	1622	1737	-6.62%
Productivity (Higher is better)	1542	1520	1.45%
Creativity (Higher is better)	1839	2198	-16.33%
Responsiveness (Higher is better)	1297	1277	1.57%

System configuration information

Table 3: Detailed information on the systems we tested.

System configuration information	HP Elite Mini 800 G9 Desktop PC	Apple® Mac® mini
Processor		
Vendor	Intel®	Apple
Model number	Core™ i7-13700T	M2 Pro
Core frequency (GHz)	1.40 – 4.9	3.2
Number of cores	16	12
Logical processors	24	N/A
Memory		
Amount (GB)	16	16
Type	DDR5-4800	Unified
Graphics		
Vendor	Intel	Apple
Model number	Intel UHD Graphics 770	M2 Pro 19-core GPU
Storage		
Amount (GB)	512	512
Type	SSD	SSD
Connectivity/expansion		
Wireless internet	Intel Wi-Fi 6E AX211	Wi-Fi 6E (802.11ax)
Wired internet	1 x Gigabit Ethernet Port	N/A
Bluetooth	5.3	5.3
Front ports	1x headset connector 1x SuperSpeed USB Type-A 10Gbps signaling rate 1x SuperSpeed USB Type-A 10Gbps signaling rate (charging) 1x SuperSpeed USB Type-C 20Gbps signaling rate	N/A
Rear ports	1x power connector 1x RJ-45 3x SuperSpeed USB Type-A 10Gbps signaling rate 2x DisplayPort 1.4 1x HDMI 2.1 1x VGA	1x 3.5 mm headphone jack 2x USB-A ports (up to 5Gb/s) 4x Thunderbolt 4 ports 1x power connector 1x RJ-45 1x HDMI 2.1
Operating system		
Vendor	Microsoft	Apple
Name	Windows 11 Pro	macOS® Sonoma
Version	22H2 Build 22621.2361	14.0

System configuration information	HP Elite Mini 800 G9 Desktop PC	Apple® Mac® mini
BIOS		
BIOS name and version	HP U21 Ver. 02.11.01	10151.1.1
Dimensions		
Height (in.)	1.35	1.41
Width (in.)	6.97	7.75
Depth (in.)	6.89	7.75
System weight (lb.)	2.54	2.81

How we tested

Setting up and updating the OEM image (Windows)

1. Boot the system.
2. Follow the on-screen instructions to complete installation, using the default selections when appropriate.
3. Set the Windows (plugged in) Power Mode to Best Performance.
4. Set Screen and Sleep options to Never:
 - Right-click the desktop, and select Display settings.
 - From the left column, select System.
 - Click Power & Battery.
 - For all power options listed under Screen and Sleep, select Never.
5. Disable User Account Control notifications:
 - Select Windows Start, type UAC, and press the Enter key.
 - Move the slider control to Never notify, and click OK.
6. Run Windows Update, and install all updates available.
7. Run the HP Support Assistant, and install all HP updates available.
8. Verify the date and time are correct, and synchronize the system clock with the time server.
9. Pause Automatic Windows Updates:
 - Click the Windows Start button.
 - Type Windows Update settings, and press the Enter key.
 - From the Pause updates drop-down menu, select Pause for 5 weeks.

Setting up and updating the OEM image (macOS)

1. Boot the system.
2. Follow the on-screen instructions to complete installation, using the default selections when appropriate.
3. Set Screen and Sleep options to Never:
 - Select System Settings.
 - Select Screensaver.
 - Set Lock Screen Settings to Never.
4. Disable automatically adjust brightness:
 - Select System Settings.
 - Select Display.
 - Disable Automatically adjust brightness.
5. Run Software Update, and install all updates available.
6. Verify the date and time are correct.
7. Enable automatic log in:
 - Select System Settings.
 - Click Users & Groups.
 - Next to the Automatically log in setting, select the drop-down menu, and select the User account.
8. Disable automatic Mac updates:
 - Select System Settings.
 - Click General.
 - Click Software Update.
 - Next to Automatic updates, click the information icon.
 - Disable Check for updates.

Testing performance with WebXPRT 4 (Windows and macOS)

Running the WebXPRT 4 test on native browsers

1. Open the system's native browser (Microsoft Edge for Windows and Safari for macOS), and go to <https://www.pricedtechnologies.com/benchmarkxpert/webxpert/>.
2. Click Run WebXPRT 4.
3. At the Ready to test your browser screen, click Continue.
4. Click Start.
5. When the test completes, record the results.
6. Click Run Again, and to rerun WebXPRT, click Start. Record the results.
7. Repeat step 6, and report the median result.

Setting up the WebXPRT 4 test for Chrome

1. Download and install the latest version of Google Chrome web browser from <https://www.google.com/chrome/dr/download/>.

Running the WebXPRT 4 test on Chrome

1. Open the Chrome web browser under test, and go to <https://www.pricedtechnologies.com/benchmarkxpert/webxpert/>.
2. Click Run WebXPRT 4.
3. At the Ready to test your browser screen, click Continue.
4. Click Start.
5. When the test completes, record the results.
6. Click Run Again, and to rerun WebXPRT, click Start. Record the results.
7. Repeat step 6, and report the median result.

Testing performance with BAPCo CrossMark (Windows and macOS)

Setting up the CrossMark test

1. Download and install CrossMark from the Microsoft Store or Apple App Store.

Running the CrossMark test

1. Launch CrossMark.
2. Click Settings.
3. For Number of Iterations, choose 1.
4. Enter a valid email address, and click Back.
5. Click Run Benchmark.
6. Record the result.
7. Complete steps 1 through 6 two more times.

Read the report at <https://facts.pt/VNyl6bT>

This project was commissioned by Intel.



Facts matter.®

Principled Technologies is a registered trademark of Principled Technologies, Inc. All other product names are the trademarks of their respective owners.

DISCLAIMER OF WARRANTIES; LIMITATION OF LIABILITY:

Principled Technologies, Inc. has made reasonable efforts to ensure the accuracy and validity of its testing, however, Principled Technologies, Inc. specifically disclaims any warranty, expressed or implied, relating to the test results and analysis, their accuracy, completeness or quality, including any implied warranty of fitness for any particular purpose. All persons or entities relying on the results of any testing do so at their own risk, and agree that Principled Technologies, Inc., its employees and its subcontractors shall have no liability whatsoever from any claim of loss or damage on account of any alleged error or defect in any testing procedure or result.

In no event shall Principled Technologies, Inc. be liable for indirect, special, incidental, or consequential damages in connection with its testing, even if advised of the possibility of such damages. In no event shall Principled Technologies, Inc.'s liability, including for direct damages, exceed the amounts paid in connection with Principled Technologies, Inc.'s testing. Customer's sole and exclusive remedies are as set forth herein.