Keep going through your workday

Enjoy battery life beyond 9-to-5 with the AMD Ryzen 5 PRO Mobile 2500U APU.

AMD Ryzen PRO Mobile Processors with Radeon Vega Graphics feature advanced energy-saving and power-efficiency features that extend useful battery life to new levels.

Here at UL, we put a Dell Latitude 5495 notebook configured with an AMD Ryzen 5 PRO Mobile 2500U APU through a series of tests to assess its battery life and performance.

From a full charge, the Dell notebook managed more than ten and a half hours of office work and easily completed our 9-to-5 workday challenge.

Overall, the Dell Latitude 5495 offers practical workday battery life for light office use and excellent performance in its class for heavier work and digital content creation tasks.

UL VERIFIED verify.UL.com C321896

Workday productivity without recharging

Our 9-to-5 challenge measures how long a laptop lasts when used for everyday office tasks. In our tests, the Dell Latitude 5495 achieved more than ten and a half hours of continuous office work going well beyond our target.

We use PCMark 10 to test battery life. PCMark 10 is an industry-standard benchmarking application developed by UL that is widely used by governments, enterprises, and the specialist press.

Dell Latitude 5495 battery profile

The Dell Latitude 5495 achieved more than ten and a half hours of active work time in the PCMark 10 Modern Office battery life scenario. Comparing this mixed workload scenario with the continuous loads imposed by the Video (8.5 hours) and Gaming (2 hours) scenarios shows how effectively the AMD Ryzen 5 PRO Mobile 2500U processor can extend battery life with its energy-saving features.

PCMark 10 produces a battery profile—a comprehensive view of the battery life you can expect for a range of real-world scenarios, such as office work, watching videos, and playing games. UL believes that benchmark tests should always reflect real-world use, which is why, with PCMark 10, the computer's screen is kept on and undimmed while the benchmark is running.

WORK

10.5 hours

Modern Office

The Dell Latitude 5495 notebook easily passed our 9-to-5 workday challenge. In this scenario, we test battery life with a realistic balance of writing, web browsing, and video conferencing tasks separated by short periods of idle time.

AFTER WORK

8.5 hours

Video

Enjoy four full-length movies or binge-watch eight episodes of a favorite series. This scenario tests battery life by playing a video continuously until the battery is drained.

2 hours

Gaming

Immerse yourself in two hours of high-intensity gaming on the go. The demanding PCMark 10 Gaming scenario provides a lower limit for the Dell's battery life profile.

Powering your productivity

The Dell Latitude 5495 offers competitive performance for general office productivity work. For modern office work and digital content creation tasks, the heavier the load, the better the Dell looks. This model offers class-leading performance for photo editing, media creation, light 3D modeling, audio-visual presentations, graphics rendering, multi-tasking, and complicated spreadsheets.

We tested system performance with the PCMark 10 benchmark test. The benchmark includes a range of tests based on everyday activities. The tests are divided into groups—Essentials, Productivity, and Digital Content Creation—that each have different performance requirements.

PCMark 10 benchmark scores[1] (higher the better)

PCMark 10

Benchmark score: **3401**

UL recommended minimum[2]: 2800

The PCMark 10 score is a measure of overall system performance. It combines CPU, graphics, storage, and memory performance in one simple number that makes it easy to compare systems.

Productivity

Benchmark score: **4897**

UL recommended minimum[2]: 4500

The Productivity score reflects the system's performance with everyday office applications. Productivity tests include Spreadsheets and Writing tasks.

Digital Content Creation

Benchmark score: **3236**

UL recommended minimum[2]: 3450

The Digital Content Creation score represents the performance for digital content tasks such as Photo Editing, Video Editing, and Rendering. The UL recommended minimum is based on a system with a discrete graphics card.

Essentials

Benchmark score: **6741**

UL recommended minimum[2]: 4100

The Essentials score shows how well the system performs with common, everyday work tasks. The tests include Web Browsing, Video Conferencing, and App Start-up time.

[1] Average of three runs. See appendix 3 for all results.
[2] UL recommended minimum score for typical office use.

Enterprise security without compromising performance

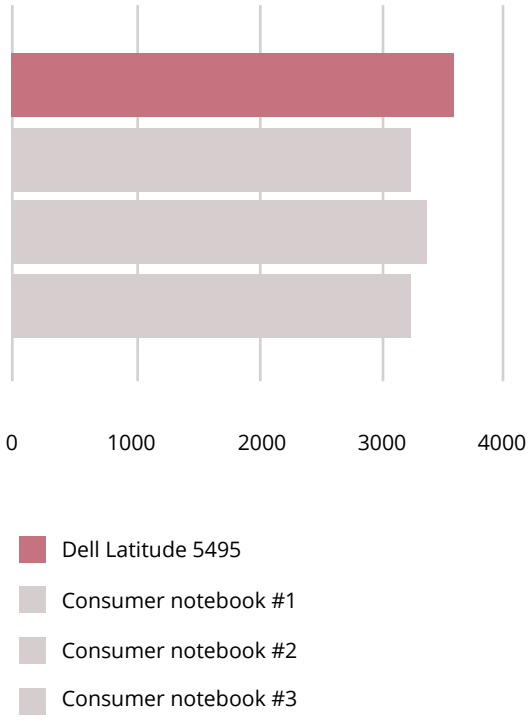
Security, manageability, and reliability

Compared with the equivalent consumer-model processor, the AMD Ryzen 5 PRO Mobile 2500U processor offers additional enterprise-level security, manageability, and reliability features without compromising on performance.

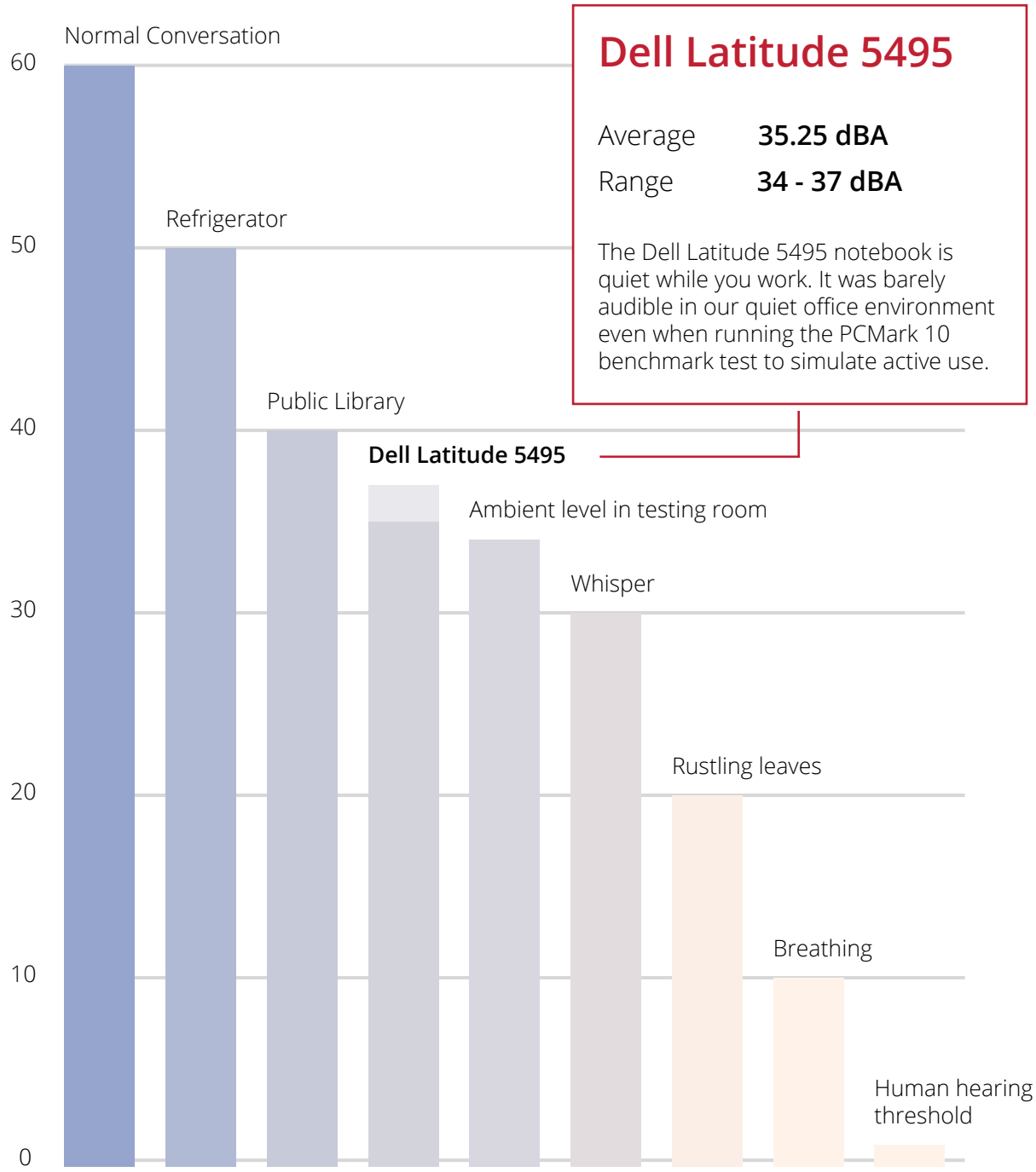
We compared the performance of the Dell Latitude 5495 notebook with three notebook models equipped with the consumer model AMD Ryzen 5 2500U Mobile processor.

The Dell notebook scored better than all three consumer notebooks in our tests.

PCMark 10 benchmark score



Work without distraction



Dell Latitude 5495

Average **35.25 dBA**

Range **34 - 37 dBA**

The Dell Latitude 5495 notebook is quiet while you work. It was barely audible in our quiet office environment even when running the PCMark 10 benchmark test to simulate active use.

Dell Latitude 5495

The Dell Latitude 5495 is a 14-inch notebook that is configurable with a Ryzen 3, 5, or 7 PRO Mobile Processor with Radeon Vega Graphics and a choice of 42, 51 or 68 Wh battery.

The Dell Latitude 5495 model we tested offers practical workday battery life for light office use and excellent performance in its class for heavier work and digital content creation tasks.

Test model specifications

Processor	**AMD Ryzen 5 Pro Mobile 2500U APU**
Graphics	**AMD Radeon™ Vega 8**
Memory	**16 GB**
SSD	**128 GB**
Screen Size	**14″**
Resolution	**1920x1080**
Battery	**68 Wh**

Appendix 1: Dell Latitude 5495 specifications

GENERAL

Operating System	Windows 10 Professional 64-bit (version 1703)
Motherboard	Dell Inc. 017593 Rev. 00
North Bridge	AMD Carrizo FCH Rev. 51
BIOS	Dell Inc. 0.12.10 03/21/2018
Memory	16384 MB (2 × 8192 MB DDR4 SDRAM @2394 MHz)
Screen resolution	1920 × 1080
Weight	1.74 kg
Dimension	334 × 229 mm
Power profile plan	Power source optimized

PROCESSOR

CPU	AMD Ryzen 5 PRO Mobile 2500U
Reported stock core clock	2594 MHz
Physical processors	1
Number of cores	4 (8 threads)
Package	Socket FP5

Appendix 1: Dell Latitude 5495 specifications

GRAPHICS

Graphics card	AMD Radeon™ Vega 8
Driver	23.20.815.3840
Graphics memory	1024 MB
Core clock	1100 MHz
Memory bus clock	1200 MHz

STORAGE

Model	SK hynix SC311
Type	SSD SATA M.2 2280
Size	128 GB
Driver	Microsoft 10.0.16299.371
Write caching	Enabled
Write cache buffer flushing	Enabled

BATTERY

Manufacturer	BYD
Serial number	2088
Chemistry	Li-ion/Polymer
Capacity	68 Wh

Appendix 2: Testing procedures

UL tested the Dell Latitude 5495 in June 2018 using the standard procedures in this appendix.

UL tests every system under controlled conditions. Each system under test is placed in the same location, at the same room temperature, and away from direct sunlight and other heat sources. The testing was performed in a climate-controlled lab environment in UL's Fremont facility in California:

- Temperature: 21.5° C
- Relative humidity: 10 - 80 %.
- Ambient light: 250 +/- 50 lux.

Measuring battery life

PCMark 10 is a benchmarking application developed by UL. The Battery Profile test measures battery life across four scenarios: Idle, Modern Office, Video, and Gaming. Starting from a full charge, each scenario runs in a loop until the battery is depleted.

Calibrate the battery

1. Connect the power adapter and charge the battery to 100%.
2. Calibrate the battery with a full drain/charge cycle followed by two hours connected to AC power adapter.
3. Repeat step 2 to perform two complete drain/charge cycles.

PC setup

1. Install all critical updates for the operating system.
2. Install the latest approved drivers for the system's hardware.
3. Disable automatic updates.
4. Disable wireless connections such as WLAN, Bluetooth and 3G/4G.
5. Disconnect external devices such as auxiliary monitors, mouse, keyboard, speakers, headphones, external disk drives, etc.
6. Lower the speaker volume to the lowest value.

PC power plan settings

1. Set Windows 10 battery saver to the default value of 20%.
2. Uncheck the option to "Lower screen brightness while in battery saver."
3. Set the power plan to 'Power saver' using the Power Options Control Panel.

Appendix 2: Testing procedures

4. Set the remaining power plan settings as follows:
    a. Require a password on wakeup: No
    b. Turn off hard disk after: 3 minutes
    c. Wireless adapter settings: Maximum power saving
    d. Dim the display: Never
    e. Turn off the display: Never
    f. Put the computer to sleep: Never
    g. USB selective suspend setting: Enabled
    h. PCI Express: Link State Power Management: Maximum power savings
    i. Processor power management:
        i. Minimum processor state: 5%
        ii. Maximum processor state: 100%
    j. Battery:
        i. Critical battery action: Shutdown (on battery), Do nothing (plugged in)
        ii. Low battery level: 0%
        iii. Critical battery level: 0%
        iv. Low battery notification: Off
        v. Low battery action: Do nothing

Set the screen brightness

1. In PCMark 10, click on the Calibrate Now button to open a pure white calibration screen.
2. Using a luminance meter, calibrate the screen brightness to 110 cd/m2.

Run the PCMark 10 Battery Profile benchmark test

1. Install PCMark 10 benchmarking software.
2. Restart the computer.
3. Wait 2 minutes for startup to complete.
4. Close other programs, including those that may be running in the background.
5. Wait for 15 minutes.
6. Ensure that the battery is 100%.
7. Open PCMark 10 and start the PCMark 10 Battery Profile test.
8. Unplug the AC adapter from the device when prompted.
9. After the battery is depleted, wait a few minutes and plug the power cable back in and turn the system on.
10. PCMark 10 will automatically complete the test and present the result.
11. Save the result file.
12. Repeat from step 2 a total of three times to verify that the variance in the results is less than 5%.

Appendix 2: Testing procedures

Measuring performance

The computer's noise level was measured in a quiet office room with the microphone placed 1 m from the PC. Noise level readings were taken every 30 seconds while the PC ran the PCMark 10 performance.

PC setup

1. Connect the AC power adapter.
2. Install all critical updates for the operating system.
3. Install the latest approved drivers for the system's hardware.
4. Disable automatic updates.
5. Install PCMark 10 benchmarking software.

PC power plan settings

1. Set the power plan to 'Maximum performance' using the Power Options Control Panel.
2. Set the remaining power plan settings as follows:
    a. Dim the display: Never
    b. Turn off the display: Never
    c. Put the computer to sleep: Never

Run the PCMark 10 performance benchmark test

1. Install PCMark 10 benchmarking software.
2. Restart the computer.
3. Wait 2 minutes for startup to complete.
4. Close other programs, including those that may be running in the background.
5. Wait for 15 minutes.
6. Ensure that the battery is 100%.
7. Open PCMark 10 and start the PCMark 10 benchmark test.
8. After the test has completed, save the result file.
9. Repeat from step 2 a total of three times to verify that the variance in the results is less than 3%.

Appendix 2: Testing procedures

Measuring noise levels

The computer's noise level was measured in a quiet office room with the microphone placed 1 m from the PC. Noise level readings were taken every 30 seconds while the PC ran the PCMark 10 performance.

PC setup

1. Install all critical updates for the operating system.
2. Install the latest approved drivers for the system's hardware.
3. Disable automatic updates.
4. Install PCMark 10 benchmarking software.
5. Disconnect the AC power adapter.

PC power plan settings

1. Set the power plan to 'Maximum performance' using the Power Options Control Panel.
2. Set the remaining power plan settings as follows:
    a. Dim the display: Never
    b. Turn off the display: Never
    c. Put the computer to sleep: Never

Measure noise levels

1. Set up the microphone 1 m from the PC.
2. Taken an ambient noise level reading for the room.
3. Turn on the PC and install PCMark 10 software.
4. Close other programs, including those that may be running in the background.
5. Wait for 15 minutes.
6. Ensure that the battery is 100%.
7. Open PCMark 10 and start the PCMark 10 benchmark test.
8. Take a noise level reading every 30 seconds.

Appendix 3: Benchmark Scores

PCMark 10 battery profile benchmark results

PCMark 10 application version: 1.1.1722
PCMark 10 Battery Profile version: 1.1.1544[4]

	1st iteration	2nd iteration	3rd iteration
Idle	12 hours 54 minutes	12 hours 30 minutes	12 hours 45 minutes
Modern Office	10 hours 35 minutes	10 hours 53 minutes	10 hours 41 minutes
Video	8 hours 31 minutes	8 hours 56 minutes	8 hours 58 minutes
Gaming	2 hours 14 minutes	2 hours 16 minutes	2 hours 12 minutes

PCMark 10 performance benchmark results

PCMark 10 application version: 1.1.1722
PCMark 10 benchmark version: 1.1.1544

Dell Latitude 5495	1st iteration	2nd iteration	3rd iteration
PCMark 10	3396	3399	3407
Productivity	4990	4853	4849
Digital Content Creation	3168	3269	3270
Essentials	6728	6719	6775

[4] Battery life testing was conducted with a pre-release version of the PCMark 10 Battery Profile test. At the time of this report, UL does not expect to make any score-altering changes to the test before its public release.

Appendix 3: Benchmark Scores

PCMark 10 performance benchmark results

PCMark 10 application version: 1.1.1722
PCMark 10 benchmark version: 1.1.1544

	1st iteration	2nd iteration	3rd iteration
Dell Latitude 5495 with AMD Ryzen 5 PRO Mobile 2500U	3396	3399	3407
Consumer notebook with AMD Ryzen 5 2500U Mobile Processor	3265	3214	3093
Consumer notebook with AMD Ryzen 5 2500U Mobile Processor	3229	3194	3184
Consumer notebook with AMD Ryzen 5 2500U Mobile Processor	3215	3194	3163

Noise levels

Measurement	A-weighted decibels (dBA)
1	34
2	34
3	36
4	37
5	37
6	36
7	34
8	36
9	35
10	35
11	37
12	34

UL is an independent, global company that offers a wide range of testing, inspection, auditing, and certification services. With 10,000 people in 40 countries, UL helps customers, purchasers, and policymakers navigate market risk and complexity. UL builds trust in the safety, security, and sustainability of products, organizations and supply chains – enabling smarter choices and better lives.

UL's benchmarking software helps people measure, understand and manage computer hardware performance. Our talented team creates the industry's most trusted and widely used performance tests for desktop computers, notebooks, tablets, smartphones, and VR systems. Find out more at https://benchmarks.ul.com.