The science behind the report:

Dell Latitude 7340 Ultralight: Strong performance plus business-essential features for privacy and productivity

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 Dell Latitude 7340 Ultralight: Strong performance plus business-essential features for privacy and productivity.

We concluded our hands-on testing on November 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 September 19, 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 testing. Higher overall scores are better. We ran each test three times and report the median results.

	Dell Latitude™ 7340 Ultralight	13-inch Apple® MacBook Air® (2022)	Difference
WebXPRT 4 (plugged in)	310	273	13.5 percent
WebXPRT 4 (unplugged)	282	277	1.8 percent
CrossMark (plugged in)	1,563	1,526	2.4 percent
CrossMark (unplugged)	1,573	1,531	2.7 percent

Table 2: Results of our surface-temperature testing. We created a sustained graphics load by repeatedly running the Cinebench 2024 benchmark for over an hour. These temperatures represent the maximum readings during that time.

	Dell Latitude 7340 Ultralight	13-inch Apple MacBook Air (2022)	Difference
Maximum temperatures in Celsius (C°)			
Ambient room temperature	22.3°		
Keyboard deck	35.5°	42.6°	7.1°
Underside of chassis	38.9°	45.0°	6.1°
Left side palm rest	25.7°	32.4°	6.7°
Right side palm rest	24.8°	31.4°	6.6°
Maximum temperatures in Fahrenheit (F°)			
Ambient room temperature	72.1°		
Keyboard deck	95.9°	108.6°	12.7°
Underside of chassis	102.0°	113.0°	11.0°
Left side palm rest	78.2°	90.3°	12.1°
Right side palm rest	76.6°	88.5°	11.9°

System configuration information

Table 3: Detailed information on the systems we tested.

System configuration information	Dell Latitude 7340 Ultralight	13-inch Apple MacBook Air (2022)
Processor		
Vendor	Intel®	Apple
Model number	Core™ i7-1365U	M2 (2022)
Core frequency (GHz)	1.8	3.9
Number of cores	10	4 performance + 4 efficiency
Cache (GB)	12	16
Memory		
Amount (GB)	16	16
Type	DDR5	DDR5
Speed (MHz)	4,800	N/A
Integrated graphics		
Vendor	Intel	Apple
Model number	Iris® Xᵉ graphics	M2 integrated
Video Memory	16 GB	N/A
Storage		
Amount (GB)	512	512
Type	PCIe®	PCIe
Connectivity/expansion		
Wired internet	N/A	N/A
Wireless internet	Intel ® Wi-Fi 6e AX211 160 MHz	Airport 802.11ax
Bluetooth	5.3	5.3
USB	1x USB 3.2	N/A
Thunderbolt	2x Thunderbolt 4.0	2x Thunderbolt 3
Video	1x HDMI	N/A
Battery		
Type	Lithium-polymer	Lithium-polymer
Size	Integrated	Integrated
Rated capacity (Whr)	57	52.6
Display		
Size (in.)	15.4	13.0
Type	LED-backlit with IPS technology	LED-backlit with IPS
Resolution	1,920 x 1,200 (400 nits)	2,560 x 1,664 (224 ppi)
Touchscreen	No	No

System configuration information	Dell Latitude 7340 Ultralight	13-inch Apple MacBook Air (2022)
Operating system		
Vendor	Windows	Apple
Name	Windows 11 Pro	macOS
Build number or version	22621.2283	13.5.2 (22G91)
BIOS		
BIOS name and version	Dell 1.6.0 (07/12/2023)	8422.141.2
Dimensions		
Height (in.)	0.65	0.44
Width (in.)	11.81	11.75
Depth (in.)	8.37	8.43
Weight (lbs.)	2.41	2.67

How we tested

Overview

We measured plugged-in and unplugged system performance using the CrossMark and WebXPRT 4 benchmarks, ran sustained Cinebench 202 workloads to compare maximum surface temperatures while operating under load, verified ports, and compared the presence detection capabilities of a Dell Latitude 7340 Ultralight and a 13-inch MacBook Air (2022).

Setting up the system (Windows)

Setting up and updating the OEM image

1. Boot the system.
2. To complete installation, follow the on-screen instructions. When appropriate, use the default selections.
3. Set the Windows (plugged in) Power Mode to Best Performance.
4. Set Screen and Sleep options to Never.

Setting screen brightness to 100

1. Right-click the desktop, and select Display settings.
2. From the left column, select System.
3. Click Power & Battery.
4. For all power options listed under Screen and Sleep, select Never.

Disabling user account control notifications

1. Select Windows Start, type `UAC` and press Enter.
2. Move the slider control to Never notify, and click OK.

Running Windows updates

1. Run Windows update, and install all available updates.
2. Verify the date and time are correct, and synchronize the system clock with the time server.

Pausing automatic Windows updates

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

Updating Intel X^e graphics

1. Go to the Intel® Arc™ & Iris® Xe Graphics – Windows* webpage: https://www.intel.com/content/www/us/en/download/785597/intel-arc-iris-xe-graphics-windows.html, and download the latest graphics driver.

Setting up the system (macOS)

Setting up and updating the OEM image

1. Boot the system.
2. To complete installation, follow the on-screen instructions. When appropriate, use the default selections.
3. Set Screen and Sleep options to Never:
   a. Select System Settings.
   b. Select Screensaver.
   c. Set Lock Screen Settings to Never.
4. Disable automatically adjust brightness:
   a. Select System Settings.
   b. Select Display.
   c. Disable Automatically adjust brightness.
5. Run Software Update, and install all available updates.

6.   Verify the date and time are correct.
7.   Enable Automatic log in:

      a.   Select System Settings.
      b.   Click Users & Groups.
      c.   Next to the Automatically log-in as setting, select the drop-down menu, and select User account.

8.   Disable Automatic Mac updates:

      a.   Select System Settings.
      b.   Click General.
      c.   Click Software Update.
      d.   Next to Automatic updates, click the information icon.
      e.   Disable Check for updates.

Benchmark testing

WebXPRT 4

Running WebXPRT 4 (Windows & MacOS)

1.   Open Chrome on the device 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.   Repeat steps 2 through 5 two more times.
7.   Report the median result.

CrossMark (Windows & MacOS)

Running the test (Windows & macOS)

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.   Repeat steps 1 though 6 two more times.
8.   Report the median result.

Thermal testing

The testing below uses a Fluke Data Acquisition Unit with thermal probes to capture thermal data while our systems under test each ran Cinebench 2024. We ran Cinebench 2024's 10-minute multi-core test repeatedly until both system had completed the test five times. Note that each run takes a minimum of 10 minutes—but can take longer. Our sustained test ran for 1 hour and 25 minutes. We report the maximum temperatures we captured during those 85 minutes.

Setting up the environmental heatmap test

1.   Download and install Cinebench from https://www.maxon.net/en/downloads/cinebench-r23-downloads.
2.   Attach a thermal probe to a surface away from any heat sources to capture ambient room temperature.
3.   Attach thermal probes to the following locations on each system:

    • Keyboard deck
    • Left palm rest
    • Right palm rest
    • Underside of chassis

Running the environmental heatmap test (Windows & macOS)

1. Start the thermal data capture.
2. Launch Cinebench.
3. Select File → Advanced benchmark.
4. Verify that the Minimum test Duration is set to the default 10 minutes (Test Throttling).
5. Select CPU (Multi-core), and click Start.
6. Monitor the benchmark. Once it completes, start another run.
7. Repeat steps 5 and 6 four times, for a total of five runs.
8. Report maximum temperature results for each location on both systems.

Presence detection testing

Setting up Dell Optimizer's Presence Detection (Windows Only)

1. Open Dell Optimizer.
2. Select Presence Detection.
3. Toggle on Onlooker Detection, for Screen Effect select Textured.
4. Toggle on Look Away Detect.
5. Toggle on Walk Away Lock, and select 30 seconds for Set lock timer.
6. Toggle on Wake on Approach.
7. Close Dell Optimizer.
8. In the Windows Search bar type `Sign-in options.`
9. In Settings, Accounts, Sign-in options, select Facial recognition (Windows Hello).
10. Click Setup.
11. On the Windows Hello setup window, click Get Started.
12. Enter your PIN when prompted.
13. Look at the camera as instructed to complete the facial recognition training.
14. Click Close.
15. Restart and log into the laptop. Wait 5 minutes.

Testing Onlooker Detection

1. Log into the target system, and begin to use the device.
2. Have a second person walk behind the device.
3. Note that the feature is present if the screen with the textured background appears, and the Onlooker Detected message appears.

Testing Look Away Detect

1. Log into the target system, and begin to use the device.
2. Look away from the screen around 60 degrees away.
3. Note that the feature is present if the screen dims when you look away and returns to full brightness when you look back.

Testing Walk Away Lock

1. Log into the target system, and begin to use the device.
2. Walk away from the device.
3. Note that the feature is present if the screen goes black after 30 seconds away from the system.

Testing Wake on Approach with Windows Hello

1. After the Walk Away Lock is engaged, walk back to the system. Do not touch the keyboard or mouse pad.
2. Note that the feature is present if the system wakes and logs in using Windows Hello.

Setting up the environmental heatmap test (Windows & macOS)

1. Download and install Cinebench from https://www.maxon.net/en/downloads/cinebench-r23-downloads.
2. A FLIR Ext Infrared Camera is necessary for taking top and bottom skin temperatures.

Running the environmental heatmap test (Windows & macOS)

1. Launch Cinebench.
2. Select File → Advanced benchmark.
3. Verify that the Minimum Test Duration is set to the default 10 minutes (Test Throttling).
4. Select CPU (Multi Core), and click Start.
5. Record the performance results for the next five back-to-back 10-minute iterations and at the end of each run, note the ambient room temperature and take a skin temperature photo with the FLIR Ext infrared Camera of the top and bottom and report the hottest spots.

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Read the report at https://facts.pt/P5Hy4BE   ▶

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This project was commissioned by Dell Technologies.