The science behind the report:

Get more done in less time with an HP ZBook Firefly 14 G10 powered by an Intel Core i7-1370P vPro 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 Get more done in less time with an HP ZBook Firefly 14 G10 powered by an Intel Core i7-1370P vPro processor.

We concluded our hands-on testing on October 4, 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 July 31, 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 1: Results of our benchmark and hand-timed design workflow comparisons. Higher benchmark scores are better. Lower hand-timed test times are better.

	HP ZBook Firefly 14 G10 with an Intel® Core™ i7-1370P vPro® processor	HP ZBook Firefly 14 G10 with an AMD® Ryzen™ 7 PRO 7840HS processor
WebXPRT 4 benchmark (higher is better)		
Overall score	332	266
Procyon® Office Productivity Benchmark (higher is better)		
Overall score	5,979	5,713
Procyon Office Productivity Benchmark sub-scores		
Word	5,584	5,314
Excel	7,869	6,911
PowerPoint	6,552	5,533
Outlook	3,342	4,762

	HP ZBook Firefly 14 G10 *with an Intel® Core™ i7-1370P vPro® processor*	HP ZBook Firefly 14 G10 *with an AMD® Ryzen™ 7 PRO 7840HS processor*
Geekbench 6 Pro benchmark (higher is better)		
CPU single-core score	2,713	2,269
CPU multi-core score	13,213	11,821
PugetBench for Photoshop benchmark (higher is better)		
Overall score	1,041	711
Hand-timed design workflow comparisons, in seconds (lower is better)		
HandBrake hardware 4K video render with Fast 1080p30 preset	208	229
Create a panoramic 45MP image using Adobe® Photoshop® Photomerge	51	58
Create a panoramic 45MP image using Adobe Photoshop Photomerge and Content Aware	91	106
Import 50 Photos using Adobe Lightroom® Classic	11	13

System configuration information

Table 2: Detailed information on the systems we tested.

System configuration information	HP ZBook Firefly 14 G10 with an Intel Core i7-1370P vPro processor	HP ZBook Firefly 14 G10 with an AMD Ryzen 7 PRO 7840HS processor
Processor		
Vendor	Intel	AMD
Model number	Core i7-1370P	Ryzen 7 PRO 7840HS
Core frequency (GHz)	3.9-5.2	3.8-5.1
Number of cores	6 P-cores, 8 E-cores	8
Cache (MB)	24	16
Memory		
Amount (GB)	32	32
Type	DDR5	DDR5
Speed (MHz)	5,200	5,600
Integrated graphics		
Vendor	Intel	AMD
Model number	Iris® Xe Graphics	Radeon™ 780M
Storage		
Amount	1TB	512GB
Type	PCIe®-based flash	PCIe-based flash
Connectivity/expansion		
Wireless internet	Intel AX211 Wi-Fi 6E	MediaTek Wi-Fi 6E RZ616
Bluetooth	5.3	5.3
USB	2x 3.2, 2 4 Type-C	2x 3.2, 2 4 Type-C
Thunderbolt	2	2
Video	1x HDMI	1x HDMI
Battery		
Type	Lithium-polymer	Lithium-polymer
Size	Integrated	Integrated
Rated capacity (WHr)	51	51
Display		
Size (in.)	14.0	14.0
Type	IPS	IPS
Resolution	1,920 x 1,200	1,920 x 1,200

System configuration information	HP ZBook Firefly 14 G10 *with an Intel Core i7-1370P vPro processor*	HP ZBook Firefly 14 G10 *with an AMD Ryzen 7 PRO 7840HS processor*
Touchscreen	No	Yes
Operating system		
Vendor	Windows	Windows
Name	Windows 11 Pro	Windows 11 Pro
Build number or version	22H2	22H2
BIOS		
BIOS name and version	HP 8b41 51.2B.00	HP 8B75 60.20.00
Dimensions		
Height (in.)	0.75	0.75
Width (in.)	12.43	12.43
Depth (in.)	8.83	8.83
Weight (lb.)	3.2	3.2

How we tested

Setting up the system

Setting up and updating the OEM image

1. Boot the system.
2. To complete installation, follow the on-screen instructions, 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:

    a. Right-click the desktop, and select Display settings.
    b. From the left column, select System.
    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 Enter.
    b. Move the slider control to Never notify, and click OK.

6. Run Windows Update, and install all updates available.
7. Verify the date and time are correct, and synchronize the system clock with the time server.
8. Pause Automatic Windows Updates:

    a. Click the Windows Start button.
    b. Type `Windows Update settings`, and press Enter.
    c. From the Pause updates drop-down menu, select Pause for 5 weeks.

Performance Testing

Geekbench 6 Pro benchmark

Setting up the test

1. Purchase a Pro license, download, and install Geekbench 6 Pro from https://www.geekbench.com/download/.

Running the test

1. Launch Geekbench.
2. Click Run GPU Benchmark.
3. Record the result.
4. Wait five minutes before re-running.
5. Complete steps 1 through 4 two more times.
6. Report the median result.

WebXPRT 4 benchmark (Microsoft Edge web browser)

Running the test

1. Open the Web browser under test, and go to https://www.principledtechnologies.com/benchmarkxprt/webxprt/.
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 click Start to rerun WebXPRT. Record the results.
7. Complete step 6 two more times.
8. Report the median result.

Procyon Office Productivity Benchmark

Setting up the test

1. Download and install Procyon.
2. Open Procyon.
3. Click Office Productivity Benchmark.
4. Click Register.
5. Enter the license key for the Office Productivity Benchmark, and click Register.
6. Before running the benchmark, make sure to install a licensed version of Microsoft 365.

Running the test

1. Boot the system.
2. Launch Procyon.
3. Click Office Productivity Benchmark.
4. Click Run.
5. When the benchmark is complete, record the results.
6. Wait 15 minutes before rerunning the benchmark.
7. Complete steps 1 through 6 twice more.
8. Report the median result.

PugetBench for Photoshop benchmark

Setting up the test

1. Launch Adobe Photoshop.
2. Click through the Tutorial pop-up tips.
3. Close Adobe Photoshop.
4. Purchase and download the PugetBench for Photoshop license from https://www.pugetsystems.com/labs/articles/PugetBench-for-Adobe-Creative-Cloud-1642/.
5. Click Get on Adobe Marketplace, and log into your Adobe account.
6. Select the PugetBench Photoshop Plug-in.
7. Open Adobe Photoshop.
8. Click Window→Extensions→PugetBench for Photoshop.
9. Next to License Key, click Change, enter your license key, and click Save.

Running the test

1. Boot the system.
2. Open Adobe Photoshop.
3. Click Window→Extensions→PugetBench for Photoshop.
4. Click Run Benchmark.
5. When the benchmark finishes, record the overall score.
6. Close Adobe Photoshop, and restart the system under test.
7. Wait 15 minutes before performing the next run.
8. Complete steps 1 through 7 twice more.
9. Report the median result.

Custom workload testing

Adobe Lightroom Classic

Running the test: Import 50 Photos

1. Launch Lightroom.
2. Click Import.
3. Select the test file directory.
4. Start the timer, and click Import.
5. When the import task completes, stop the timer, and record the time.
6. Remove all images from the test library.
7. Complete steps 1 through 6 two more times.
8. Report the median result.

Adobe Photoshop

We recorded how long it took to photo merge a panorama to create a 45MP image.

Running the test

1. Launch Photoshop.
2. Select File→Automate→Photomerge→Panorama.
3. Browse to the directory where the images are located, select them, and click OK
4. Simultaneously start the timer and click OK.
5. When the panoramic picture appears, stop the timer.
6. Complete steps 1 through 5 two more times.
7. Report the median result.

Running the test (content aware)

1. Launch Photoshop.
2. Select File→Automate→Photomerge→Panorama. Ensure the Content Aware option is selected.
3. Browse to the directory where the images are located, select them, and click OK.
4. Simultaneously start the timer and click OK.
5. When the panoramic picture appears, stop the timer.
6. Complete steps 1 through 5 two more times.
7. Report the median result.

Read the report at https://facts.pt/2PxNbu8 ▶

This project was commissioned by HP.

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