Dell Latitude 12 Rugged Extreme (7204) Getting Started Guide

Notes, cautions, and warnings

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

Contents

Finding Information and Resources

See the safety and regulatory documents that shipped with your computer and the regulatory compliance website at **www.dell.com/regulatory_compliance** for more information on:
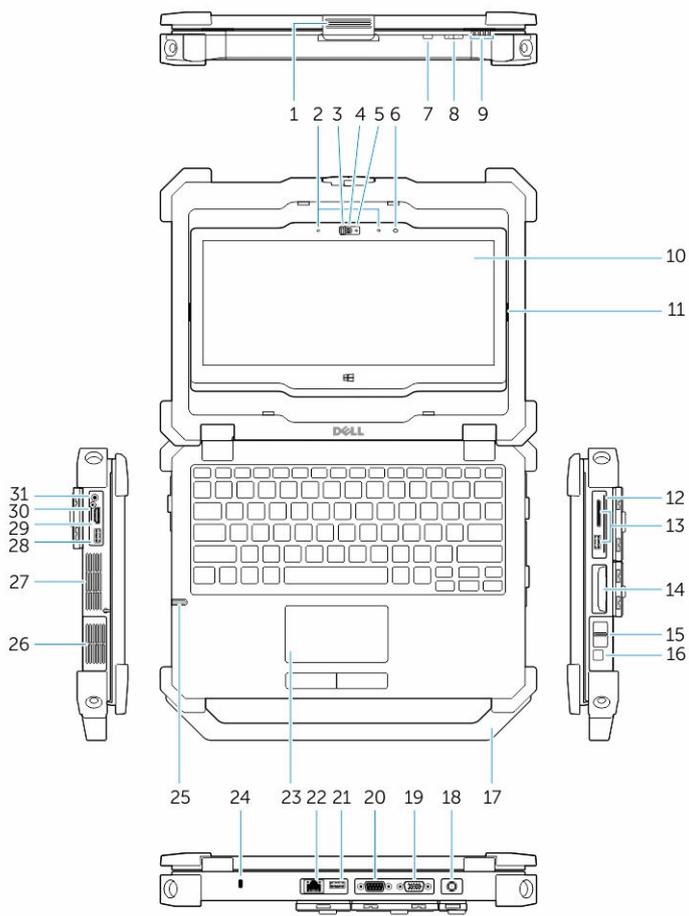
- Safety best practices
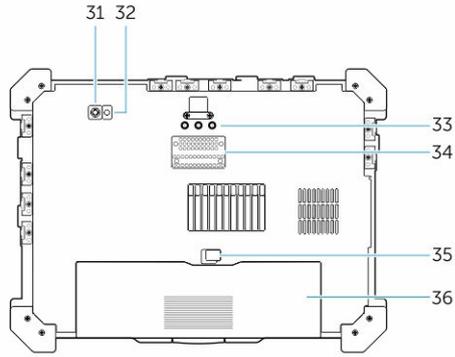- Regulatory certification
- Ergonomics

See **www.dell.com** for additional information on:

- Warranty
- Terms and Conditions (U.S. only)
- End User License Agreement

Additional information on your product is available at **www.dell.com/support/manuals**

System Overview

1.	Display latch	2.	Microphones
3.	Privacy shutter	4.	Camera (optional)
5.	Camera-status light	6.	Ambient light sensor
7.	Screen-rotate button	8.	Volume button
9.	Status lights	10.	Rotatable outdoor-readable display/ touchscreen
11.	Flip-hinge	12.	Smart Card reader
13.	USB 3.0 connector and memory-card reader / PCMCIA/ ExpressCard reader (optional)	14.	Hard drive
15.	Finger Print reader	16.	Power button
17.	WWAN configuration handle (Optional)	18.	Power connector
19.	VGA connector	20.	Serial connector
21.	USB 2.0 connector	22.	Network connector
23.	Touchpad	24.	Security cable slot
25.	Stylus	26.	Speaker
27.	Sealed thermal chamber	28.	USB 3.0 connector with PowerShare
29.	HDMI connector	30.	SIM card reader
31.	Audio connector	32.	Rear camera
33.	Camera flash	34.	Radio frequency pass-through connectors
35.	Docking-device connector	36.	Battery latch
37.	Battery		

⚠ WARNING: Do not block, push objects into, or allow dust to accumulate in the air vents. Do not store your Dell computer in a low-airflow environment, such as a closed briefcase, while it is running. Restricting the airflow can damage the computer or cause a fire. The computer turns on the fan when the computer gets hot. Fan noise is normal and does not indicate a problem with the fan or the computer.

⚠ WARNING: EXPLOSION HAZARD-External Connections (Power Jack, HDMI Port, USB Ports, RJ45 Port, RS232 Port, Audio Port, Smart Card Reader, SD card Reader, Express Card Reader, PC-card Reader, SIM card Reader) are not to be used in a hazardous location.

Quick Setup

⚠ **WARNING: Before you begin any of the procedures in this section, read the safety information that shipped with your computer. For additional best practices information, see www.dell.com/regulatory_compliance**

⚠ **WARNING: The AC adapter works with electrical outlets worldwide. However, power connectors and power strips vary among countries. Using an incompatible cable or improperly connecting the cable to the power strip or electrical outlet may cause fire or equipment damage.**

⚠ **CAUTION: When you disconnect the AC adapter cable from the computer, grasp the connector, not the cable itself, and pull firmly but gently to avoid damaging the cable. When you wrap the AC adapter cable, ensure that you follow the angle of the connector on the AC adapter to avoid damaging the cable.**

📝 NOTE: Some devices may not be included if you did not order them.

1. Connect the AC adapter to the AC adapter connector on the computer and to the electrical outlet.
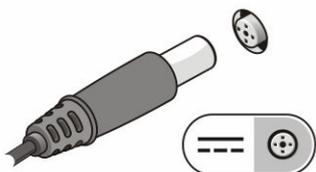
Figure 1. AC Adapter

2. Connect the network cable (optional).
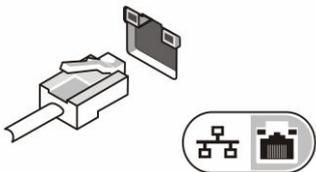
Figure 2. Network Connector

3. Connect USB devices, such as a mouse or keyboard (optional).
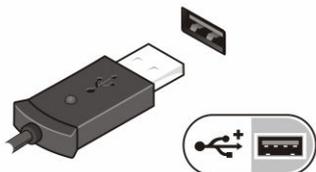
Figure 3. USB Connector

4. Connect IEEE 1394 devices, such as a 1394 hard drive (optional).
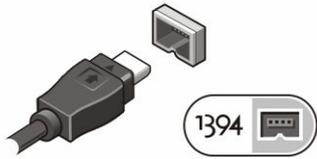
Figure 4. 1394 Connector

5. Open the computer display and press the power button to turn on the computer.

Figure 5. Power Button

NOTE: It is recommended that you turn on and shut down your computer at least once before you install any cards or connect the computer to a docking device or other external device, such as a printer.

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Removing and Installing Components

This section provides detailed information on how to remove or install the components from your computer.

Opening the Press-Latch Doors

There are six press-latch doors. Three on the back and two on the right side panel. An extra press-latch door is also present on the left side of the computer.
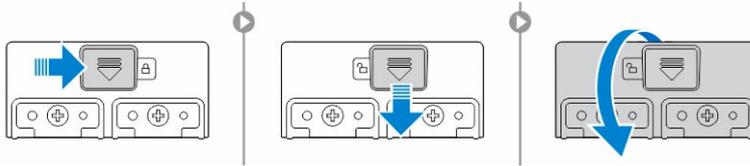
To open the press-latch doors:
a. Left and right side press-latch doors: Slide the latch towards the back of the computer to lock and towards the front to unlock.
b. Back press-latch door: Slide the latch to the right to lock and to the left to unlock.
c. Press down the latch and pull the door in the direction away from the computer.

Closing the Press-Latch Doors

1. Rotate the door back in position, towards the computer.
2. Engage the lock by sliding until the lock symbol is visible.

Removing the Battery

⚠ **WARNING: Using an incompatible battery may increase the risk of fire or explosion. Replace the battery only with a compatible battery purchased from Dell. The battery is designed to work with your Dell computer. Do not use a battery from other computers with your computer.**

⚠ **WARNING: Before removing or replacing the battery, turn off the computer, disconnect the AC adapter from the electrical outlet and the computer, disconnect the modem from the wall connector and computer, and remove any other external cables from the computer.**

⚠ **WARNING: Not for use in hazardous locations. See installation instructions.**

⚠ **WARNING: To prevent ignition in a hazardous atmosphere, batteries must only be changed or charged in an area known to be non-hazardous.**

NOTE: The battery cannot be installed or removed with the optional accessory handle installed. The handle must be removed first (if present).

1. Unlock the battery release latch by pushing it upwards.
2. Slide the latch to the right to release the battery.
3. Remove the battery from the computer.
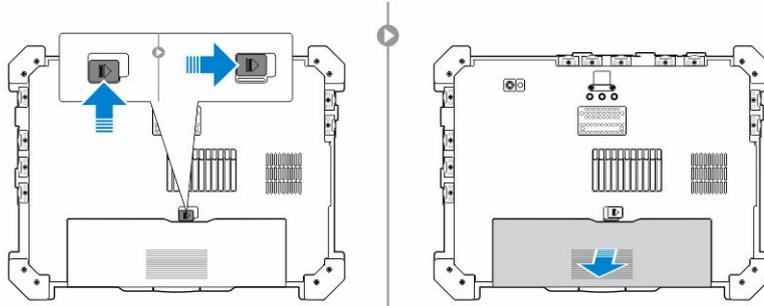
Installing the Battery

1. Slide the battery into its slot.
2. Push the battery latch down to lock it.

Removing the Hard Drive

1. To open the hard drive latch door, push the latch button to the left (if locked).
2. Open the hard-drive latch door by pushing the latch down.
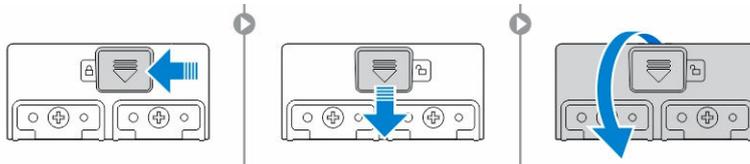
3. Pull the hard drive outwards using the pull-tab and remove it from the computer.

Installing the Hard Drive

1. To secure the hard drive, push the hard drive into its compartment.
2. Close and lock the hard-drive latch door.

   NOTE: Keep the hard drive pull-tab clear of the doors before closing.

Working on Your Computer

This section provides information about Backlit Keyboard, Stealth Mode, Function keys and how to convert your computer to notebook and tablets modes.

Using the Backlit Keyboard

The Latitude rugged series comes equipped with a backlit keyboard that can be customized. The system comes with the following colors enabled:

1. White
2. Red
3. Green
4. Blue

Alternatively, the system can be configured with 2 additional custom colors in the System Setup (BIOS)

Turning the Keyboard Backlight On/Off or Adjusting Brightness

1. Press **<Fn>** + **< F10>** to initialize the keyboard backlight switch.

   ✐ NOTE: <Fn> key is not needed if function key <Fn> lock is activated.

   ✐ NOTE: The first use of the above key combination turns on the backlight to its lowest setting. Additional pressing of the key combinations cycle the brightness settings through 25%, 50%,75% and 100% .

2. Cycle through the key combination to either adjust the brightness or completely turn off the keyboard backlight.
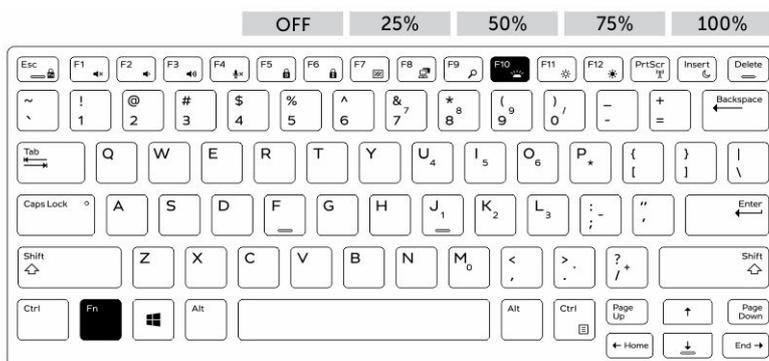
Changing the Keyboard Backlight Color

To change the keyboard backlight color:

1. Press **<FN> + < C>** keys to cycle through the available backlight colors.
2. White, Red, Green and Blue are active by default; up to two custom colors can be added to the cycle in the System Setup (BIOS).
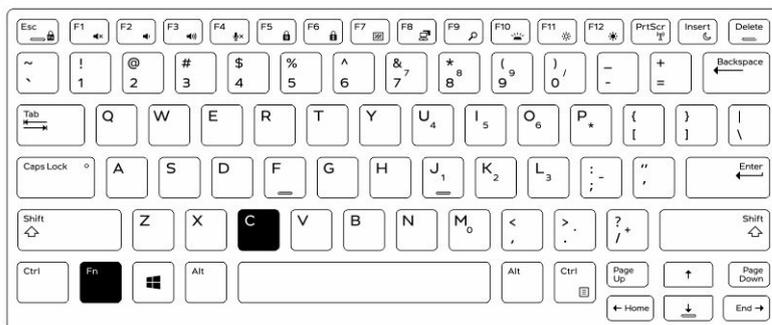
Customizing the Backlit Keyboard in System Setup (BIOS)

1. Power off the computer.
2. Power on the computer and at the Dell logo, tap the <F2> key repeatedly to bring up the system setup menu.
3. Expand and open the **System Configuration** menu.
4. Select **RGB Keyboard Backlight.**

   You can enable/disable the standard colors (White, Red, Green and Blue).
5. To set a custom RGB value, use the input boxes on the right side of the screen.
6. Click **Apply** changes and click **Exit** close the system setup.

Function <Fn> Key Lock Features

> **NOTE:** The keyboard has Function key <Fn> lock capability. When activated, the secondary functions on the top row of keys become default and will not require use of the <Fn> key.
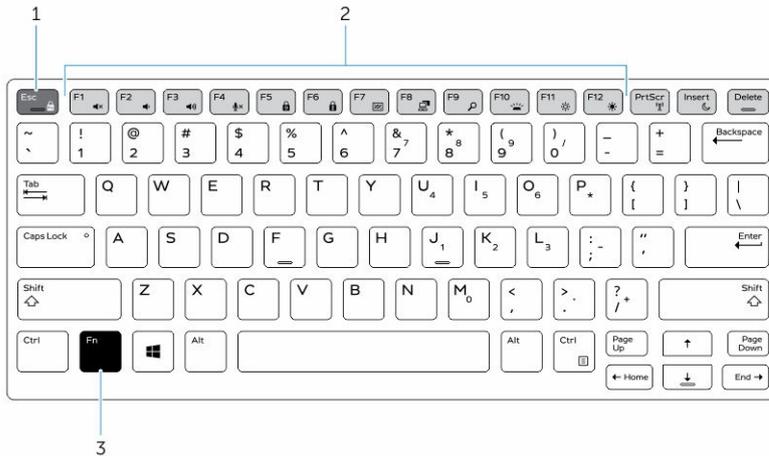
Figure 6. <Fn> key callouts

1. <Fn> Lock Key
2. Affected <Fn> keys
3. <Fn> Key

NOTE: <Fn> Lock affects only the above keys . Secondary functions will not require the <Fn> key to be pressed while enabled.

Activating the Function (Fn) lock

1. Press the <Fn> + <Esc> keys

> **NOTE:** Other secondary functions on keys below the top row are not affected and requires the use of the <Fn> key.

2. Press the <Fn> + <Esc> keys again to deactivate the function lock feature.

The function keys return to their default actions.

Turning Stealth Mode On/Off

1. Press the **<Fn> + <F7>** key combination (<Fn> key not needed if Fn lock is activated) to turn on stealth mode.

> **NOTE:** Stealth mode is a secondary function of the <F7> key. The key can be used to perform other functions on the computer when not used with the <Fn> key to activate stealth mode.

2. All the lights and sounds are turned off.
3. Press the **<Fn> + <F7>** key combination again to turn off the stealth mode.
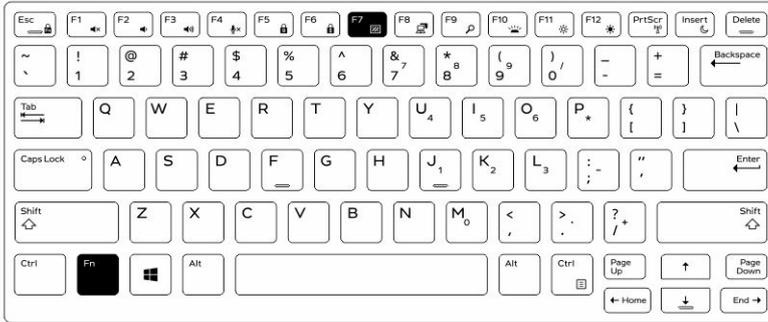
Disabling Stealth Mode in the System Setup (BIOS)

1. Power off the computer.
2. Power on the computer and at the Dell logo, tap the **<F2>** key repeatedly to bring up the **System Setup** menu.
3. Expand and open the **System Configuration** menu.
4. Select **Stealth Mode Control**.

   📝 NOTE: Stealth mode is enabled by default.

5. Select **Disable** to disable the stealth mode.
6. When complete, **Apply** changes and **Exit** the BIOS or system setup.

Enabling and Disabling Wireless (WiFi) Feature

1. Press the **<Fn> + <PrtScr>** keys to enable wireless networking.
2. Press the**<Fn> + < PrtScr>** keys again to disable wireless networking.
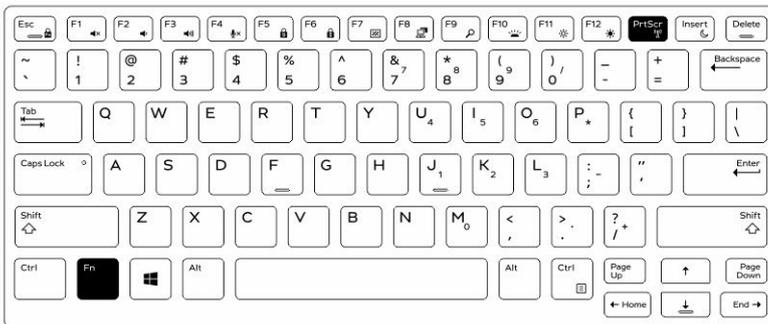
Converting Between Notebook and Tablet Modes

1. To undock the computer, press the display latch.
2. Open the display lid by lifting it upwards.
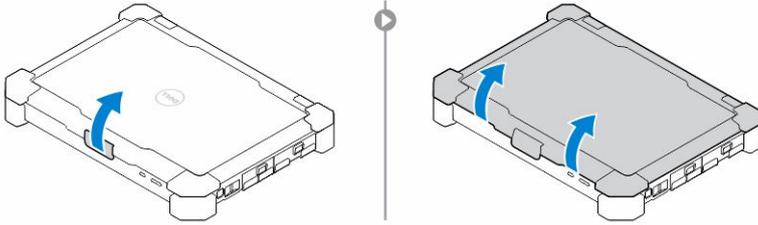
3. To change to tablet mode:
   a. Gently push the display panel in the direction indicated to pop the display from the display frame.
   b. Rotate the display by 180–degrees until it clicks back into place.
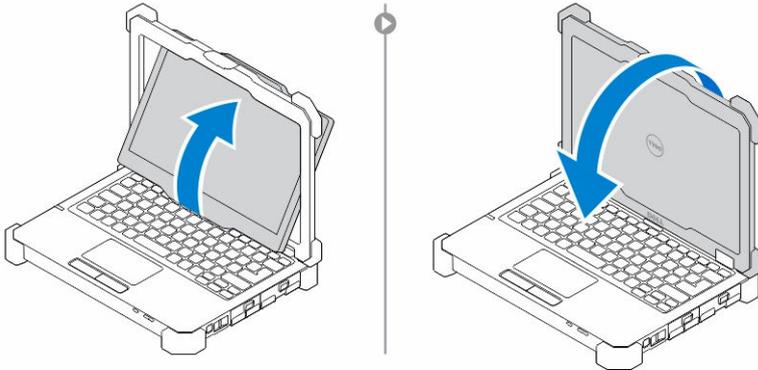
4. Close the display lid.
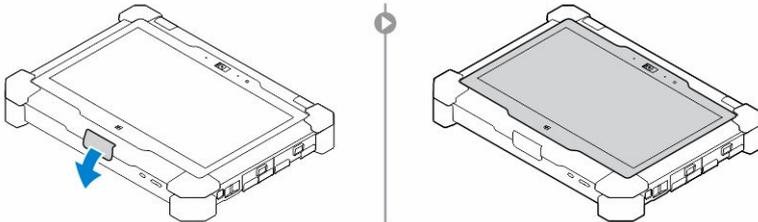
5. The computer is now converted for use in the tablet mode. Repeat the steps, flipping the display in the opposite direction, to bring the computer back to notebook mode.

Quick Disconnect (QD) Connector

Latitude fully rugged products come equipped with receptacles for QD (Quick-Disconnect) connectors at the corners. These receptacles allow the connection of optional accessories such as shoulder straps.

Installing a QD connector

1. Align the QD connector to the receptacle on the corner of the computer.
2. Insert the connector into the receptacle while holding the button pressed.
3. Press and hold the button on top of the QD connector.
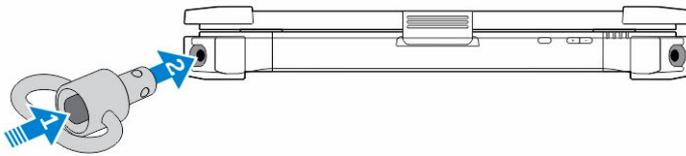
4. Release the button after the connector is seated in the receptacle to secure it.

Removing a QD connector

1. Press and hold the button on top of the QD connector.
2. Pull the connector out of the receptacle while holding the button pressed.

Specifications

NOTE: Offerings may vary by region.

Table 1. System Information

Feature	Specification
DRAM bus width	64 bit
Flash EPROM	SPI 32 Mbits
PCIe 2.0 bus	100MHz

Table 2. Processor

Feature	Specification
Types	Intel Core i3/i5/i7 series
L3 cache	up to 4MB
External bus frequency	1600MHz

Table 3. Memory

Feature	Specification
Memory connector	two SODIMM slots
Memory capacity	2GB, 4GB, or 8GB
Memory type	DDR3L SDRAM 1600 Mhz
Minimum memory	4GB
Maximum memory	16GB

Table 4. Audio

Feature	Specification
Type	four-channel high definition audio
Controller	Realtek ALC3226
Stereo conversion	24 bit (analog-to-digital and digital-to-analog)
Interface:	
Internal	HD audio
External	microphone-in/stereo headphones/external speakers connector

Feature	Specification
Speakers	one mono speaker
Internal speaker amplifier	2 W (RMS)
Volume controls	Volume Up/Volume Down buttons

⚠ **CAUTION: Adjustment of volume control, as well as the equalizer in the operating system and/or equalizer software, to other settings than the center position may increase the earphones and/or headphones output and cause hearing damage or loss.**

Table 5. Video

Feature	Specification
Type	integrated on system board
Controller (UMA)	
Intel Core i3/ i5 series	Intel HD Graphics 4400
Intel Core i7	Intel HD Graphics 5000

Table 6. Communications

Feature	Specification
Network adapter	10/100/1000 Mb/s Ethernet (RJ-45)
Wireless	• WLAN with Bluetooth 4.0 enabled • WWAN

Table 7. Ports and Connectors

Feature	Specification
Audio	one microphone/stereo headphone/speakers connector
Video	• one 15-pin VGA connector • one 19-pin HDMI connector
Network adapter	one RJ-45 connector
USB 2.0	one 4−pin USB 2.0−compliant connector
USB 3.0	one 4-pin USB 3.0-compliant connector with PowerShare
	one 4-pin USB 3.0-compliant connector (not present on configurations with ExpressCard or PCMCIA reader)
Memory card reader	one 8-in-1 memory card reader (not present on configurations with Express Card or PCMCIA reader)
	one optional ExpressCard Reader or optional PCMCIA Reader (choosing either replaces one USB 3.0 port and 8-in-1 memory card reader)
Serial	one DB9 pin serial connector

Feature	Specification
Docking port	one
SIM Slot	one micro-SIM slot with security feature

Table 8. Display

Feature	Specification
Type	WLED display
Size	11.6 inches viewable
Dimensions:	
Height	158.5 mm (6.24 inches)
Width	268.0 mm (10.59 inches)
Diagonal	29.38 mm (1.15 inches)
Active area (X/Y)	256.12 mm x 144 mm
Maximum resolution	1366 x 768 pixels
Operating angle	0° (closed) to 180°
Refresh rate	60 Hz
Minimum Viewing angles:	
Horizontal	+/- 70° minimum for HD
Vertical	+/-70° minimum for HD
Pixel pitch	0.1875 mm

Table 9. Keyboard

Feature	Specification
Number of keys	83 keys: US English, Thai, French-Canadian, Korean, Russian, Hebrew, English-International
	84 keys: UK English, French Canadian Quebec, German, French, Spanish (Latin America), Nordic, Arabic, Canada Bilingual
	85 keys: Brazilian Portuguese
	87 keys: Japanese
Layout	QWERTY/AZERTY/Kanji

Table 10. Touchpad

Feature	Specification
Active Area:	
X-axis	91 mm (3.58 inches)

Feature	Specification
Y-axis	51 mm (2.00 inches)

Table 11. Battery

Feature	Specification
Type	4-cell "smart" lithium ion
Dimensions:	
Height	16.5 mm (0.65 inches)
Width	215 mm (8.46 inches)
Depth	72.6 mm (2.85 inches)
Weight	318 g
Voltage	14.8 VDC
Temperature range:	
Operating	• Charging : 0 °C to 60 °C (32 °F to 140 °F) • Discharging: 0 °C to 70 °C (32 °F to 158 °F)
Non-Operating	−40 °C to 85 °C (−40 °F to 185 °F)

NOTE: The battery pack is capable of safely withstanding the above storage temperatures with 100 percent charge.

NOTE: The battery pack is also capable of withstanding storage temperatures from −20 °C to +60 °C with no degradation in its performance.

Coin-cell battery	3 V CR2032 lithium-ion coin cell

Table 12. AC Adapter

Feature	Specification
Type	65 W
Input voltage	100–240 VAC
Input current (maximum)	1.7 A
Input frequency	50–60 Hz
Output power	65 W
Output current	3.34 A (continuous)
Rated output voltage	19.5 +/− 1.0 VDC
Temperature range:	
Operating	0 °C to 40 °C (32 °F to 104 °F)
Non-Operating	−40 °C to 70 °C (−40 °F to 158 °F)

Table 13. Physical

Feature	Specification
Height	39.4 mm (1.55 inches)
Width	311 mm (12.24 inches)
Depth	229 mm (9.01 inches)
Weight	5.9 lbs (2.71 kg)

Table 14. Environmental

Feature	Specification
Temperature:	
Operating	−29 °C to 63 °C (−20 °F to 145 °F)
Storage	−51 °C to 71 °C (−60 °F to 160 °F)
Relative humidity (maximum):	
Operating	10 % to 90 % (non condensing)
Storage	0 % to 95 % (non condensing)
Altitude (maximum):	
Operating	−15.24 m to 4572 (−50 ft to 15,000 ft ft)
Non-Operating	−15.24 m to 9144 m (−50 ft to 30,000 ft)
Airborne contaminant level	G1 as defined by ISA-71.04−1985

Information para NOM (únicamente para México)

The following information is provided on the device described in this document in compliance with the requirements of the official Mexican standards (NOM).

Voltaje de alimentación	100 VAC − 240 VAC
Frecuencia	50 Hz − 60 Hz
Consumo eléctrico	1.7 A
Voltaje de salida	19,50 V de CC
Intensidad de salida	3,34 A

8

Contacting Dell

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

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1. Go to **dell.com/support**.
2. Select your support category.
3. Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4. Select the appropriate service or support link based on your need.