

# Dell Rugged Extreme 14- 5404 Getting Started Guide

Regulatory Model: P46G  
Regulatory Type: P46G001



# 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.

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## 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](http://www.dell.com/regulatory_compliance) for more information on:

- Safety best practices
- Regulatory certification
- Ergonomics

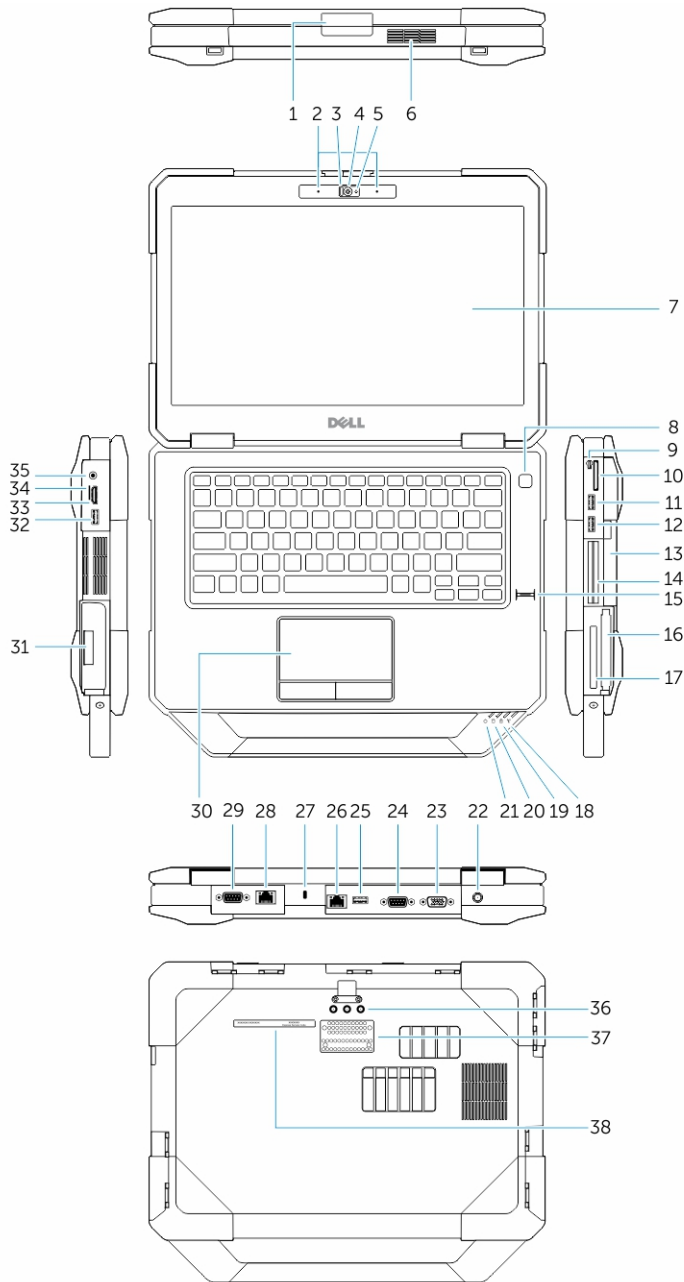
See [www.dell.com](http://www.dell.com) for additional information on:

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

Additional information on your product is available at [www.dell.com/support/manuals](http://www.dell.com/support/manuals)



# Front and Back View



- 1. Display latch

2. Microphone
3. Privacy shutter (optional)
4. Camera (optional)
5. Camera-status light (optional)
6. Speaker
7. Outdoor readable display/touchscreen (optional)
8. Power button
9. Stylus
10. Memory-card reader
11. USB 2.0 Connector
12. USB 3.0 Connector
13. Optical Disk Drive
14. Secure-card reader (optional)
15. Finger-print reader
16. Hard drive
17. PC/ExpressCard Reader
18. Wireless status light
19. Battery status light
20. Hard-drive status light
21. Power status light
22. Power Connector
23. VGA Connector
24. Serial Connector
25. USB 2.0 Connector
26. Network Connector
27. Security-cable slot
28. Network Connector (optional)
29. Serial connector (optional)
30. Touchpad
31. Battery
32. USB 3.0 connector
33. HDMI Connector
34. SIM card connector
35. Audio connector
36. Radio frequency pass-through connectors
37. Docking device connector (optional)
38. Service tag label







**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, RJ-45 Port, RS232 Port, Audio Port, Smart Card Slot, SD card Slot, Express Card Slot, PC-card Slot, SIM card Slot) 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](http://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.

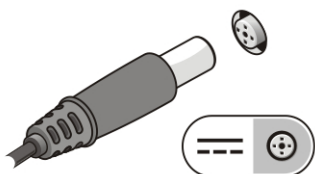


Figure 1. AC Adapter

2. Connect the network cable (optional).

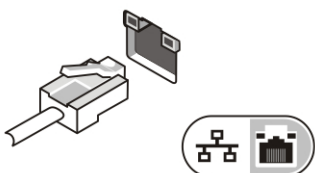


Figure 2. Network Connector

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

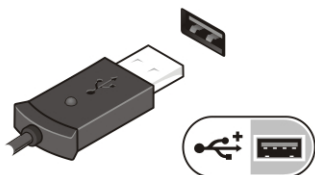
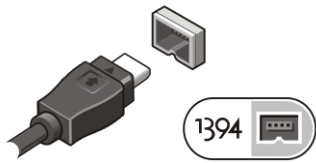


Figure 3. USB Connector

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.

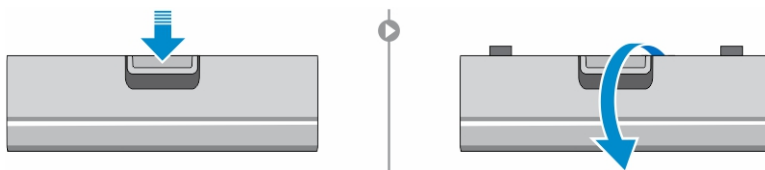
## Removing and Installing Components

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

### Opening the Press-Latch Doors

There are eight press-latch doors. Four on the back, two on the right side, and two on the left side of the computer.

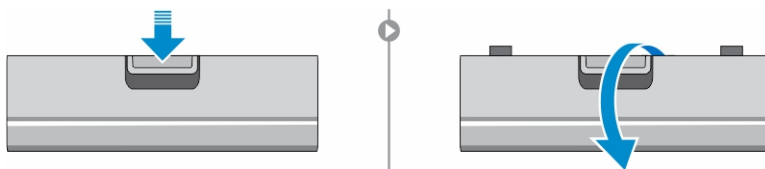
1. Push the lock button in a downward direction.
2. Pull the latch door in a direction away from the computer.



### Closing The Press-Latch Doors

Follow the steps below to close the press-latch doors :

1. Rotate the door back towards the computer.
2. Press until it is in a closed position.



### Removing the Battery

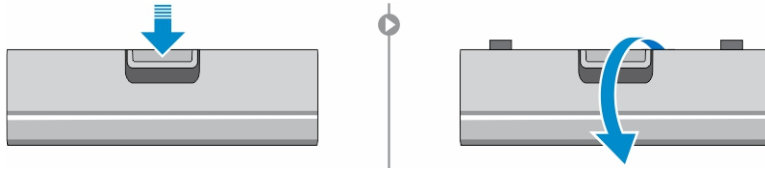
**⚠ WARNING:** Using an incompatible battery may increase the risk of fire or explosion. Replace the battery only with a compatible battery purchased from Dell. The battery is designed to work with your Dell computer. Do not use a battery from other computers with your computer.

**⚠ 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.

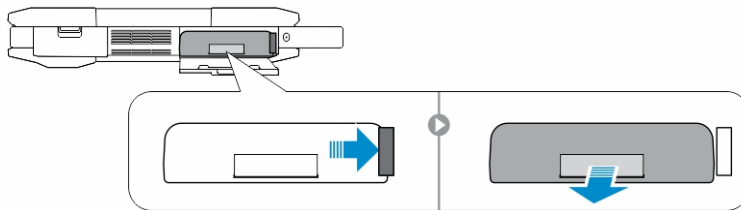
**⚠ WARNING:** Not for use in hazardous locations. See installation instructions.

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

1. Push the battery slide-lock to unlock.
2. The door can now be opened by sliding the latch down, and rotating the door in a downward direction.



3. To remove the battery:
  - a. To unlock, push the battery release latch to the right to unlock it.
  - b. Slide the battery out of the computer by pulling on the tab attached to the battery.

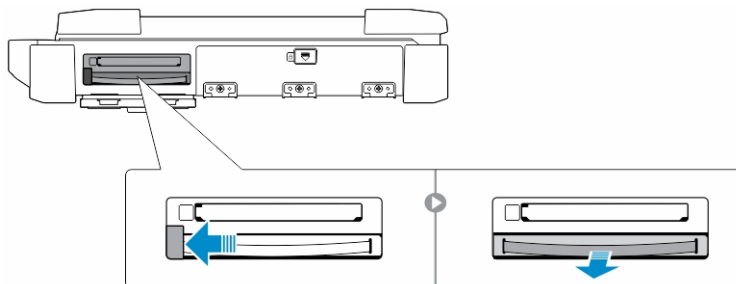


## Installing the Battery

1. Slide the battery into its slot until it clicks into place.
2. Rotate the battery door back into its closed position and press until you can hear it click in place.

## Removing the Hard Drive

1. Slide the hard drive release latch to the left to unlock.
2. Pull the hard drive outwards using the pull-loop and remove it from the computer.



## Installing the Hard Drive

1. Push the hard drive into its compartment until it snaps in place.
2. Rotate the door back towards the computer and press until it is in a closed position.

## Using the Backlit Keyboard

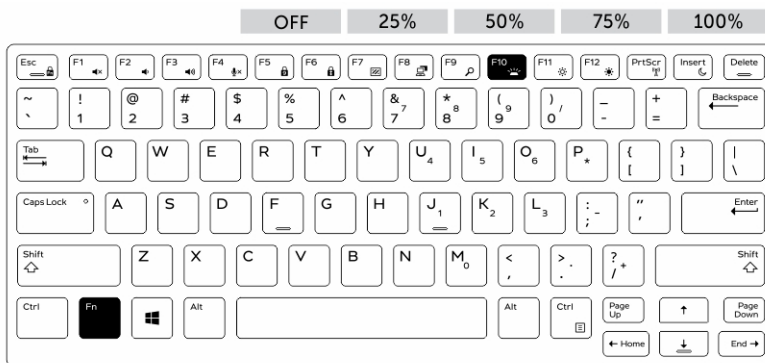
The Latitude rugged series comes equipped with a backlit keyboard that can be customized. The backlight can be set to any of the following colors:

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

## Turning the Keyboard Backlight On/Off or Adjusting Brightness

To turn backlight On/Off or adjust the backlight brightness settings, perform the steps:

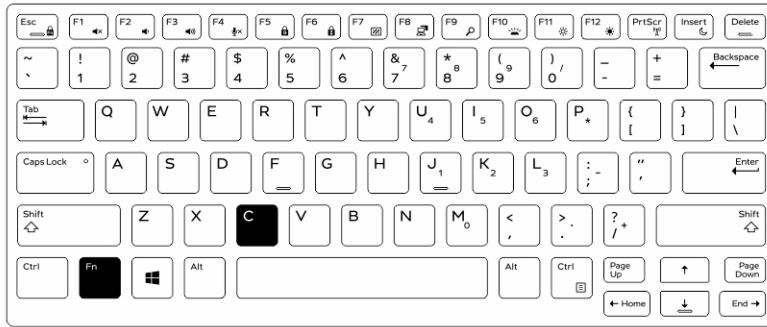
1. Press **<Fn> + <F10>** (Fn key not needed if function key <Fn> lock is activated) to initialize the keyboard backlight switch.
2. The first use of the above key combination will turn on the backlight to its lowest setting.
3. Additional pressing of the key combinations will cycle the brightness settings through 25%, 50%, 75% and 100% .
4. 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).

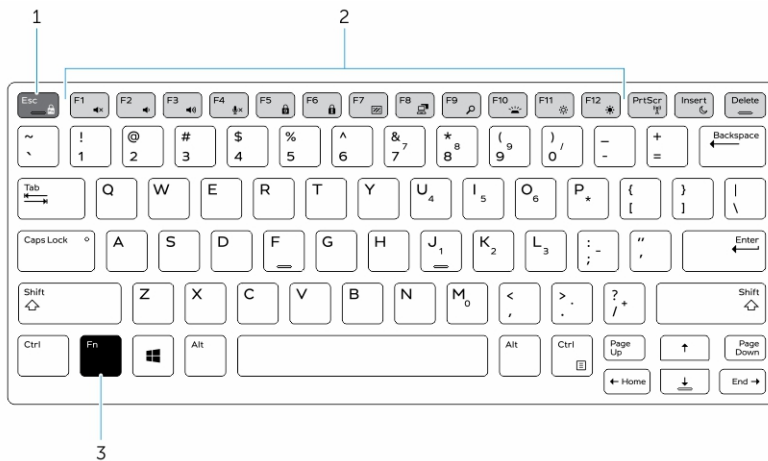


## Customizing the Backlit Keyboard in System Setup (BIOS)

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.






## Stealth Mode

Latitude fully rugged products come equipped with a Stealth mode. Stealth mode allows you to turn off the Display, all the LED lights, internal speakers, the fan and all wireless radios with a single key combination.

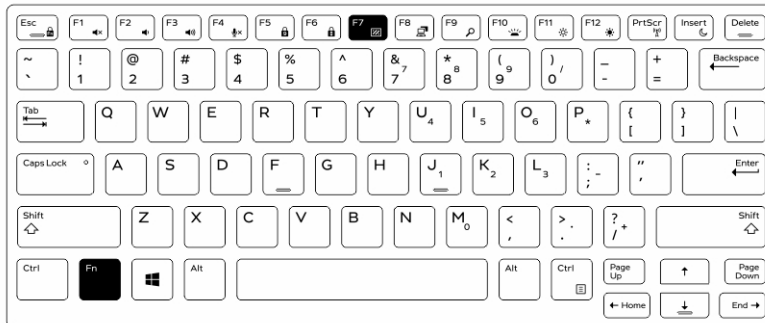
 **NOTE:** This mode is aimed at using the computer in covert operations. When the stealth mode is activated, the computer remains functional but will not emit any light or sound.

### 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.

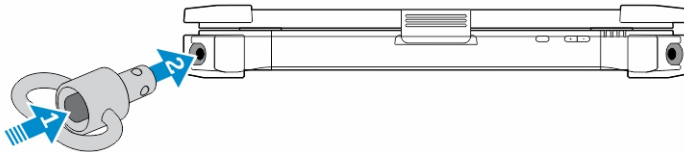


# Quick Disconnect (QD) Connector

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.

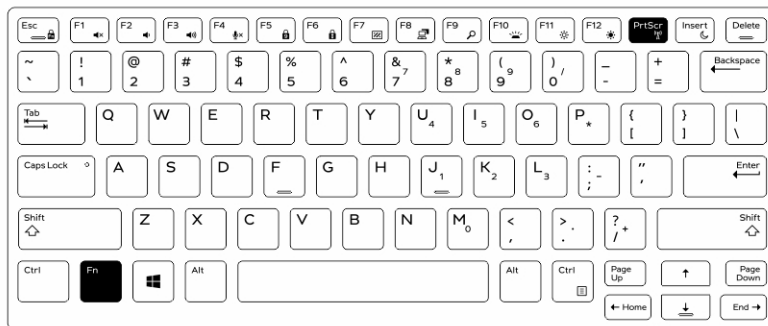
## Removing a QD connector

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.



# Enabling and Disabling Wireless (WiFi) Feature

1. To enable wireless network, press the <Fn>+ <PrtScr> keys.
2. Press the <Fn> +< PrtScr> keys again to disable wireless networking.





# Smart Cards

There are two main types of Smart or Common Access Cards (CAC):

1. Enclosed Smart Cards — These cards have a contact area with many gold plated connection pads. When inserted into a card reader, the information from the chip can be read and written

The Smart Card can be fully inserted, allowing the protective hinged door to be closed. Insert the card into the smart card slot with the gold contact pad facing upward and pointing toward the smart card slot. Slide the card into the slot until it is fully seated in its connector.



2. Contactless Smart Cards — These cards do not require any physical contact with the reader. The chip communicates with the card reader through RFID induction technology.

These cards require only close proximity to an antenna of a card reader to complete transactions.





# Specifications

 **NOTE:** Offerings may vary by region. For more information regarding the configuration of your computer, click Start  (**Start icon**) → **Help and Support**, and then select the option to view information about your computer.

**Table 1. System Information**

Feature	Specification
Chipset	Intel Mobile Express Series 6 chipset
DRAM bus width	64-bit
Flash EPROM	SPI 32Mbits
PCIe Gen1 bus	100 MHz

**Table 2. Processor**

Feature	Specification
Types	<ul style="list-style-type: none"> <li>• Intel Core i3 series</li> <li>• Intel Core i5 series</li> <li>• Intel Core i7 series</li> </ul>
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	DDR3 SDRAM 1600 Mhz
Minimum memory	4GB
Maximum memory	16 GB

**Table 4. Audio**

Feature	Specification
Type	four-channel high definition audio
Controller	Realtek ALC3226

Feature	Specification
Stereo conversion	24-bit (analog-to-digital and digital-to-analog)
Interface:	
Internal	HD audio
External	microphone-in/stereo headphones/external speakers connector
Speakers	one mono speaker
Internal speaker amplifier	2W (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	Intel HD Graphics 4400
Intel Core i7	Intel HD Graphics 5000
Discrete (Optional)	Nvidia GeForce (N14M-GE) Discrete Graphics Card, 2GB Graphics

**Table 6. Communications**

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

**Table 7. Ports and Connectors**

Feature	Specification
Audio (optional)	one microphone/stereo headphone/speaker connector
Video	<ul style="list-style-type: none"> <li>one 15-pin VGA connector</li> <li>one 19-pin HDMI connector</li> </ul>
Network adapter	one RJ-45 connector (second optional)
USB 2.0	two 4-pin USB 2.0 compliant connector
USB 3.0	<ul style="list-style-type: none"> <li>one 4-pin USB 3.0 compliant connector</li> </ul>

Feature	Specification
	<ul style="list-style-type: none"> <li>one 4-pin USB 3.0 compliant connector with PowerShare</li> </ul>
Memory card reader	one 8-in-1 memory card reader
Expansion card	<ul style="list-style-type: none"> <li>one ExpressCard reader</li> <li>optional PCMCIA reader (replaces ExpressCard reader)</li> </ul>
Serial	one DB9 serial connector (second optional)
Docking port	one
Subscriber Identity Module (SIM) port	one micro-SIM slot with security feature

**Table 8. Display**

Feature	Specification
Type	WLED display
Size	14.0 inches
Dimensions:	
Height	190.00 mm (7.48 inches)
Width	323.5 mm (12.59 inches)
Diagonal	375.2 mm (14.77 inches)
Active area (X/Y)	309.4 mm x 173.95 mm
Maximum resolution	1366 x 768 pixels
Operating angle	0° (closed) to 180°
Refresh rate	60 Hz
Minimum Viewing angles:	
Horizontal	<ul style="list-style-type: none"> <li>+/- 70° for HD</li> </ul>
Vertical	<ul style="list-style-type: none"> <li>+/- 70° for HD</li> </ul>
Pixel pitch	1875 mm



**Table 9. Keyboard**

Feature	Specification
Number of keys	84 keys: US English, Thai, French-Canadian, Korean, Russian, Hebrew, English-International
Layout	QWERTY/AZERTY/Kanji

**Table 10. Touchpad**

Feature	Specification
Active Area:	
X-axis	99.5 mm
Y-axis	53 mm

**Table 11. Battery**

Feature	Specification
Type	6-cell or 9-cell "smart" lithium ion
Dimensions:	
Height	21 mm (0.82 inches)
Width	166.9 mm (6.57 inches)
Depth	80 mm (3.14 inches)
Weight	6-cell : 365.5 g (0.80 lbs) ; 9-cell : 520 g (1.14 lbs)
Voltage	14.8 VDC
Temperature range:	
Operating	<ul style="list-style-type: none"> <li>• Charging : 0 °C to 60 °C (32 °F to 140 °F)</li> <li>• Discharging: 0 °C to 70 °C (32 °F to 158 °F)</li> </ul>
Non-Operating	-51°C to 71 °C (-60 °F to 160 °F)  <b>NOTE:</b> The battery pack is capable of safely withstanding the above storage temperatures with 100% charge.  <b>NOTE:</b> 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	3V CR2032 lithium-ion coin cell

**Table 12. AC Adapter**

Type	65 W/90 W
Input voltage	100 VAC to 240 VAC
Input current (maximum)	1.5A / 1.7A
Input frequency	50 Hz to 60 Hz
Output power	65 W/90 W
Output current	3.34 A/4.62 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. Auto-air Adapter**

Type	90 W
Input voltage	11 VDC to 16 VDC
Input current (maximum)	9.0 A
Output power	90 W
Output current	4.86 A(continuous)
Rated output voltage	19.5 +/- 1.0 VDC
Temperature range:	
Operating	0 °C to 35 °C (32 °F to 95°F)

**Table 14. Physical**

Feature	Specification
Height	44 mm (1.73 inches)
Width	347 mm (13.66 inches)
Depth	243 mm (9.57 inches)
Weight	6.5 lbs (2.95 kg)

**Table 15. 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	5 % to 95 % (non condensing)
Altitude (maximum):	
Operating	-15.24 m to 4572 (-50 ft to 15,000 ft)3048 (-50 ft to 10,000 ft ft)
Non-Operating	'-15.24 m to 4572 (-50 ft to 15,000 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	1,5 A/1,7 A
Voltaje de salida	19,50 V de CC
Intensidad de salida	3,34 A/4,62 A

## 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/contactdell**.
2. Verify your country or region from the drop-down menu at the top left corner of the page.
3. Select your support category: **Technical Support, Customer Support, Sales, or International Support Services**.
4. Select the appropriate service or support link based on your requirement.

 **NOTE:** If you have purchased a Dell system, you may be asked for the Service Tag.