

DELL LATITUDE 9000 SERIES  
GOES HEAD-TO-HEAD WITH  
APPLE MACBOOK PRO

Innovation meets ultra-premium design



**DELL**  
Technologies

**intel**<sup>®</sup>

# THE DELL LATITUDE FAMILY

## Why choose Dell Latitude

Work wherever and however you need with small, light and stylish laptops and 2-in-1s designed for mobility and productivity.

Stay connected with industry's fastest wireless<sup>1</sup> and LTE options, intelligent collaboration and privacy features, and a broad array of port and accessories to set up office anywhere.

Featuring Dell Optimizer AI with Express features and Safe security solutions, Latitude continues to innovate as the world's most intelligent<sup>2</sup> and secure commercial PCs<sup>3</sup>.



## LATITUDE

3000 SERIES

5000 SERIES

7000 SERIES

**9000 SERIES**

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# WHY CHOOSE DELL LATITUDE 9000 SERIES<sup>4</sup>

Intelligence meets innovation



## SLAY PRODUCTIVITY

Bigger screen. Boosted power. All so you can get more done, faster. Another bonus, ComfortView Plus low blue light is built-in and just works, so you don't have to mess with settings and your eyes don't feel fatigued.



## RETAIN AN AIR OF MYSTERY

SafeShutter automatically opens and closes your camera for conference calls, so your private life stays private.



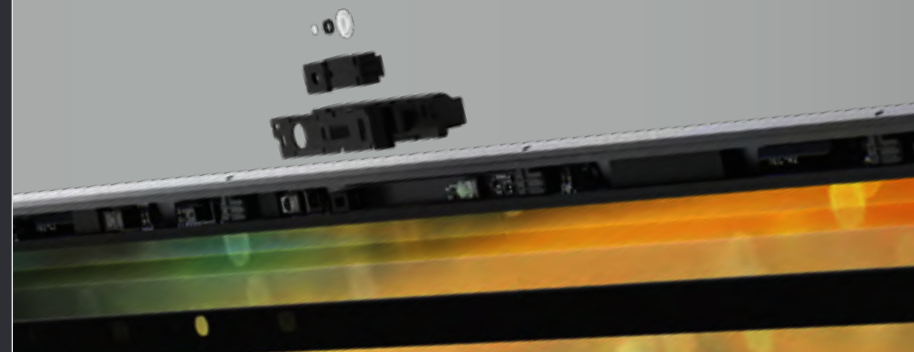
## LOOK THE PART

Our smallest, ultra-premium laptops are crafted from machined aluminum – making them heavy on style and light on weight.



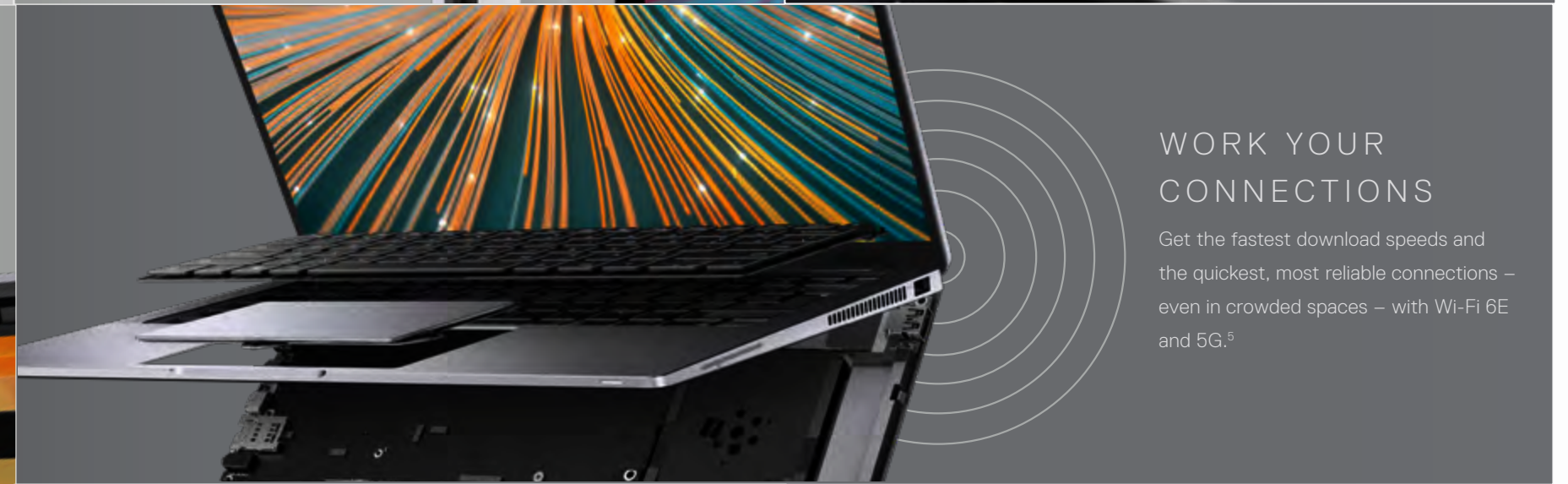
## OWN EVERY VIDEO CALL

Say goodbye to background noises and hello to a better on-screen image with the 9000 series new camera and intelligent audio.



## WORK YOUR CONNECTIONS

Get the fastest download speeds and the quickest, most reliable connections – even in crowded spaces – with Wi-Fi 6E and 5G.<sup>5</sup>



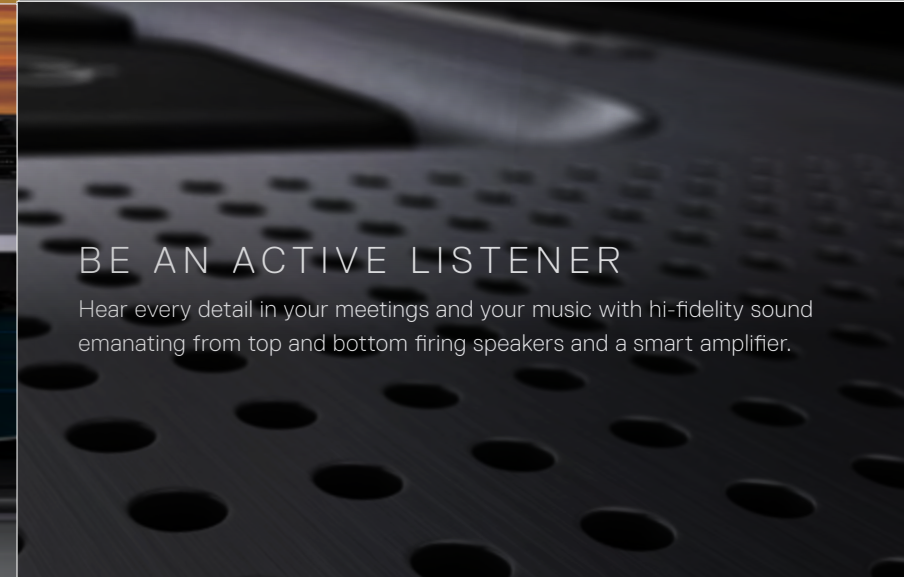
## PERSONALIZED PERFORMANCE

Dell Optimizer adapts to the way you work for improved app performance and battery run time, enhanced audio, optimal network connectivity, and faster sign-in. Personalized performance that is as unique as you are.



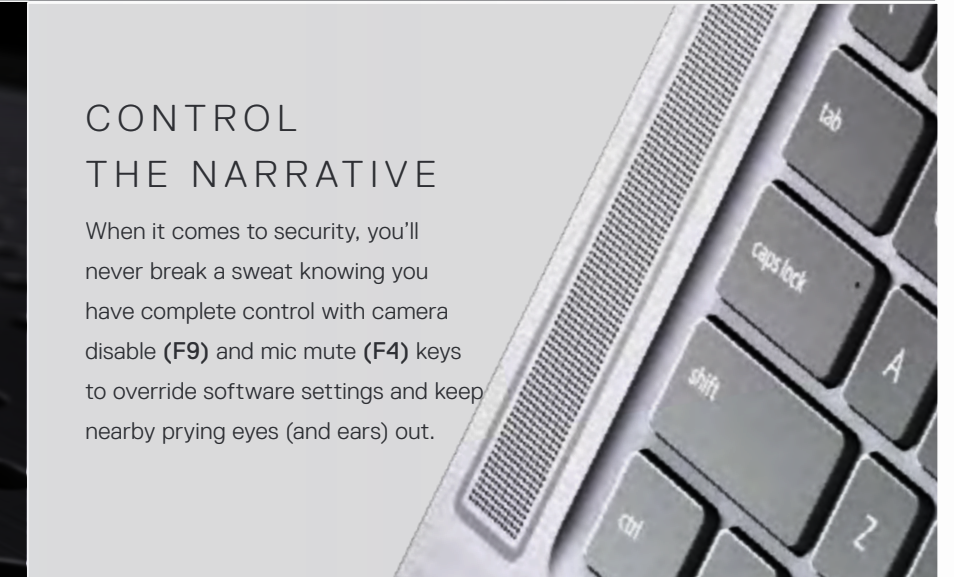
## BE AN ACTIVE LISTENER

Hear every detail in your meetings and your music with hi-fidelity sound emanating from top and bottom firing speakers and a smart amplifier.



## CONTROL THE NARRATIVE

When it comes to security, you'll never break a sweat knowing you have complete control with camera disable (F9) and mic mute (F4) keys to override software settings and keep nearby prying eyes (and ears) out.



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# DELL OPTIMIZER.

## Technology that adapts as fast as you do.

Transform your remote work experience with Dell Optimizer, the only built-in, AI-based optimization software that learns and responds to the way you work.<sup>6</sup>

Dell Optimizer features	Latitude 9000 Series	MacBook Pro	Why it matters
<b>ExpressConnect<sup>7</sup></b> Keeps you connected to the best network available and prioritizes bandwidth for VoIP applications	✓	✗	ExpressConnect delivers better connectivity by intelligently identifying the best network access points as you move from place to place. It also allows users to prioritize bandwidth for VoIP applications. Improvements: 3X less buffering and 8 X better video quality due to optimized internet bandwidth, 20% more data transfer from optimized networking and 30% faster application data processing. <sup>8</sup>
<b>Intelligent Audio</b> Improves audio and voice quality using AI	✓	✗	Intelligent Audio enhances your audio based on your work environment - whether you're listening to music, recording a podcast, or on a conference call. It detects your voice and stabilizes your PC's volume for an enhanced conferencing experience. Our intelligent noise elimination technology detects and eliminates non-human sounds such as dogs or doorbells that occur when you're not talking, giving users the confidence to stay off mute and engage in the meeting.
<b>ExpressResponse<sup>9</sup></b> Improves application performance using AI, so that applications launch, perform better and transition faster.	✓	✗	ExpressResponse with Intel® Adaptix™ Technology, uses built-in AI to manage the speed and performance of your favorite applications. Users can select up to 5 frequently used applications to optimize. ExpressResponse boosts application launch times, improves performance and lets you switch between them seamlessly.
<b>ExpressCharge<sup>10</sup></b> Uses AI to understand user behavior to improve battery performance and extend run time	✓	✗	Avoid the stress of last-minute power disruptions with ExpressCharge. This feature analyzes your power usage habits to improve your PC's battery utilization. Based on your behavior, charge your PC up to 80% in 40 minutes. <sup>11</sup>
<b>ExpressSign-in 2.0</b> Signs you in and locks the PC by detecting your presence	✓	✗	Get to work faster than ever on the world's first business PC with Intel® Visual Sensing Technology. <sup>12</sup> It detects your presence to instantly wake and log you in via the IR camera and Windows Hello™, all without lifting a finger. It locks when you walk away, so your work stays safer.

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Features of MacBook Pro based on publicly available information for [configurations/ specifications], July 2021.



LATITUDE 9420

LEADING THE NEW AGE  
OF INTELLIGENCE

MACBOOK PRO 13(M1)



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**HOW IT LOOKS**

The Latitude 9420 features CNC machined aluminum with a hairline finish and diamond cut edges that are stunning in any setting. This incredibly beautiful design is ready for business.

**Enhanced Camera**

Intel® IPU6 provides a 720p HD camera with Auto White Balance and Temporal Noise Reduction (TNR) for clearer video quality.

**The industry's first webcam SafeShutter<sup>13</sup>**

automatically opens and closes, or take control with secure camera and mic mute keys.

**ExpressSign-in 2.0<sup>14</sup>**

Uses the camera/sensor to sense your presence for a touchless, type-less, quicker sign-in with Windows Hello™ facial recognition.

**14" Display, 91.55% Screen to Body Ratio**

16% bigger screen in a 3% bigger chassis, Almost borderless display

**QHD+ (2560x1600) Resolution<sup>15</sup>**

Same pixel count as Apple's "Retina" display

**Corning® Gorilla Glass® 6 DX<sup>16</sup>**

Anti-Reflective, Anti-Smudge Screen

**Mobile Broadband**

5G & 4G options<sup>17</sup>

**Display with 500 Nits Brightness**

16:10 Aspect Ratio

**Always-On, Built-In, Low Blue Light Display**

Through ComfortView Plus that maintains color accuracy while reducing harmful blue light

**Touchscreen and 2-in-1 Options**

0.33" Front  
0.54" Rear

Dell Latitude 9420 - 12.2 in / 310.59 mm width

See important information on page 23  
Features vary by laptop or 2-in-1 configuration

**720p FaceTime HD camera**

**No Camera Shutter or Facial Recognition**

Must type a password, no FaceID enabled

**13.3" Display, Screen to Body Ratio: 79.6%**

Smaller screen; Larger border

**Retina (2560x1600) Display**

Same pixel count as 9420, 16:10 Aspect Ratio.

**No Anti-Reflective or Anti-Smudge Screen**

**No Mobile Broadband**

Wi-Fi (WLAN) only

**Display with 500 Nits Brightness**

16:10 Aspect Ratio

**No Hardware-Based Low Blue Light**

True Tone Technology Software

**No Touchscreen or 2-in-1 Options**

0.61"

Apple MacBook Pro 13(M1) - 11.97 in / 304 mm width

Features of MacBook Pro based on publicly available information for [configurations/ specifications], July 2021.










MacBook Pro 13 has no HDMI, USB-A, Smart Card Reader or Lock Slot.\*

The Apple M1 chip can support limited external displays even when using a Thunderbolt™ dock. The Latitude 9420 can connect to as many as 3 4k monitors.

\*Available with an adapter sold separately.

HOW IT CONNECTS

# Latitude 9420 vs. MacBook Pro 13(M1)

DELL		APPLE
2		0
	THUNDERBOLT™ 4 (USB-C) (POWER DELIVERY DISPLAY PORT)	
0		2
	THUNDERBOLT™ 3 (USB 4) (POWER DELIVERY DISPLAY PORT)	
1		0
	USB 3.2 GEN 1 (WITH POWER SHARE)	
1		0
	HDMI 2.0	
1		0
	USD 4.0 READER + USIM CARD SLOT (WWAN ONLY) + SMART CARD READER (OPTIONAL)	
1		1
	AUDIO COMBO JACK	
1		0
	WEDGE-SHAPED LOCK SLOT	

Features of MacBook Pro based on publicly available information for [configurations/ specifications], July 2021.



## Latitude 9420 vs. MacBook Pro 13(M1)



Feature	Latitude 9420	MacBook Pro 13(M1)	Why it matters
Screen size	14.0"	13.3"	Choose the best screen size that fits your needs. Larger screens are tied to increased worker productivity.
Weight <sup>18</sup>	2.8lbs./ 1.3kg.	3lbs./ 1.4kg.	With a larger display, Latitude 9420 is a lightweight laptop, making it easier to carry. Latitude 9420 is only 12.2" in width and is lighter than MacBook Pro 13.
16:10 Aspect Ratio	●	●	Aspect Ratio in a display describes the correlation between the Width (X) and Height (Y) of the display. With 16:10 aspect ratio, you gain 5% more viewing area with a taller screen vs. 16:9 aspect ratio.
Touch Laptop and 2-in-1 option	●	Non-touch Laptop only	With Latitude 9420 you get to choose: a traditional laptop or a convertible 2-in-1 laptop which can rotate 360-degrees into tablet mode, tent mode, or back to laptop mode.
Performance: 11th Generation Intel® Core™ i5 or i7 vPro processor options <sup>19</sup>	●	Apple M1	Latitude 9420 offers latest Intel core™ 11th generation U-series and up to 20W TDP for ultimate performance which is 66% more CPU power gen over gen. Apple MacBook Pro 13 offers new Apple silicon M1 processor.
Up to 32GB Memory	●		MacBook Pro 13(M1) offers up to 16GB Memory.
CNC Aluminum finish	●		The CNC in CNC machining stands for computer numerical control, and it's a way to take full advantage of the efficiency of machining through automation.
Mobile broadband 5G & 4G LTE Cat 16 <sup>20</sup>	●		Mobile Broadband enables workers to stay productive virtually anywhere.
Wi-Fi 6E	●		Wi-Fi 6E allows for quadruple the bandwidth vs. Wi-Fi 6, which reduces congestion and means devices and routers will have a better chance to deliver their maximum speeds. MacBook Pro 13 (M1) has WiFi 6.
SafeShutter <sup>21</sup>	●		SafeShutter is the Industry's first automatic security webcam that knows when to automatically open or close by syncing to your video conferencing applications (if you give it permission) with security-hardened, hardware-controlled circuit that is tied to the F4 and F9 keys. When you press a key, you can instantly turn the camera on or off, or hardware mute or unmute your mic. No fumbling and losing precious time to turn off your video through the conferencing software should the unexpected occur.
Enhanced HD Camera	●	●	9420 has an Intel™ IPU6 Camera is HD with Auto White Balance, Wide Dynamic Range and Dell's Temporal Noise Reduction (TNR) for clearer video quality. Apple has HD camera with advanced ISP to improve the image quality.
ExpressSign-in 2.0 <sup>22</sup>	●		ExpressSign-in 2.0 enables your camera to sense when a user approaches and wake the PC, and automatically locks the PC when the user walks away. With an IR camera, it also enables secure, password-less sign-in.
Built-in low blue light display	●		Avoid potential harm from blue light emitting from screens with Dell's low blue light panels branded ComfortView Plus, which is TUV certified, built-in, always-on, and virtually unnoticeable -that's how well color accuracy is maintained.
2560 x 1600 resolution, 500 Nits display option	●	●	Latitude 9420 also offers FHD (1920x10180) option.
Over 90% screen-to-body ratio	●		Screen-to-body is a percentage of how much surface the screen represents compare to its body (or entire hinge-up). The larger the percentage, the more screen real estate there is compared to the bezels and other coverings.
InfinityEdge borders	●		A Dell branded type of display where the bezels are narrowed, cameras miniaturized, the drive electronics and connectors are moved to the bottom, allowing the sides of the screen to go all the way to the edge, providing for an almost borderless display look.
Top firing Speakers, noise canceling mics	●		System speakers on the palmrest that are strategically placed for a more premium sound experience.
Over 15 hours battery life <sup>23</sup>	●	●	Latitude 9420 offers over 15 hours of battery life (MobileMark 18 tested). MacBook Pro claims up to 20 hours of Apple TV app playback (M1 version) <sup>25</sup> . MobileMark 18 testing looks at web browsing, plus productivity and creativity applications like Microsoft Office & Adobe Creative Cloud that office workers are likely to use.
Faster battery charging (ExpressCharge <sup>24</sup> )	●		ExpressCharge 2.0 is available only on Latitude 9000 Series, it can get your battery from 0% up to 80% in under 40 minutes <sup>26</sup>

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Features of MacBook Pro based on publicly available information for [configurations/ specifications], July 2021.





LATITUDE 9520

BRILLIANTLY COLLABORATIVE

MACBOOK PRO 16



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Apple MacBook Pro 16

Latitude 9520

HOW IT LOOKS

Stunning from the start.—our most premium Latitude ever is meticulously crafted with CNC aluminum, with diamond cut edges and a hair-line brushed finish. Only Dell offers a 2-in-1 configuration.

**SafeShutter<sup>27</sup>**  
 webcam shutter that knows when to automatically open or close by syncing to your video conferencing applications

**ExpressSign-in 2.0<sup>28</sup>**  
 Uses the camera/sensor to sense your presence for a touchless, type-less, quicker sign-in with Windows Hello™ facial recognition

**Higher Resolution Option with Low Blue Light Display**  
 16:9 UHD, 4K (3840x2160) (more pixels than Retina display) with ComfortView plus Low Blue Light

**Screen to Body Ratio: 90.38%**  
 Almost borderless display

**Corning® Gorilla® Glass 6 DX<sup>29</sup>**  
 Anti-Reflective, Anti-Smudge Screen

**Faster Wireless Connectivity**  
 Intel® Wi-Fi 6 (Gig+) delivers nearly 3x faster speeds and next-gen security to PCs and wireless networks<sup>30</sup>

**Display with 500 Nits Brightness**  
 16:9 aspect ratio & sRGB 100% color gamut

**Touchscreen and 2-in-1 Options**

**More Powerful and Latest Processor**  
 11th Generation Intel Core™ Processors up to i7-1185G7 vPro, 12M cache, up to 4.8GHz, 4 cores<sup>31</sup>

**720p FaceTime HD camera**  
**No Camera Shutter or Facial Recognition**  
 Must type a password, no FaceID enabled

**Lower Resolution and No Blue Light Filtering**  
 Retina display (3072x1920) with IPS technology

**Screen To Body Ratio: 86.9%**  
 Thicker and smaller screen to body ratio

**No Anti-Reflective or Anti-Smudge Screen**

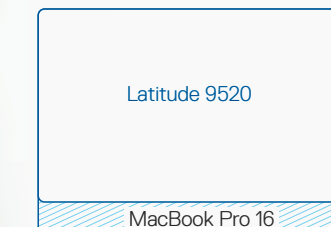
**Slower Wireless Connectivity**  
 Wi-Fi 5 Only

**Display with 500 Nits Brightness**  
 16:10 aspect ratio & P3 color gamut

**No Touchscreen or 2-in-1 Options**

**Less Powerful Processor**  
 Intel 9th Gen up to i9-9880H processor, 16 MB cache, up to 5GHz, 8 cores

This long running business PC is the world's most intelligent ultra-premium 15.0" PC in the size of a 14".<sup>32</sup>



**FOOTPRINT**

**Dell Latitude 9520:**  
 Height: 0.36 inch (1.40 cm)  
 Width: 13.39 inches (34.02 cm)  
 Depth: 8.49 inches (21.58 cm)








**Apple MacBook Pro 16:**  
 Height: 0.64 inch (1.62 cm)  
 Width: 14.09 inches (35.79 cm)  
 Depth: 9.68 inches (24.59 cm)

See important information on page 23  
 Features vary by laptop or 2-in-1 configuration

Features of MacBook Pro based on publicly available information for [configurations/ specifications], July 2021.

HOW IT CONNECTS

# Latitude 9520 vs. MacBook Pro 16

DELL		APPLE
2	 THUNDERBOLT™ 4 (USB-C) (POWER DELIVERY DISPLAY PORT)	0
0	 THUNDERBOLT™ 3 (USB-C) (POWER DELIVERY DISPLAY PORT)	4
1	 USB 3.2 GEN 1 (WITH POWER SHARE)	0
1	 HDMI 2.0	0
1	 USB 4.0 READER + USIM CARD SLOT (WWAN ONLY) + SMART CARD READER (OPTIONAL)	0
1	 AUDIO COMBO JACK	1
1	 WEDGE-SHAPED LOCK SLOT	0

See important information on page 23



Features of MacBook Pro based on publicly available information for [configurations/ specifications], July 2021.



## Latitude 9520 vs. MacBook Pro 16



Feature	Latitude 9520	MacBook Pro 16	Why it matters
Screen size	15.0"	16.0"	Choose the best screen size that fits your needs. Consider that the smaller the screen size, the lighter the laptop.
Weight <sup>35</sup>	3.1lbs./1.4kg	4.3lbs./2.0kg	With a larger display, Latitude 9520 is a lightweight laptop. Latitude 9520 is only 13.39" in width and is lighter than MacBook Pro 16.
Touch laptop and 2-in-1 option	●	Non-touch Laptop only	This mean that these devices can be purchased as either a traditional laptop or a convertible 2-in-1 laptop which can rotate 360-degrees into tablet mode, tent mode, or back to laptop mode.
Performance: 11th Generation Intel® Core™ i5 or i7 vPro processor options (Intel Core U-Series) <sup>34</sup>	●	Up to Intel® 10th generation i9 processors (H-Series)	Latitude 9520 offers latest Intel core™ 11th generation U-series processors. MacBook Pro offers 9th generation Intel Core H-Series processors.
CNC Aluminum finish	●		The CNC in CNC machining stands for computer numerical control, and it's a way to take full advantage of the efficiency of machining through automation. The Latitude 9000 Series has all-over CNC machined Aluminum with diamond cut edges while MacBook Pro 16 offers Silver or Space Gray.
Mobile broadband 5G & 4G LTE Cat 16 <sup>35</sup>	●		If you need built-in mobile broadband, Latitude 9000 Series offers 5G and 4G options. Feature not available with MacBook Pro 16.
Wi-Fi 6	●		Intel® Wi-Fi 6 (Gig+) delivers nearly 3x faster speeds and next-gen security to PCs and wireless networks. <sup>40</sup>
SafeShutter <sup>36</sup> Automatic webcam shutter	●		SafeShutter is the Industry's first automatic security webcam that knows when to automatically open or close by syncing to your video conferencing applications (if you give it permission) with security-hardened, hardware-controlled circuit that is tied to the F4 and F9 keys. When you press a key, you can instantly turn the camera on or off, or hardware mute or unmute your mic. No fumbling and losing precious time to turn off your video through the conferencing software should the unexpected occur.
ExpressSign-in 2.0 <sup>37</sup>	●		Get to work fast with our PC proximity sensor enabled by Intel® Context Sensing Technology that detects your presence to instantly wake and log you in via the IR camera and Windows Hello™, all without lifting a finger. It locks when you walk away, so your work stays safer. Apple does not offer any facial recognition sign-in on MacBook Pros.
Built-in low blue light display	●		Avoid potential harm from blue light emitting from screens with Dell's low blue light panels branded ComfortView Plus, which is TUV certified, built-in, always-on, and virtually unnoticeable -that's how well color accuracy is maintained.
UHD (3840x2160)500 Nits display option	●		Dell offers an option 4K UHD display with 500 nits, which is a higher resolution than the 2560x1600 "Retina" display offered by Apple. Latitude 9520 also offers an FHD (1920x1080) option.
Over 90% screen-to-body ratio	●		Screen-to-body is a percentage of how much surface the screen represents compare to its body (or entire hinge-up). The larger the percentage, the more screen real estate there is compared to the bezels and other coverings.
InfinityEdge borders	●		A Dell branded type of display where the bezels are narrowed, cameras miniaturized, the drive electronics and connectors are moved to the bottom, allowing the sides of the screen to go all the way to the edge, providing for an almost borderless display look.
Top firing Speakers, noise canceling mics	●	MB Pro 16 offers 6x high fidelity speakers	System speakers on the palmrest that are strategically placed for a more premium sound experience.
Over 15 hours battery life <sup>38</sup>	●	●	Latitude 9520 offers up to 18 hours and 49 minutes of battery life with MobileMark 18 testing. Latitude 9520 offers 2 battery options: 49Whr or 88Whr. MacBook Pro 16 offers 100Whr battery and claims up to 11 hours wireless web browsing and video playback battery life.
Faster battery charging (ExpressCharge) <sup>39</sup>	●		ExpressCharge 2.0 is available only on Latitude 9000 Series, it can get your battery from 0% up to 80% in under 40 minutes <sup>41</sup> .



<sup>1</sup>Based on internal analysis, April 2021. Dell Optimizer available in 2020 and 2021 devices. Feature availability and functionality vary by model.

<sup>2</sup>Based on internal analysis, April 2021. Dell Optimizer available in 2020 devices, not available in OptiPlex 3000 series, Latitude 3310 2-in-1 and Latitude Chromebook Enterprise. Feature availability and functionality varies by model.

<sup>3</sup>Based on Dell internal analysis, January 2021. Learn more at <https://www.dell.com/endpointssecurity>.

<sup>4</sup>Features may vary based on configurations.

<sup>5</sup>Subject to service provider's broadband subscription and coverage area; speeds may vary. Additional charges may apply. Contact your service provider for details.

<sup>6</sup>Based on Dell internal analysis, November 2020.

<sup>7</sup>Best network selection based on signal strength, channel congestion, router type and others. Network suggestions based on user credentials

<sup>8</sup>Based on testing performed by Dell Labs in June 2020, comparing performance with ExpressConnect enabled and disabled. Actual results may vary; testing results do not guarantee performance under test conditions. Subject to service provider's broadband subscription and coverage area; speeds may vary. Additional charges will apply. Contact your service provider for details.

<sup>9</sup>ExpressResponse must be enabled in the Applications feature. DO learns how user uses the selected application(s) over several hours. Based on Dell testing using Sysmark 2018 benchmark running productivity applications, March 2020.

Improvement will vary based on product configuration, use, application and other factors.

<sup>10</sup>ExpressCharge with Dell Optimizer (DO) requires 14 days to learn the user's behavior, then dynamically applies appropriate battery settings. DO Adaptive Battery setting must be enabled in the Power feature settings labeled "Adaptive Battery Performance". Improvement will vary based on product configuration, use, software, operating conditions, power management settings and other factors. Improvements may decrease over time. System performance may be impacted.

<sup>11</sup>ExpressCharge must be enabled within Dell Power Manager software. System must be powered off or in hibernation mode for ExpressCharge feature to function. After charging has reached the stated capacity, charging speed will return to normal speed. Recommended for use with the provided Dell power adapter. Charging times may vary.

<sup>12</sup>Based on a September 2020 analysis.

<sup>13</sup>Based on Dell analysis, November 2020.

<sup>14</sup>Based on Dell internal analysis, September 2020. Express Sign-In available on Latitude 9000, 7000 and 5000 series. See product details for availability.

<sup>15</sup>QHD available on 2-in-1 only.

<sup>16</sup>Option only available on 2-in-1.

<sup>17</sup>Subject to service provider's broadband subscription and coverage area; speeds may vary. Additional charges will apply. Contact your service provider for details.

<sup>18</sup>Weights vary depending on configurations and manufacturing variability.

<sup>19</sup>Offering may vary by country and by configuration.

<sup>20</sup>Subject to service provider's broadband subscription and coverage area; speeds may vary. Additional charges will apply. Contact your service provider for details.

<sup>21</sup>Based on Dell internal analysis, November 2020.

<sup>22</sup>Based on Dell internal analysis, September 2020. Express Sign-In available on Latitude 9000, 7000 and 5000 series. See product details for availability.

<sup>23</sup>Based on internal testing using the Mobile Mark 2018 battery life benchmark test. For more information about this benchmark test, visit [www.bapco.com](http://www.bapco.com). Test results are for comparative purposes only. Actual battery life may be significantly less than the test results and varies depending on product configuration and use, software, usage, operating conditions, power management settings and other factors. Maximum battery life will decrease with time.

<sup>24</sup>ExpressCharge with Dell Optimizer (DO) requires 14 days to learn the user's behavior, then dynamically applies appropriate battery settings. DO Adaptive Battery setting must be enabled in the Power feature settings labeled "Adaptive Battery Performance". Improvement will vary based on product configuration, use, software, operating conditions, power management settings and other factors. Improvements may decrease over time. System performance may be impacted.

<sup>25</sup>MacBook Pro with Apple M1 chip: Testing conducted by Apple in October 2020 using preproduction 13-inch MacBook Pro systems with Apple M1 chip, 8GB of RAM, and 512GB SSD. The wireless web test measures battery life by wirelessly browsing 25 popular websites with display brightness set to 8 clicks from bottom. The Apple TV app movie playback test measures battery life by playing back HD 1080p content with display brightness set to 8 clicks from bottom. MacBook Pro with Intel Core processor: Testing conducted by Apple in April 2020 using preproduction 1.4GHz quad-core Intel Core i5-based 13-inch MacBook Pro systems with 8GB of RAM and 256GB SSD; and preproduction 2.0GHz quad-core Intel Core i5-based 13-inch MacBook Pro systems with 16GB of RAM and 1TB SSD. The wireless web test measures battery life by wirelessly browsing 25 popular websites with display brightness set to 12 clicks from bottom or 75%. The Apple TV app movie playback test measures battery life by playing back HD 1080p content with display brightness set to 12 clicks from bottom or 75%. The standby test measures battery life by allowing a system, connected to a wireless network and signed in to an iCloud account, to enter standby mode with Safari and Mail applications launched and all system settings left at default. Battery life varies by use and configuration. See [apple.com/batteries](http://apple.com/batteries) for more information.

<sup>26</sup>ExpressCharge must be enabled within Dell Power Manager software. System must be powered off or in hibernation mode for ExpressCharge feature to function. After charging has reached the stated capacity, charging speed will return to normal speed. Recommended for use with the provided Dell power adapter. Charging times may vary.

<sup>27</sup>Based on Dell internal analysis, November 2020.

<sup>28</sup>Based on Dell internal analysis, September 2020. Express Sign-In available on Latitude 9000, 7000 and 5000 series. See product details for availability.

<sup>29</sup>Option only available on 2-in-1.

<sup>30</sup>Nearly 3X Faster: 802.11ax 2x2 160 MHz enables 2402 Mbps maximum theoretical data rates, ~3X (2.8X) faster than standard 802.11ac 2x2 80 MHz (867 Mbps) as documented in IEEE 802.11 wireless standard specifications, and require the use of similarly configured 802.11ax wireless network routers. WPA3 Wi-Fi Security Features: The Wi-Fi Alliance industry consortium will certify Wi-Fi 6 products for compliance with the IEEE 802.11ax standard, and will require WPA3 security certification as a pre-requisite to ensure the latest in Wi-Fi security features. WPA3 Simplified Passwords: WPA3 uses Simultaneous Authentication of Equals (SAE) to replace the Pre-Shared Key (PSK) exchange protocol used by WPA2. SAE more securely handles initial key exchange and uses forward secrecy, which makes it more resistant to offline decryption attacks and provides stronger password-based authentication. WPA3 Enhanced Protection: Additional network protection comes from the equivalent of 192-bit cryptographic strength across an 802.11ax network and is superior to the 128-bit AES encryption utilized with WPA2. Claim D is based on industry standard WAP3 certification which parameters are broadly available <https://www.wi-fi.org/discover-wi-fi/security>

<sup>31</sup>Offering may vary by country and by configuration.

<sup>32</sup>Based on Dell analysis, October 2020

<sup>33</sup>Weights vary depending on configurations and manufacturing variability.

<sup>34</sup>Offering may vary by country and by configuration.

<sup>35</sup>Subject to service provider's broadband subscription and coverage area; speeds may vary. Additional charges will apply. Contact your service provider for details.

<sup>36</sup>Based on Dell internal analysis, November 2020.

<sup>37</sup>Based on Dell internal analysis, September 2020. Express Sign-In available on Latitude 9000, 7000 and 5000 series. See product details for availability.

<sup>38</sup>Based on internal testing using the Mobile Mark 2018 battery life benchmark test. For more information about this benchmark test, visit [www.bapco.com](http://www.bapco.com). Test results are for comparative purposes only. Actual battery life may be significantly less than the test results and varies depending on product configuration and use, software, usage, operating conditions, power management settings and other factors. Maximum battery life will decrease with time.

<sup>39</sup>ExpressCharge with Dell Optimizer (DO) requires 14 days to learn the user's behavior, then dynamically applies appropriate battery settings. DO Adaptive Battery setting must be enabled in the Power feature settings labeled "Adaptive Battery Performance". Improvement will vary based on product configuration, use, software, operating conditions, power management settings and other factors. Improvements may decrease over time. System performance may be impacted.

<sup>40</sup>Nearly 3X Faster: 802.11ax 2x2 160 MHz enables 2402 Mbps maximum theoretical data rates, ~3X (2.8X) faster than standard 802.11ac 2x2 80 MHz (867 Mbps) as documented in IEEE 802.11 wireless standard specifications, and require the use of similarly configured 802.11ax wireless network routers. WPA3 Wi-Fi Security Features: The Wi-Fi Alliance industry consortium will certify Wi-Fi 6 products for compliance with the IEEE 802.11ax standard, and will require WPA3 security certification as a pre-requisite to ensure the latest in Wi-Fi security features. WPA3 Simplified Passwords: WPA3 uses Simultaneous Authentication of Equals (SAE) to replace the Pre-Shared Key (PSK) exchange protocol used by WPA2. SAE more securely handles initial key exchange and uses forward secrecy, which makes it more resistant to offline decryption attacks and provides stronger password-based authentication. WPA3 Enhanced Protection: Additional network protection comes from the equivalent of 192-bit cryptographic strength across an 802.11ax network and is superior to the 128-bit AES encryption utilized with WPA2. Claim D is based on industry standard WAP3 certification which parameters are broadly available <https://www.wi-fi.org/discover-wi-fi/security>

<sup>41</sup>ExpressCharge must be enabled within Dell Power Manager software. System must be powered off or in hibernation mode for ExpressCharge feature to function. After charging has reached the stated capacity, charging speed will return to normal speed. Recommended for use with the provided Dell power adapter. Charging times may vary.

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