

## The science behind the report:

# Reduce daily frictions and increase productivity with the Dell Pro 14

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 [Reduce daily frictions and increase productivity with the Dell Pro 14](#).

We concluded our hands-on testing on December 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 December 8, 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: Results of our benchmark testing.

	Dell Pro 14	HP ProBook 4 G1A 14	Percentage win	Lenovo® ThinkPad® E14 Gen 7	Percentage win
Procyon Office Productivity Benchmark					
Overall rating	6,724	5,481	22.67%	6008	11.91%
Word sub-score	7,980	6,726	18.64%	6689	19.30%
Excel sub-score	6,061	5,402	12.19%	5544	9.32%
PowerPoint sub-score	7,272	6,247	16.40%	6880	5.69%
Outlook sub-score	5,027	2,885	74.24%	4345	15.69%
Cinebench 2024					
CPU multi-core score	593	575	3.13%	519	14.25%
CPU single-core score	106	101	4.95%	100	6.00%

	Dell Pro 14	HP ProBook 4 G1A 14	Percentage win	Lenovo® ThinkPad® E14 Gen 7	Percentage win
Procyon AI Computer Vision Benchmark - Integer					
Overall score	1,415	46	2,976.08%	47	2,910.63%
MobileNet V3 average inference time (ms)	0.27	20.16	98.66%	20.40	98.67%
ResNet 50 average inference time (ms)	0.97	8.52	88.61%	8.72	88.87%
Inception V4 average inference time (ms)	1.87	32.85	94.30%	29.58	93.67%
DeepLab V3 average inference time (ms)	6.37	438.50	98.54%	463.35	98.62%
Real-ESRGAN average inference time (ms)	3.98	179.28	97.78%	167.24	97.62%
YOLO V3 average inference time (ms)	156.61	3,293.97	95.24%	3,268.91	95.20%
Geekbench AI CPU					
Single Precision score	2,828	2,799	1.03%	2,505	12.89%
Half Precision score	1,590	1,393	14.14%	1,304	21.93%
Quantized score	6,623	6,140	7.86%	5,742	15.34%
MLPerf Client benchmark					
Overall geomean time to first token (TTFT)	6.390	8.800	27.38%	7.390	13.53%

Table 2: Results of our battery testing.

	Dell Pro 14
MobileMark 30 - Balanced (default) mode	
Total duration (hours:min)	6:15
MobileMark 30 - Best power efficiency mode	
Total duration (hours:min)	8:04

## System configuration information

Table 3: Detailed information on the systems we tested.

System configuration information	Dell Pro 14	HP ProBook 4 G1A	Lenovo® ThinkPad® E14 Gen 7
<b>Processor</b>			
Vendor	AMD®	AMD	AMD
Model number	Ryzen™ AI 5 Pro 340	Ryzen 5 230	Ryzen 5 230
Core frequency (GHz)	2.0 – 4.8	3.5 – 4.9	3.5 – 4.9
Number of cores	6	6	6
Number of threads	12	12	12
L2 Cache (MB)	6	6	6
L3 Cache (MB)	16	16	16
AI engine capabilities (Overall TOPS)	Up to 59	Up to 31	Up to 31
AI engine capabilities (NPU TOPS)	Up to 50	Up to 16	Up to 16
<b>Memory</b>			
Amount (GB)	16	16	16
Type	DDR5	DDR5	DDR5
Speed (MT/s)	5600	5600	5600
<b>Graphics</b>			
Vendor	AMD	AMD	AMD
Model number	Radeon™ 840M	Radeon 760M	Radeon 760M
Driver	AMD 32.0.22022.3	AMD 32.0.13030.9001	AMD 32.0.13034.6001
<b>Storage</b>			
Amount (GB)	256	256	256
Type	NVMe® PCIe Gen 4 x4	NVMe PCIe Gen 4 x4	NVMe PCIe Gen 4 x4
<b>Connectivity/expansion</b>			
Wireless internet	MediaTek Wi-Fi 6E MT7922	MediaTek Wi-Fi 6E RZ616	Realtek Wi-Fi 6 RTL8852BE
Bluetooth	5.2	5.3	5.1
USB	2 x USB Type-C Thunderbolt 4 with Power Delivery 3.1 & DisplayPort 2.1 2 x USB Type-A	2 x USB Type-C Thunderbolt 4 with Power Delivery 3.1 & DisplayPort 1.4 2 x USB Type-A	2 x USB Type-C Thunderbolt 4 with Power Delivery 3.1 & DisplayPort 1.4a 2 x USB Type-A
Video	1 x HDMI® 2.1	1 x HDMI 2.1	1 x HDMI 2.1
<b>Battery</b>			
Type	Lithium-polymer	Lithium-polymer	Lithium-polymer
Rated capacity (Wh)	45	56	48

System configuration information	Dell Pro 14	HP ProBook 4 G1A	Lenovo® ThinkPad® E14 Gen 7
Display			
Size (in.)	14	14	14
Resolution	1,920 x 1,200	1,920 x 1,200	1,920 x 1,200
Touchscreen	No	No	No
Operating system			
Vendor	Microsoft	Microsoft	Microsoft
Name	Windows 11 Pro	Windows 11 Pro	Windows 11 Pro
Build number or version	26100.7309	26100.7309	26100.7309
BIOS			
BIOS name and version	Dell v1.8.1 (10/03/2025)	HP X78 v01.02.01 (08/26/2025)	Lenovo R2ZET28W v1.11 (10/13/2025)
Advertised OEM dimensions			
Height (in.)	0.74 – 0.84	0.43 – 0.67	0.40 – 0.60
Width (in.)	12.35	12.54	12.32
Depth (in.)	8.87	8.83	8.68
Weight (lbs)	2.99	3.09	3.11

# How we tested

## Setting up the systems

### 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 (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. Run the OEM's Support Assistant utility, 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 Enter.
  - 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.

## Testing with Cinebench 2024

### 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 multi-core test

1. Launch Cinebench 2024.
2. Click Start next to CPU (Multi Core).
3. Record the result.
4. Wait 10 minutes before rerunning.
5. Repeat steps 1 through 4 twice more, and report the median result.

### Running the single-core test

1. Launch Cinebench 2024.
2. Click Start next to CPU (Single Core).
3. Record the result.
4. Wait 10 minutes before rerunning.
5. Repeat steps 1 through 4 twice more, and report the median result.

## Testing with Geekbench AI

### Setting up the test

1. Purchase and download a Geekbench AI Pro license from <https://www.geekbench.com/ai/download/>.
2. Using all the defaults, run the installer, and install the benchmark.

### Running the test

1. Launch Geekbench AI.
2. Enter the license key.
3. For CPU testing, select:
  - AI Framework: ONNX™
  - AI Backend: CPU
  - AI Device: processor
4. Click Run AI Benchmark.
5. Wait 5 minutes before rerunning.
6. Repeat steps 1 through 5 twice more, and report the median result.

## Testing with MLPerf Client

### Setting up the test

1. Download the latest AMD NPU driver (we used version 32.0.203.304) from <https://ryzenai.docs.amd.com/en/latest/inst.html>.
2. Download and install the latest VC++ Redistributable from <https://learn.microsoft.com/en-us/cpp/windows/latest-supported-vc-redist?view=msvc-170#latest-microsoft-visual-c-redistributable-version>.
3. Download the latest ML Perf Client GUI (we used version 1.5) from [https://github.com/mlcommons/mlperf\\_client/releases](https://github.com/mlcommons/mlperf_client/releases).
4. Extract the ML Perf Client zip file to the desktop.

## Running the test

1. Inside the extracted ML Perf Client directory, to launch the benchmark, click mlperf-windows-gui.exe.
2. Accept the license agreement, and click Continue.
3. Select the benchmark, and click Run Benchmark Test.
4. To download the necessary benchmark files, click Yes.
5. Record the results.
6. Wait 15 minutes before rerunning.
7. Repeat steps 1 through 6 twice more, and report the median result.

## Testing with Procyon AI Computer Vision Benchmark

### Setting up the test

1. Purchase and download the Procyon AI Computer Vision benchmark from <https://benchmarks.ul.com/procyon>.
2. Install the benchmark.
3. Double-click the installer.
4. Click Next.
5. To agree to the EULA, click Agree, and click Next.
6. Click Next.
7. Launch Procyon.
8. Select Settings, and input the license key.
9. Close Procyon.

### Running the test

1. Launch Procyon.
2. Select the Computer Vision test.
3. For all tests, select the Microsoft Windows ML tab.
4. Choose GPU, and select Integer.
5. To begin the test, click Run.
6. Additionally, on systems that contain a supported AMD NPU, select the AMD Ryzen AI tab.
7. Choose the NPU and Integer option, and click Run.
8. When the test completes, record the results.
9. Wait 15 minutes before rerunning.
10. Repeat steps 1 through 9 twice more, and report the median result.

## Testing with Procyon Office Productivity Benchmark

### Setting up the test

1. Install a licensed version of Microsoft 365, and verify the system is signed into the following apps: Excel, PowerPoint, and Word.
2. Purchase and download the Procyon Benchmark Suite from <https://benchmarks.ul.com/procyon>.
3. Install the benchmark.
4. Double-click the installer.
5. Click Next.
6. To agree to the EULA, click Agree, and click Next.
7. Click Next.
8. Launch Procyon.
9. Select Settings, and input the license key.
10. Close Procyon.

## Running the test

1. Launch Procyon.
2. Select the Office Productivity Benchmark.
3. To begin the test, click Run.
4. When the test completes, record the results.
5. Wait 15 minutes before rerunning.
6. Repeat steps 3 through 5 twice more, and report the median result.

## Measuring battery life with MobileMark 30

This test requires an X-Rite - i1Display Plus colorimeter. We performed this test in both Balanced and Best power efficiency modes.

## Avoiding antivirus software conflicts

MobileMark 30 is not compatible with any virus-scanning software, so we uninstalled any such software present on the PCs before we installed the benchmark.

## Avoiding pre-installed software conflicts

MobileMark 30 installs the following applications, which its test scripts employ:

### Productivity

- Corel WinZip 26.0 Enterprise
- Microsoft Excel 2021 Professional Plus
- Microsoft Outlook 2021 Professional Plus
- Microsoft PowerPoint 2021 Professional Plus
- Microsoft Word 2021 Professional Plus

### Creativity

- Adobe Photoshop CC

If any of these applications already exist on the system under test, they could cause problems with the benchmark due to software conflicts. To avoid any such issues, we uninstalled all conflicting pre-installed software applications—including different versions of any of the programs MobileMark 30 uses—before we installed the benchmark.

## Using the MobileMark built-in configuration tool

This tool supports three levels of configuration:

1. Only makes changes that are **REQUIRED** for the benchmark to run.
2. Additionally, makes changes that are **RECOMMENDED** for repeatable results.
3. Additionally, makes **OPTIONAL** changes that help ensure best results.

The configuration tool makes the following configuration changes at each of the three levels:

### Level 1 - Required

- Disables User Account Control (UAC)
- Set DPI Scaling to 100%
- Disables Low Battery Actions
- Disables Network Proxies
- Disables System Sleep and Hibernate
- Disables Windows Update
- Enables Windows Search
- Disables WinSAT

## Level 2 - Recommended

- Create BAPCo power scheme
- Set Power Plan Type to Balanced
- Set CPU Adaptive Mode
- Disables Battery Saver Dimming
- Verifies Battery Saver Threshold
- Disables Disk Defrag
- Disables Windows Error Reporting
- Disables Windows Lock Screen
- Disables Screen Saver and Monitor Timeout
- Set Font Smoothing

## Level 3 - Optional

- Disables Battery Saver
- Disables Hard Disk Timeout
- Disables System Restore
- Ignores Laptop Lid Close
- Enables Dark Mode

For the Balanced runs, we chose the official BAPCo “Run Benchmark” default as outlined in the BAPCo MobileMark30 User Guide ([https://bapco.com/wp-content/uploads/2024/04/BAPCo-MobileMark30\\_User-Guide-v1.0.pdf](https://bapco.com/wp-content/uploads/2024/04/BAPCo-MobileMark30_User-Guide-v1.0.pdf)), which runs the benchmark using the Required and Recommended options. For the Best power efficiency runs, we disabled the recommended options for “Set Power Plan Type to balanced” and “Verify Battery Saver Threshold” options.

## Setting up the performance-qualified battery life test

1. On a separate PC, install the i1Profiler software from <https://www.xrite.com/categories/formulation-and-quality-assurance-software/i1profiler>, and connect the X-Rite - i1Display Plus colorimeter to that PC.
2. For the Best power efficiency battery life runs:
  - a. Select Windows Start, type Power, sleep, and battery settings, and press Enter.
  - b. From the Power mode drop-down menu, select Best power efficiency.
  - c. Select Windows Start, type Battery saver, and press Enter.
  - d. From the Battery saver drop-down menu select Turns on at Always (100%), and click the down arrow. Next to Lower screen brightness when using battery saver, toggle the button to Off.
3. On the system under test, verify that the volume is set to 50%.
4. Verify the system is no less than 250 nits.
5. On the system under test, install MobileMark 30 with the default options.

## Running the performance-qualified battery life test

1. Boot the system.
2. Launch MobileMark 30.
3. Click Run Benchmark.
4. Click the Brightness Profiler button.
5. Allow the white screen to warm up for 30 minutes. After 30 minutes, click Skip.
6. At the Panel Dark Luminance pop-up, to use the value that is queried from the display, select Yes.
7. Place the X-Rite - i1Display Plus colorimeter in the outlined spot on the screen.
8. On the test PC, to turn off the test overlay, toggle the F1 button.
9. On the colorimeter PC, start i1Profiler program, and select Advanced.
10. Click Display, and click Profiling.
11. Next to Luminance, click the drop-down menu, and select Measure.
12. In the drop-down menu that appears below, select Paper in booth.
13. In the box with the image that says Place your paper in the light booth, scroll down, and click Measure.
14. On the test PC, adjust the slider until the Target White luminance is met on the colorimeter PC.
15. Once the correct Target White luminance is met on the test PC, click Done.
16. The test will begin immediately. When prompted, unplug the AC power adapter.





The benchmark is complete when the PC has fully depleted its battery and is no longer operational when running on battery power.

We executed the MobileMark 30 benchmark three times on the system and took the median battery life score run as the representative performance score result for that test.

This project was commissioned by Dell Technologies.

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#### How we created this report

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