


# Vostro 15 3510

## Setup and specifications



## Notas, precauciones y avisos

 **NOTA:** Una NOTA indica información importante que le ayuda a hacer un mejor uso de su producto.

 **PRECAUCIÓN:** Una PRECAUCIÓN indica la posibilidad de daños en el hardware o la pérdida de datos, y le explica cómo evitar el problema.

 **AVISO:** Un mensaje de AVISO indica el riesgo de daños materiales, lesiones corporales o incluso la muerte.

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# Set up your Vostro 15 3510

**NOTE:** The images in this document may differ from your computer depending on the configuration you ordered.

1. Connect the power adapter and press the power button.



**NOTE:** To conserve battery power, the battery might enter power saving mode. Connect the power adapter and press the power button to turn on the computer.


2. Finish Windows setup.

Follow the on-screen instructions to complete the setup. When setting up, Dell recommends that you:





- Connect to a network for Windows updates.
  - NOTE:** If connecting to a secured wireless network, enter the password for the wireless network access when prompted.
- If connected to the Internet, sign in with or create a Microsoft account. If not connected to the Internet, create an offline account.
- On the **Support and Protection** screen, enter your contact details.

3. Locate and use Dell apps from the Windows Start menu—Recommended.

**Table 1. Locate Dell apps**

Resources	Description
	<p><b>My Dell</b></p> <p>Centralized location for key Dell applications, help articles, and other important information about your computer. It also notifies you about the warranty status, recommended accessories, and software updates if available.</p>

**Table 1. Locate Dell apps (continued)**

Resources	Description
	<p><b>SupportAssist</b></p> <p>SupportAssist proactively and predictively identifies hardware and software issues on your computer and automates the engagement process with Dell Technical support. It addresses performance and stabilization issues, prevents security threats, monitors and detects hardware failures. For more information, see SupportAssist for Home PCs User's Guide on <a href="http://www.dell.com/serviceabilitytools">www.dell.com/serviceabilitytools</a>. To navigate to SupportAssist for Home PCs User's Guide, click <b>SupportAssist</b> and then, click <b>SupportAssist for Home PCs User's Guide</b>.</p> <p> <b>NOTE:</b> In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.</p>
	<p><b>Dell Update</b></p> <p>Updates your computer with critical fixes and latest device drivers as they become available. For more information about using Dell Update, see the knowledge base article <a href="http://www.dell.com/support">SLN305843</a> at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>
	<p><b>Dell Digital Delivery</b></p> <p>Download software applications, which are purchased but not pre-installed on your computer. For more information about using Dell Digital Delivery, see the knowledge base article <a href="http://www.dell.com/support">153764</a> at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>

## Views of Vostro 15 3510

### Right



#### 1. SD-card reader slot (Optional)

Reads from and writes to the SD card. The computer supports the following card types:

- Secure Digital (SD)
- Secure Digital High Capacity (SDHC)
- Secure Digital Extended Capacity (SDXC)

#### 2. One USB 2.0 port

Connect devices such as external storage devices and printers. Provides data transfer speeds up to 480 Mbps.

#### 3. Network Port

Connect an Ethernet (RJ45) cable from a router or a broadband modem for network or Internet access.

#### 4. Headset jack

Connect headphones or a headset (headphone and microphone combo).

#### 5. Wedge-shaped security slot

Connect a security cable to prevent unauthorized movement of your computer.

### Left (Integrated graphics)

**NOTE:** The types of USB ports may vary based on systems configured with integrated and discrete graphics.



#### 1. DC-in port

Connect a power adapter to provide power to your computer and charge the battery.

#### 2. Diagnostic LED

Provides diagnostics information and is used for troubleshooting.

### 3. **HDMI 1.4 port**

Connect to a TV, external display or another HDMI-in enabled device. Provides video and audio output.

Display output supports up to 1920x1080 @ 60Hz. No 4K/2K output supported.

### 4. **One USB 3.2 Gen 1 port**

Connect devices such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps. The number of ports may vary on systems configured with integrated and discrete graphics.

### 5. **One USB 3.2 Gen 1 port**

Connect devices such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps. The number of ports may vary on systems configured with integrated and discrete graphics.

## Left (Discrete graphics)

**NOTE:** The types of USB ports may vary based on systems configured with integrated and discrete graphics.



### 1. **DC-in port**

Connect a power adapter to provide power to your computer and charge the battery.

### 2. **Diagnostic LED**

Provides diagnostics information and is used for troubleshooting.

### 3. **HDMI 1.4 port**

Connect to a TV, external display or another HDMI-in enabled device. Provides video and audio output.

Display output supports up to 1920x1080 @ 60Hz. No 4K/2K output supported.

### 4. **One USB 3.2 Gen 1 port**

Connect devices such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps.

### 5. **One USB 3.2 Gen 1 Type-C port**

Connect devices such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps.

# Front



## 1. Power button with optional fingerprint reader

Press to turn on the computer if it is turned off, in sleep state, or in hibernate state.

When the computer is turned on, press the power button to put the computer into sleep state; press and hold the power button for 10 seconds to force shut-down the computer.

If the power button has a fingerprint reader, place your finger on the power button to log in.

## 2. Touchpad

Move your finger on the touchpad to move the mouse pointer. Tap to left-click and two fingers tap to right-click.

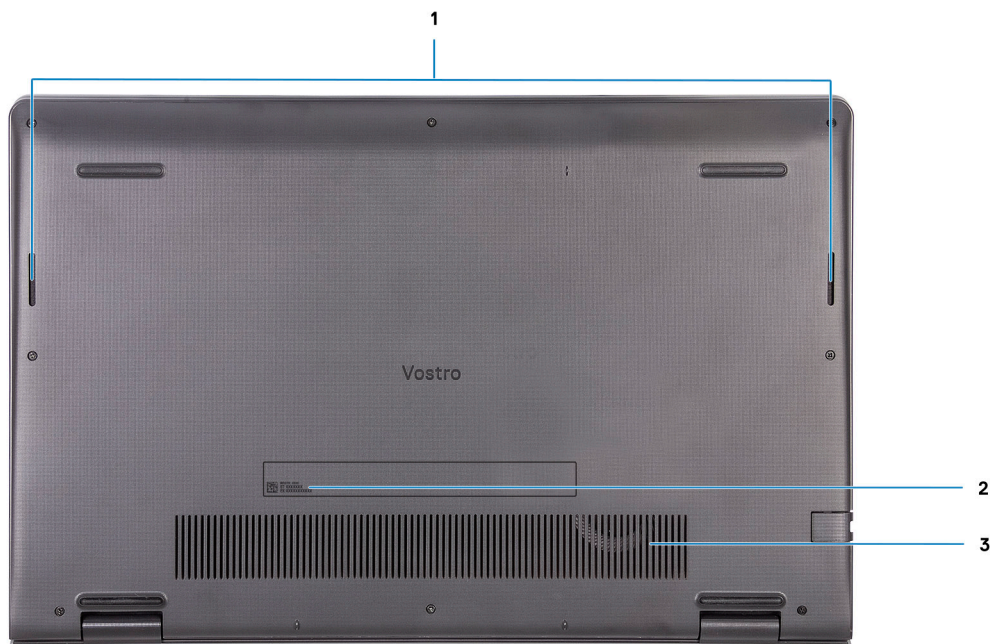


# Display



- 1. Camera**  
Enables you to video chat, capture photos, and record videos.
- 2. Camera Status LED**  
Turns on when the camera is in use.
- 3. Microphone**  
Provides digital sound input for audio recording, voice calls, and so on.
- 4. LCD Panel**

# Bottom



## 1. Speakers

Provides audio output.

## 2. Service Tag

The Service Tag is a unique alphanumeric identifier that enables Dell service technicians to identify the hardware components in your computer and access warranty information.

## 3. Air vents

# Battery Charge and Status LED

**Table 2. Battery Charge and Status LED Indicator**

Power Source	LED Behavior	System Power State	Battery Charge Level
AC Adapter	Off	S0 - S5	Fully Charged
AC Adapter	Solid White	S0 - S5	< Fully Charged
Battery	Off	S0 - S5	11-100%
Battery	Solid Amber (590+/-3 nm)	S0	< 10%


- S0 (ON) - System is turned on.
- S4 (Hibernate) - The system consumes the least power compared to all other sleep states. The system is almost at an OFF state, expect for a trickle power. The context data is written to hard drive.
- S5 (OFF) - The system is in a shutdown state.

# Specifications of Vostro 15 3510

## Dimensions and weight

The following table lists the height, width, depth, and weight of your Vostro 15 3510.

**Table 3. Dimensions and weight**

Description	Values
Height:	
Front height	17.50 mm (0.68 in.)
Rear height	18.90 mm (0.74 in.)
Width	358.50 mm (14.11 in.)
Depth	235.56 mm (9.27 in.)
Weight	1.85 kg (4.07 lb)
 <b>NOTE:</b> The weight of your computer depends on the configuration ordered and manufacturing variability.	

## Processor

The following table lists the details of the processors that are supported by your Vostro 15 3510 .

**Table 4. Processor**

Description	Option one	Option two	Option three	Option four	Option five	Option six	Option seven	Option eight
Processor type	Intel Celeron 6305	Intel Pentium 7505	10 <sup>th</sup> Generation Intel Core i3-1005G1	10 <sup>th</sup> Generation Intel Core i5-1035G1	11 <sup>th</sup> Generation Intel Core i3-1115G4	11 <sup>th</sup> Generation Intel Core i3-1125G4	11 <sup>th</sup> Generation Intel Core i5-1135G7	11 <sup>th</sup> Generation Intel Core i7-1165G7
Processor wattage	15 W	15 W	15 W	15 W	15 W	15 W	15 W	15 W
Processor core count	2	2	2	4	2	4	4	4
Processor thread count	2	4	4	8	4	8	8	8
Processor speed	Up to 1.8 GHz	2.00 GHz to 3.5 GHz	1.20 GHz to 3.40 GHz	1.00 GHz to 3.60 GHz	3.00 GHz to 4.10 GHz	2.00 GHz to 3.70 GHz	2.40 GHz to 4.20 GHz	2.80 GHz to 4.70 GHz
Processor cache	4 MB	4 MB	4 MB	6 MB	6 MB	8 MB	8 MB	12 MB

**Table 4. Processor (continued)**

Description	Option one	Option two	Option three	Option four	Option five	Option six	Option seven	Option eight
Integrated graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics

## Chipset

The following table lists the details of the chipset supported by your Vostro 15 3510

**Table 5. Chipset**

Description	Option one	Option two
Processors	<ul style="list-style-type: none"> <li>Intel Core i3 / i5 / i7</li> <li>Intel Celeron / Pentium</li> </ul>	Intel Core i3 / i5
Chipset	Intel Tiger Lake (Integrated in the processor)	Intel Ice Lake (Integrated in the processor)
DRAM bus width	64-bit	64-bit
Flash EPROM	16 MB + 8 MB	16 MB + 8 MB
PCIe bus	Up to Gen 3	Up to Gen 3

## Operating system

Your Vostro 15 3510 supports the following operating systems:

- Windows 10 Pro, 64-bit
- Windows 10 Home, 64-bit
- Windows 10 Pro - Academic, 64-bit
- Ubuntu 20.04

## Memory

The following table lists the memory specifications of your Vostro 15 3510.

**Table 6. Memory specifications**

Description	Values
Memory slots	Two SODIMM slots
Memory type	DDR4
Memory speed	<ul style="list-style-type: none"> <li>2666 MHz (With Integrated Graphics)</li> <li>3200 Mhz (With Discrete Graphics)</li> </ul>
Maximum memory configuration	16 GB
Minimum memory configuration	4 GB
Memory size per slot	4 GB, 8 GB, 16 GB


**Tabla 6. Memory specifications (continuación)**

Description	Values
Memory configurations supported	<ul style="list-style-type: none"> <li>• 4 GB, 1 x 4 GB, DDR4, 2666 MHz / 3200 MHz</li> <li>• 8 GB, 1 x 8 GB, DDR4, 2666 MHz / 3200 MHz</li> <li>• 8 GB, 2 x 4 GB, DDR4, 2666 MHz / 3200 MHz</li> <li>• 12 GB, 1 x 4 GB + 1 x 8 GB, DDR4, 2666 MHz / 3200 MHz</li> <li>• 16 GB, 2 x 8 GB, DDR4, 2666 MHz / 3200 MHz</li> <li>• 16 GB, 1 x 16 GB, DDR4, 2666 MHz / 3200 MHz</li> </ul>

## External ports

The following table lists the external ports of your Vostro 15 3510.


**Table 7. External ports**

Description	Values
Network port	One Flip-down RJ 45 10/100/1000 Mbps
USB ports	<ul style="list-style-type: none"> <li>• Two USB 3.2 Gen 1 ports (on systems configured with integrated graphics)</li> <li>• One USB 3.2 Gen 1 port (on systems configured with discrete graphics)</li> <li>• One USB 3.2 Gen 1 Type-C port (on systems configured with discrete graphics)</li> <li>• One USB 2.0 port</li> </ul>
Audio port	One Audio jack
Video port	One HDMI 1.4 port  <b>NOTE:</b> HDMI output supports up to 1920x1080 @ 60Hz. No 4K/2K output supported.
Media-card reader	One SD-Card slot
Power-adaptor port	4.5 mm barrel-type
Security-cable slot	One Wedge shaped lock slot

## Internal slots

The following table lists the internal slots of your Vostro 15 3510.

**Table 8. Internal slots**

Description	Values
M.2	<ul style="list-style-type: none"> <li>• One M.2 2230 slot for Wi-Fi</li> <li>• One M.2 slot for 2230/2280 solid-state drive</li> </ul>  <b>NOTE:</b> To learn more about the features of different types of M.2 cards, see the knowledge base article <a href="https://www.dell.com/support/000144170">000144170</a> at <a href="https://www.dell.com/support">www.dell.com/support</a> .

# Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your Vostro 15 3510.

**Table 9. Ethernet specifications**

Description	Values
Model number	Integrated Realtek RTL8111H
Transfer rate	10/100/1000 Mbps

# Wireless module

The following table lists the Wireless Local Area Network (WLAN) module specifications of your Vostro 15 3510.

**Table 10. Wireless module specifications**

Description	Option one	Option two	Option Three	Option Four
Model number	Intel 9462	Qualcomm QCNFA435 (DW1810)	Realtek RTL8821CE	Intel AX201
Transfer rate	Up to 433 Mbps	Up to 433 Mbps	Up to 433 Mbps	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz	2.4 GHz	2.4 GHz/5 GHz
Wireless standards	<ul style="list-style-type: none"> <li>• WiFi 802.11a/b/g</li> <li>• Wi-Fi 4 (Wi-Fi 802.11n)</li> <li>• Wi-Fi 5 (Wi-Fi 802.11ac)</li> </ul>	<ul style="list-style-type: none"> <li>• WiFi 802.11a/b/g</li> <li>• Wi-Fi 4 (Wi-Fi 802.11n)</li> <li>• Wi-Fi 5 (Wi-Fi 802.11ac)</li> </ul>	<ul style="list-style-type: none"> <li>• Wi-Fi 802.11 b/g</li> <li>• Wi-Fi 4 (WiFi 802.11n)</li> <li>• Wi-Fi 5 (Wi-Fi 802.11ac)</li> </ul>	<ul style="list-style-type: none"> <li>• WiFi 802.11a/b/g</li> <li>• Wi-Fi 4 (WiFi 802.11n)</li> <li>• Wi-Fi 5 (WiFi 802.11ac)</li> <li>• Wi-Fi 6 (WiFi 802.11ax)</li> </ul>
Encryption	<ul style="list-style-type: none"> <li>• 64-bit/128-bit WEP</li> <li>• AES-CCMP</li> <li>• TKIP</li> </ul>	<ul style="list-style-type: none"> <li>• 64-bit/128-bit WEP</li> <li>• AES-CCMP</li> <li>• TKIP</li> </ul>	<ul style="list-style-type: none"> <li>• 64-bit/128-bit WEP</li> <li>• AES-CCMP</li> <li>• TKIP</li> </ul>	<ul style="list-style-type: none"> <li>• 64-bit/128-bit WEP</li> <li>• AES-CCMP</li> <li>• TKIP</li> </ul>
Bluetooth	Bluetooth 5.0	Bluetooth 4.1	Bluetooth 5.0	Bluetooth 5.1

# Audio

**Table 11. Audio specifications**

Description	Values
Controller	Realtek ALC3204 <ul style="list-style-type: none"> <li>• Cirrus CS8409</li> <li>• Cirrus CS42L42</li> <li>• Cirrus TI SN005825</li> </ul>
Stereo conversion	Supported
Internal interface	High definition audio
External interface	Universal audio port
	HDA bridge + CS42L42 audio codec
	Audio jack

**Table 11. Audio specifications (continued)**

Description	Values	
		<b>NOTE:</b> 3.5mm Audio jack functionality varies by model configuration. For best results, use Dell recommended audio accessories
Speakers	Two	Two
Internal-speaker amplifier	Supported	Supported
External volume controls	Keyboard shortcut controls	Keyboard shortcut controls
Speaker Output Average	2 W	2 W
Speaker Output Peak	2.5 W	2.5 W
Subwoofer output	Not supported	Not supported
Microphone	Single digital microphone	Single digital microphone

## Storage

This section lists the storage options on your Vostro 15 3510.

Your computer supports one of the following configurations:

- 2.5 in. 5400 RPM, SATA hard drive
- M.2 2230/2280 for solid-state drive

The primary drive of your computer varies with the storage configuration. For computers:

- 2.5 in. 5400 RPM, SATA hard drive
- M.2 2230/2280 for solid-state drive

**Table 12. Storage specifications**

Storage type	Interface type	Capacity
2.5-inch 5400 rpm, hard drive	SATA	upto 2 TB
M.2 2230 solid-state drive	PCIe NVMe 3x4	upto 1 TB
M.2 2280 solid-state drive	PCIe NVMe 3x4	upto 2 TB

## Media-card reader

The following table lists the media cards supported by your Vostro 15 3510.

**Table 13. Media-card reader specifications**

Description	Values
Media-card type	One SD 3.0 card
Media-cards supported	<ul style="list-style-type: none"> <li>• Secure Digital (SD)</li> <li>• Secure Digital High Capacity (SDHC)</li> <li>• Secure Digital Extended Capacity (SDXC)</li> </ul>

**Tabla 13. Media-card reader specifications (continuación)**

Description	Values
<p><b>i</b> <b>NOTA:</b> The maximum capacity supported by the media-card reader varies depending on the standard of the media card installed in your computer.</p>	

## Keyboard

The following table lists the keyboard specifications of your Vostro 15 3510.

**Tabla 14. Keyboard specifications**

Description	Values
Keyboard type	<ul style="list-style-type: none"> <li>Standard keyboard</li> <li>White backlight keyboard</li> </ul>
Keyboard layout	QWERTY
Number of keys	<ul style="list-style-type: none"> <li>United States and Canada: 99keys</li> <li>United Kingdom: 100 keys</li> <li>Japan: 103 keys</li> </ul>
Keyboard size	X=18.70 mm key pitch Y=18.05 mm key pitch
Keyboard shortcuts	Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. To type the alternate character, press Shift and the desired key. To perform secondary functions, press Fn and the desired key. <p><b>i</b> <b>NOTA:</b> You can define the primary behavior of the function keys (F1–F12) changing <b>Function Key Behavior</b> in BIOS setup program.</p>

## Camera

The following table lists the camera specifications of your Vostro 15 3510.

**Tabla 15. Camera specifications**

Description	Values
Number of cameras	One
Camera type	HD RGB camera
Camera location	Front Camera
Camera sensor type	CMOS sensor technology
Camera resolution:	
Still image	0.92 megapixel
Video	1280 x 720 (HD @ 30 fps)
Diagonal viewing angle:	78.6 degrees



# Touchpad

The following table lists the touchpad specifications of your Vostro 15 3510.


**Table 16. Touchpad specifications**

Description		Values
Touchpad resolution:		
	Horizontal	> 300 DPI
	Vertical	> 300 DPI
Touchpad dimensions:		
	Horizontal	115 mm (4.52 in.)
	Vertical	80 mm (3.14 in.)
Touchpad gestures		For more information about touchpad gestures available on Windows 10, see the Microsoft knowledge base article <a href="https://support.microsoft.com/4027871">4027871</a> at <a href="https://support.microsoft.com">support.microsoft.com</a> .

# Power adapter

The following table lists the power adapter specifications of your Vostro 15 3510.

**Table 17. Power adapter specifications**

Description		Values
Type		65 W
Connector dimensions:		<ul style="list-style-type: none"> <li>External diameter: 4.50 mm</li> <li>Internal diameter: 2.90 mm</li> </ul>
Input voltage		100 VAC x 240 VAC
Input frequency		50 Hz x 60 Hz
Input current (maximum)		1.70 A
Output current (continuous)		3.34 A
Rated output voltage		19.50 VDC
Temperature range:		
	Operating	0°C to 40°C (32°F to 104°F)
	Storage	-40°C to 70°C (-40°F to 158°F)
 <b>CAUTION: Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.</b>		

# Battery

The following table lists the battery specifications of your Vostro 15 3510.

**Table 18. Battery specifications**

Description	Option one	Option two	
Battery type	3-cell, 41 Whr Polymer	4-cell, 54 Whr Polymer	
Battery voltage	11.25 VDC	15.0 VDC	
Battery weight (maximum)	0.176 kg (0.388 lb)	0.231 kg (0.509 lbs)	
Battery dimensions:			
	Height	206.4 mm (8.12 in.)	271.90 mm (10.70 in.)
	Width	82 mm (3.22 in.)	82 mm (3.22 in.)
	Depth	5.75 mm (0.22 in.)	5.75 mm (0.22 in.)
Temperature range:			
	Operating	0°C to 35°C (32°F to 95°F)	0°C to 35°C (32°F to 95°F)
	Storage	-20°C to 65°C (-4°F to 149°F)	-20°C to 65°C (-4°F to 149°F)
Battery operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	
Battery charging time (approximate) <i>i</i> <b>NOTE:</b> Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see, <i>Me and My Dell</i> on <a href="http://www.dell.com">www.dell.com</a> .	4 hours (when the computer is off)	4 hours (when the computer is off)	
Coin-cell battery	N/A	N/A	
<p><b>⚠ CAUTION: Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.</b></p> <p><i>i</i> <b>NOTE:</b> Dell recommends that you charge the battery regularly for optimal power consumption. If your battery charge is completely depleted, connect the power adapter, turn on your computer, and then restart you computer to reduce the power consumption.</p>			

# Display

The following table lists the display specifications of your Vostro 15 3510.

**Table 19. Display specifications**


Description	Option one	Option two
Display type	High Definition (HD)	Full High Definition (FHD)
Display-panel technology	TN (Twisted Nematic)	WVA (wide view angle)


**Table 19. Display specifications (continued)**

Description	Option one	Option two
Display-panel dimensions (active area):		
Height	193.54 mm (7.62 in.)	193.54 mm (7.62 in.)
Width	344.23 mm (13.55 in.)	344.23 mm (13.55 in.)
Diagonal	394.90 mm (15.54 in.)	394.90 mm (15.54 in.)
Display-panel native resolution	1366 x 768	1920 x 1080
Luminance (typical)	220 nits	220 nits
Megapixels	1.05	2.07
Color gamut	NTSC 45% Typ.	NTSC 45% Typ.
Pixels Per Inch (PPI)	100	141
Contrast ratio (min.)	400:1	400:1
Response time (max.)	25 ms	35 ms
Refresh rate	60 Hz	60 Hz
Horizontal view angle	40 +/- degrees	80 +/- degrees
Vertical view angle	10(Top)/30(Bottom) degrees	80 +/- degrees
Pixel pitch	0.252 mm	0.179 mm
Power consumption (maximum)	4.2 W	4.2 W
Anti-glare vs glossy finish	Anti-glare	Anti-glare
Touch options	No	No

## Fingerprint reader

The following table lists the fingerprint-reader specifications of your Vostro 15 3510.

 **NOTE:** The fingerprint reader is located on the power button.

 **NOTE:** The fingerprint reader is an optional offering.

**Table 20. Fingerprint reader specifications**

Description	Values
Fingerprint-reader sensor technology	Capacitive
Fingerprint-reader sensor resolution	500 dpi
Fingerprint-reader sensor pixel size	108 x 88

## GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Vostro 15 3510.

**Table 21. GPU—Integrated**

Controller	Memory size	Processor
Intel UHD Graphics	Shared system memory	<ul style="list-style-type: none"> <li>• Intel 10<sup>th</sup> Generation Core i3/i5 processors</li> <li>• Intel 11<sup>th</sup> Generation Core i3 processors</li> <li>• Intel 11<sup>th</sup> Generation Celeron processors</li> <li>• Intel 11<sup>th</sup> Generation Pentium processors</li> </ul>
Intel Iris Xe Graphics	Shared system memory	<ul style="list-style-type: none"> <li>• Intel 11<sup>th</sup> Generation Core i5 / i7 processors</li> </ul>

## GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your Vostro 15 3510.

**Table 22. GPU—Discrete**


Controller	External display support	Memory size	Memory type
Nvidia GeForce MX350 Graphics	Not Supported	2 GB	GDDR5

## Operating and storage environment

This table lists the operating and storage specifications of your Vostro 15 3510.

**Airborne contaminant level:** G1 as defined by ISA-S71.04-1985


**Table 23. Computer environment**

Description	Operating	Storage
Temperature range	0°C to 40°C (32°F to 104°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (non-condensing)	0% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	1.30 GRMS
Shock (maximum)	140 G†	160 G†
Altitude range	0 m to 3048 m (0 ft to 10000 ft)	0 m to 10668 m (0 ft to 35000 ft)
 <b>CAUTION: Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.</b>		

\* Measured using a random vibration spectrum that simulates user environment.

† Measured using a 2 ms half-sine pulse when the hard drive is in use.

## ComfortView

 **WARNING: Prolonged exposure to blue light from the display may lead to long-term effects such as eye strain, eye fatigue, or damage to the eyes.**

Blue light is a color in the light spectrum which has a short wavelength and high energy. Chronic exposure to blue light, particularly from digital sources, may disrupt sleep patterns and cause long-term effects such as eye strain, eye fatigue, or damage to the eyes.

ComfortView mode can be enabled and configured using the Dell CinemaColor application.

ComfortView mode complies with TÜV Rheinland's requirement for low blue light displays.

Low blue light: Dell ComfortView software technology reduces harmful blue light emissions to make extended screen time easy on your eyes.

To reduce the risk of eye strain, it is also recommended that you:

- Position the display at a comfortable viewing distance between 20 and 28 inches (50 and 70 cm) from your eyes.
- Blink frequently to moisten your eyes, wet your eyes with water, or apply suitable eye drops.
- Look away from your display, and gaze at a distant object at 20 ft (609.60 cm) away for at least 20 seconds during each break.
- Take an extended break for 20 minutes every two hours.

# Keyboard shortcuts

**NOTE:** Keyboard characters may differ depending on the keyboard language configuration. Keys that are used for shortcuts remain the same across all language configurations.

**Table 24. List of keyboard shortcuts**



Keys	Primary Behavior	Secondary Behavior (fn + Key)
fn + Esc	Escape	Toggle fn-key lock
fn + F1	Mute audio	F1 behavior
fn + F2	Decrease volume	F2 behavior
fn + F3	Increase volume	F3 behavior
fn + F4	Play/Pause	F4 behavior
fn + F5	Keyboard backlight <b>NOTE:</b> Not applicable for non-backlight keyboard.	F5 behavior
fn + F6	Decrease screen brightness	F6 behavior
fn + F7	Increase screen brightness	F7 behavior
fn + F8	Switch to external display	F8 behavior
fn + F10	Print Screen	F10 behavior
fn + F11	Home	F11 behavior
fn + F12	End	F12 behavior
fn + ctrl	Open application menu	Control
fn + page up	Scroll up	Page up
fn + page down	Scroll down	Page down

# Getting help and contacting Dell

## Self-help resources


You can get information and help on Dell products and services using these self-help resources:


**Table 25. Self-help resources**

Self-help resources	Resource location
Information about Dell products and services	<a href="http://www.dell.com">www.dell.com</a>
My Dell app	
Tips	
Contact Support	In Windows search, type <code>Contact Support</code> , and press Enter.
Online help for operating system	<a href="http://www.dell.com/support/windows">www.dell.com/support/windows</a> <a href="http://www.dell.com/support/linux">www.dell.com/support/linux</a>
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals and documents.	Your Dell computer is uniquely identified by a Service Tag or Express Service Code. To view relevant support resources for your Dell computer, enter the Service Tag or Express Service Code at <a href="http://www.dell.com/support">www.dell.com/support</a> .  For more information on how to find the Service Tag for your computer, see <a href="#">Locate the Service Tag on your computer</a> .
Dell knowledge base articles for a variety of computer concerns	<ol style="list-style-type: none"> <li>1. Go to <a href="http://www.dell.com/support">www.dell.com/support</a>.</li> <li>2. On the menu bar at the top of the Support page, select <b>Support &gt; Knowledge Base</b>.</li> <li>3. In the Search field on the Knowledge Base page, type the keyword, topic, or model number, and then click or tap the search icon to view the related articles.</li> </ol>

## Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see [www.dell.com/contactdell](http://www.dell.com/contactdell).

 **NOTE:** Availability varies by country/region and product, and some services may not be available in your country/region.

 **NOTE:** If you do not have an active Internet connection, you can find contact information about your purchase invoice, packing slip, bill, or Dell product catalog.