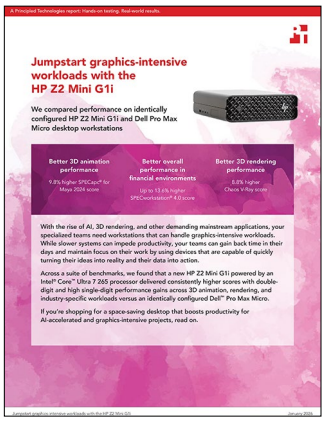

The science behind the report:

Jumpstart graphics-intensive workloads with the HP Z2 Mini G1i

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 Jumpstart graphics-intensive workloads with the HP Z2 Mini G1i.

We concluded our hands-on testing on October 22, 2025. 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 September 30, 2025 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 https://facts.pt/calculating-and-highlighting-wins. Unless we state otherwise, we have followed the rules and principles we outline in that document.

Table 1: Median results of our benchmark testing. Higher scores and more samples per minute are better.

Test / Subtest	HP Z2 Mini G1i	Dell™ Pro Max Micro
Cinebench 2024		
CPU multi-core score	1,789	1,672
Blender: Classroom		
Samples per minute	91.7	84.8
Chaos V-Ray benchmark		
Score	30,830	28,327
SPECapc® for Maya		
CPU composite score	8.4	7.6
SPECworkstation® 4.0		
Energy	2.3	2.1
Media & Entertainment	2.3	2.2
Financial Services	1.6	1.4

System configuration information

Table 2: Detailed information on the systems we tested.

System configuration information	HP Z2 Mini G1i	Dell Pro Max Micro
Processor		
Vendor	Intel®	Intel®
Model number	Core™ Ultra 7 265	Core™ Ultra 7 265
Core frequency (GHz)	2.4 – 5.3	2.4 – 5.3
Number of cores	20	20
Number of threads	20	20
Cache (MB)	30	30
Memory module(s)		
Amount (GB)	64	64
Type	DDR5 CSoDIMM	DDR5 SODIMM
Speed (MT/s)	6,400	6,400
Graphics		
Vendor	NVIDIA®	NVIDIA
Model number	RTX™ 4000 SFF Ada Generation	RTX 4000 SFF Ada Generation
Driver	NVIDIA v32.0.15.7260	NVIDIA v32.0.15.7260
Storage controller		
Amount (TB)	1	1
Type	M.2 2280 NVMe PCIe Gen 4 x4	M.2 2280 NVMe PCIe Gen 4 x4
Connectivity/expansion		
Communications	LAN: Intel Ethernet Connection I219-LM WLAN: Intel Wi-Fi 7 BE200 320MHz	LAN: Intel Ethernet Connection I219-LM WLAN: Intel Wi-Fi 7 BE200 320MHz
Bluetooth	5.4	5.4
USB	2 x USB Type-C 20Gbps 4 x USB Type-A 10Gbps	1 x USB Type-C 20Gbps 1 x USB Type-C 10Gbps 4 x USB Type-A 10Gbps 2 x USB Type-A 5Gbps
Video	2 x DisplayPort 1.4	3 x DisplayPort 1.4
Display		
Size (in.)	27	27
Type	Dell P2715Q	Dell P2715Q
Resolution	1,920 x 1,200	1,920 x 1,200

System configuration information	HP Z2 Mini G1i	Dell Pro Max Micro
Operating system		
Vendor	Microsoft	Microsoft
Name	Windows 11 Pro	Windows 11 Pro
Build number or version	24H2 Build 26100.6584	24H2 Build 26100.6584
BIOS		
BIOS name and version	HP X52 Ver.01.07.01 (07/28/2025)	Dell Inc. 1.8.1 (08/15/2025)

How we tested

Setting up the system

Setting up and updating the OEM image

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

Capturing an image

1. Connect an external HDD to the system.
2. Click Windows Menu button, and type Control Panel in the search bar. Click Control Panel → System and Security → Backup and Restore (Windows 7) → Create a system image.
3. Verify that the external HDD is selected as the save drive, and click Next.
4. Verify that all drives are selected to back up, and click Next.
5. Click Start backup.
6. When you see the prompt to create a system repair disc, select No, and close the dialogs.

Restoring an image

1. Connect an external HDD to the system.
2. Press and hold the Shift key while restarting the system.
3. Select Troubleshoot.
4. Select Advanced options.
5. Select See more recovery options.
6. Select System image recovery.
7. Select the User account.
8. Enter the system password, and click Continue.
9. At the Restore system files and settings screen, select Next.
10. Verify that the external HDD is selected, and click Next.
11. Once the recovery has completed, click Finish.

Blender testing

Setting up the test

1. Download the Blender Benchmark from https://opendata.blender.org/.

Running the test

1. Launch the Blender Benchmark.
2. At the Welcome screen, click Next.
3. Select Blender version 4.3.0, and click Next.
4. At the Benchmark Scenes screen, click Next.
5. At the Benchmark Device screen, select either the CPU or GPU option, and click Start Benchmark.
6. Record the results.
7. Wait 15 minutes before rerunning the benchmark.
8. Repeat steps 1 through 7 twice, and record the median result from the three runs.

Chaos V-Ray testing

Setting up the test

1. Download the V-Ray Benchmark from https://www.chaos.com/benchmark-download. We used version 6.00.01.

Running the test

1. Run V-Ray benchmark
2. Using V-Ray for CPU, run v-Ray for 5 minutes. Record the results.
3. Wait 5 minutes.
4. Repeat steps 2 and 3 twice, and record the median result from the three runs.

Cinebench 2024 testing

Setting up the test

1. Download and install Cinebench 2024 from https://www.maxon.net/en/downloads/cinebench-2024-downloads
2. Launch Cinebench 2024.
3. Select File → Advanced benchmark.
4. From the Minimum Test Duration drop-down menu, select Off.

Running the test

1. Launch Cinebench 2024.
2. Click File, Run All tests.
3. Record the result.
4. Wait 10 minutes before rerunning the benchmark.
5. Repeat steps 1 through 4 twice, and record the median result from the three runs.

SPECapc Maya 2024 testing

Setting up the test

1. Purchase and install a full license of Maya 2024 from https://www.autodesk.com/products/maya/overview?term=1-YEAR&tab=subscription.
2. Purchase and download the vendor license of the benchmark from https://gwpg.spec.org/benchmarks/benchmark/specapc-maya-2024/.
3. To extract the installation files, click SPECapcMaya2024-1.01.exe.
4. To install the benchmark, click SPECapc_Maya2024_combined.exe.
5. Set the DPI scaling to 100%:
   - Right-click the desktop and select Display settings.
   - From the Scale drop-down menu, select 100%.
6. Shut down the system.

Running the test

1. Launch the SPECapc Maya benchmark.
2. Click Run Benchmark.
3. When the test is complete, record the result.
4. Repeat steps 1 through 3 twice and record the median result from the three runs.

SPECworkstation 4.0 testing

Setting up the test

1. Purchase, and download the vendor license of the benchmark from https://gwpg.spec.org/benchmarks/benchmark/specworkstation-4_0/.
2. To install, click SPECworkstation-Setup-4.0.0.exe.
3. Turn off Windows Defender Firewall.
4. Click Windows Menu.
5. In the search bar, type `Firewall`.
6. Select Windows Defender Firewall.
7. In the left-hand column, select Turn Windows Defender Firewall on or off.
8. Under both Private and Public network settings, choose Turn off Windows Defender Firewall, and click OK.

Running the test

1. Launch SPECworkstation.
2. Click Run.
3. When the test is complete, record the results.
4. Reboot the system.
5. Repeat steps 1 through 4 twice, and record the median result from the three runs.

Read the report ▶

This project was commissioned by HP.