

# XPS 15 7590

## Setup and Specifications



## Notes, cautions, and warnings

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

 **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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# Set up your XPS 15 7590

**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 computer might enter power saving mode (sleep state). 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>
	<p><b>SupportAssist</b></p> <p>Pro-actively checks the health of your computer's hardware and software. The SupportAssist OS Recovery tool troubleshoots issues with the operating system. For more information, see the SupportAssist documentation at <a href="http://www.dell.com/support">www.dell.com/support</a>.</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="https://www.dell.com/support">SLN305843</a> at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>

## Resources

## Description

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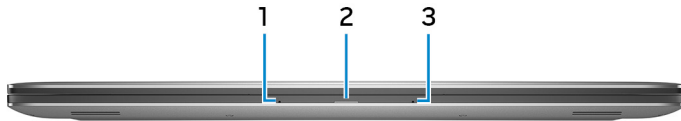


### **Dell Digital Delivery**

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 [153764](https://www.dell.com/support/article/153764) at [www.dell.com/support](https://www.dell.com/support).

## Views of XPS 15 7590

### Front



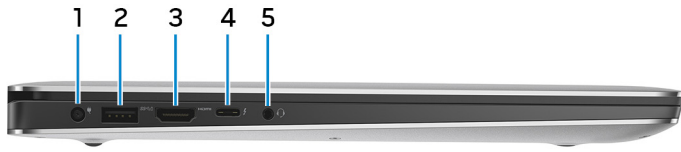
1. **Left microphone**  
Provides digital sound input for audio recording and voice calls.
2. **Power and battery-status light**  
Indicates the power state and battery state of the computer.  
Solid white—Power adapter is connected and the battery is charging.  
Solid amber—Battery charge is low or critical.  
Off—Battery is fully charged.
3. **Right microphone**  
Provides digital sound input for audio recording and voice calls.

### Right



1. **SD-card slot**  
Reads from and writes to the SD card.
2. **USB 3.1 Gen 1 port with PowerShare**  
Connect peripherals such as external storage devices and printers.  
Provides data transfer speeds up to 5 Gbps. PowerShare enables you to charge your USB devices even when your computer is turned off.  
**NOTE:** If the charge on your computer's battery is less than 10 percent, you must connect the power adapter to charge your computer, and USB devices connected to the PowerShare port.
- NOTE:** If a USB device is connected to the PowerShare port before the computer is turned off or in hibernate state, you must disconnect and connect it again to enable charging.
- NOTE:** Certain USB devices may not charge when the computer is turned off or in sleep state. In such cases, turn on the computer to charge the device.
3. **Battery-charge status lights (5)**  
Turn on when the battery-charge status button is pressed. Each light indicates approximately 20% charge.
4. **Battery-charge status button**  
Press to check the charge remaining in the battery.
5. **Security-cable slot (wedge-shaped)**  
Connect a security cable to prevent unauthorized movement of your computer.

# Left



## 1. Power-adapter port

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

## 2. USB 3.1 Gen 1 port with PowerShare

Connect peripherals such as external storage devices and printers.

Provides data transfer speeds up to 5 Gbps. PowerShare enables you to charge your USB devices even when your computer is turned off.

**NOTE:** If the charge on your computer's battery is less than 10 percent, you must connect the power adapter to charge your computer, and USB devices connected to the PowerShare port.

**NOTE:** If a USB device is connected to the PowerShare port before the computer is turned off or in hibernate state, you must disconnect and connect it again to enable charging.

**NOTE:** Certain USB devices may not charge when the computer is turned off or in sleep state. In such cases, turn on the computer to charge the device.

## 3. HDMI port

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

## 4. Thunderbolt 3 (USB 3.1 Gen 2 Type-C) port with Power delivery

Supports USB 3.1 Gen 2, DisplayPort 1.2, Thunderbolt 3 and also enables you to connect to an external display using a display adapter. Provides data transfer rates up to 10 Gbps for USB 3.1 Gen 2 and up to 40 Gbps for Thunderbolt 3. Supports Power Delivery that enables two-way power supply between devices. Provides up to 5V/3A power output that enables faster charging.

**NOTE:** Adapters (sold separately) are required to connect standard USB and DisplayPort devices.

## 5. Headset port

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

# Base



## 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.

**NOTE:** You can customize power-button behavior in Windows. For more information, see *Me and My Dell* at [www.dell.com/support/manuals](http://www.dell.com/support/manuals).

**NOTE:** The power-status light on the power button is available only on computers without the fingerprint reader. Computers shipped with the fingerprint reader integrated on the power button will not have the power-status light on the power button.

**2. Right-click area**

Press to right-click.

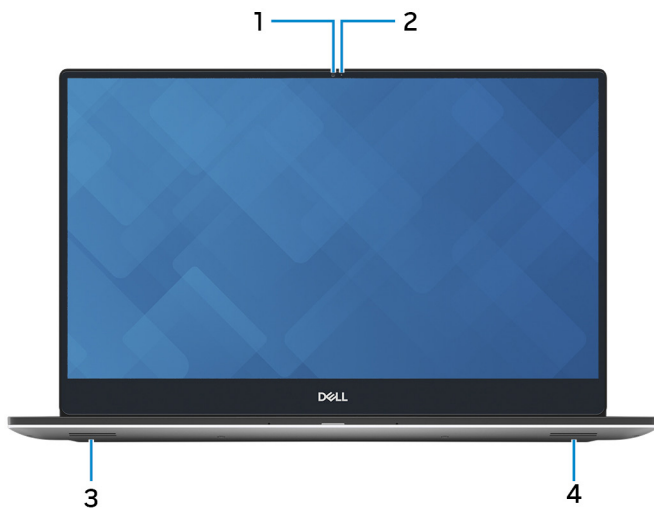
**3. Touchpad**

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

**4. Left-click area**

Press to left-click.

## Display



**1. Camera**

Enables you to video chat, capture photos, and record videos.

**2. Camera-status light**

Turns on when the camera is in use.

**3. Left speaker**

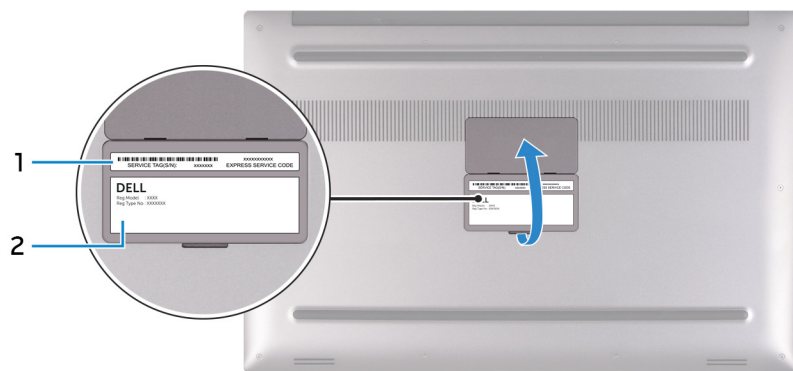
Provides audio output.

**4. Right speaker**

Provides audio output.



# Bottom



## 1. Service Tag label

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.

## 2. Regulatory label

Contains regulatory information of your computer.

# Specifications of XPS 15 7590

## Dimensions and weight

Table 2. Dimensions and weight

Description	Values
Height:	
Front	11.2 mm (0.44 in.)
Rear	17 mm (0.67 in.)
Width	357 mm (14.06 in.)
Depth	235 mm (9.25 in.)
Weight (maximum)	1.8 kg (3.97 lb)

**NOTE:** The weight of your computer depends on the configuration ordered and the manufacturing variability.

## Processors

Table 3. Processors

Description	Values		
Processors	9th Generation Intel Core i5-9300H	9th Generation Intel Core i7-9750H	9th Generation Intel Core i9-9980 HK
Wattage	45 W	45 W	45 W
Core count	4	6	8
Thread count	8	12	16
Speed	Up to 2.4 GHz	Up to 2.6 GHz	Up to 2.4 GHz
Cache	8 MB	12 MB	16 MB
Integrated graphics	Intel UHD Graphics 630	Intel UHD Graphics 630	Intel UHD Graphics 630

## Chipset

Table 4. Chipset

Description	Values
Chipset	CM246
Processor	9th generation Intel Core i5/i7/i9
DRAM bus width	64-bit

Description	Values
Flash EPROM	16 MB
PCIe bus	Up to Gen3

## Operating system

- Windows 10 Home (64-bit)
- Windows 10 Professional (64-bit)

## Memory

**Table 5. Memory specifications**

Description	Values
Slots	Two SODIMM slots
Type	Dual-channel DDR4
Speed	2666 MHz
Maximum memory	64 GB
Minimum memory	8 GB
Memory size per slot	4 GB, 8 GB, 16 GB, 32 GB
Configurations supported	<ul style="list-style-type: none"> <li>• 8 GB DDR4 at 2666 MHz (2 x 4 GB)</li> <li>• 16 GB DDR4 at 2666 MHz (2 x 8 GB)</li> <li>• 32 GB DDR4 at 2666 MHz (2 x 16 GB)</li> <li>• 64 GB DDR4 at 2666 MHz (2 x 32 GB)</li> </ul>

## Ports and connectors

**Table 6. External ports and connectors**

External:	
USB	<ul style="list-style-type: none"> <li>• Two USB 3.1 Gen 1 ports with PowerShare</li> <li>• One Thunderbolt 3 (USB 3.1 Gen 2 Type-C) port with Power delivery</li> </ul>
Audio	One headset (headphone and microphone combo) port
Video	One HDMI 2.0b port
Media card reader	One SD-card slot
Docking port	Not supported
Power adapter port	One 4.5 mm x 2.9 mm DC-in
Security	One security-cable slot (wedge-shaped)

**Table 7. Internal ports and connectors****Internal:**

M.2	<ul style="list-style-type: none"> <li>One M.2 slot for solid-state drive (SATA or PCIe/NVMe)</li> <li>One M.2 slot for WiFi and Bluetooth combo card</li> </ul> <p><b>NOTE:</b> To learn more about the features of different types of M.2 cards, see the knowledge base article <a href="#">SLN301626</a>.</p>
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# Communications

## Wireless module

**Table 8. Wireless module specifications**

Description	Values
Model number	Killer 1650x
Transfer rate	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz
Wireless standards	<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>WiFi 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>
Bluetooth	Bluetooth 5

# Audio

**Table 9. Audio specifications**

Description	Values
Controller	ALC3266-CG with Waves MaxxAudio Pro
Stereo conversion	Not supported
Internal interface	High-definition audio interface
External interface	HDMI 2.0b port
Speakers	2
Internal speaker amplifier	Not supported
External volume controls	Keyboard shortcut controls
Speaker output:	
Average	2 W

Description	Values
Peak	2.5 W
Subwoofer output	Not supported
Microphone	Dual-array microphones

## Storage

Your computer supports one of the following configurations:

- One 2.5-inch hard-drive
- One M.2 2230/2280 solid-state drive (SSD)

**Table 10. Storage specifications**

Storage type	Interface type	Capacity
One 2.5-inch hard-disk drive	SATA AHCI, up to 6 Gbps	Up to 2 TB
One M.2 2230/2280 solid-state drive	PCIe Gen3.0x4 NVMe, up to 32 Gbps	Up to 2 TB

## Media-card reader

**Table 11. Media-card reader specifications**

Description	Values
Type	One SD-card slot
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>

## Keyboard

**Table 12. Keyboard specifications**

Description	Values
Type	Backlit keyboard
Layout	QWERTY
Number of keys	<ul style="list-style-type: none"> <li>• United States and Canada: 80 keys</li> <li>• United Kingdom: 81 keys</li> <li>• Japan: 84 keys</li> </ul>
Size	X=19.05 mm key pitch Y=18.05 mm key pitch
Shortcut keys	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.

Description	Values
	<p><b>NOTE:</b> You can define the primary behavior of the function keys (F1–F12) changing Function Key Behavior in BIOS setup program.</p> <p><a href="#">Keyboard shortcuts</a></p>

## Camera

**Table 13. Camera specifications**

Description	Values
Number of cameras	One
Type	RGB HD camera
Location	Front camera on top bezel
Sensor type	Rolling shutter
Resolution	
Camera	
Still image	0.92 megapixel
Video	1280 x 720 (RGB) @ 30 fps
Infrared camera	
Still image	0.92 megapixel
Video	340 x 340 @ 30 fps
Diagonal viewing angle	
Camera	78 degrees
Infrared camera	80 degrees

## Touchpad

**Table 14. Touchpad specifications**

Description	Values
Resolution:	
Horizontal	1219
Vertical	919
Dimensions:	
Horizontal	105 mm (4.13 in.)
Vertical	80 mm (3.15 in.)

# Touchpad gestures

For more information about touchpad gestures for Windows 10, see the Microsoft knowledge base article [4027871](https://support.microsoft.com/4027871) at [support.microsoft.com](https://support.microsoft.com).

# Power adapter

**Table 15. Power adapter specifications**

Description	Values
Type	130 W
Diameter (connector)	4.5 mm x 2.9 mm
Input voltage	100 VAC x 240 VAC
Input frequency	50 Hz x 60 Hz
Input current (maximum)	1.80 A
Output current (continuous)	6.67 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)

# Battery

**Table 16. Battery specifications**

Description	Values	
Type	3-cell lithium ion (56 WHr)	6-cell lithium ion (97 WHr)
Voltage	11.40 VDC	11.40 VDC
Weight (maximum)	0.24 kg (0.53 lb)	0.34 kg (0.75 lb)
Dimensions:		
Height	71.80 mm (2.83 in.)	71.80 mm (2.83 in.)
Width	223.20 mm (8.79 in.)	330.50 mm (13.01 in.)
Depth	7.20 mm (0.28 in.)	7.20 mm (0.28 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	-40°C to 65°C (-40°F to 149°F)	-40°C to 65°C (-40°F to 149°F)
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.
Charging time (approximate)	4 hours (when the computer is off)	4 hours (when the computer is off)

Description	Values	
	<p><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></p>	
Life span (approximate)	300 discharge/charge cycles	300 discharge/charge cycles
Coin-cell battery	ML1220	ML1220
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.

## Display

**Table 17. Display specifications**

Description	Values		
Type	15.6-inch UHD touchscreen	15.6-inch WLED FHD non-touchscreen	15.6 inch OLED UHD non-touchscreen
Panel technology	In-Plane Switching (IPS)	In-Plane Switching (IPS)	OLED
Luminance (typical)	500 nits	500 nits	400 nits
Dimensions (active area):			
Height	193.62 mm (7.62 in.)	193.59 mm (7.62 in.)	193.62 mm (7.62 in.)
Width	344.21 mm (13.55 in.)	344.16 mm (13.55 in.)	344.22 mm (13.55 in.)
Diagonal	394.9 mm (15.55 in.)	394.9 mm (15.55 in.)	394.9 mm (15.55 in.)
Native resolution	3840 x 2160	1920 x 1080	3840 x 2160
Megapixels	8.29	2.07	8.29
Color gamut	100 % (Adobe RGB)	NTSC 72 %	DCI P3 100%
Pixels per inch (PPI)	282.42	141.21	282
Contrast ratio (min)	1500:1 (typical)	1500:1 (typical)	100000:1 (typical)
Response time (max)	35 ms	35 ms	1 ms
Refresh rate	60 Hz	60 Hz	60 Hz
Horizontal view angle	89/89 (typical), 80/80 (minimum)	89/89 (typical), 80/80 (minimum)	88/88 (typical), 80/80 (minimum)
Vertical view angle	89/89 (typical), 80/80 (minimum)	89/89 (typical), 80/80 (minimum)	88/88 (typical), 80/80 (minimum)
Pixel pitch	0.09 mm	0.18 mm	0.09 mm
Power consumption (maximum)	10.41 W	4.30 W	14.80 W
Anti-glare vs glossy finish	Anti-reflective	Anti-glare	Anti-reflective



Description	Values		
Touch options	Yes	No	No

## Fingerprint reader (optional)

Table 18. Fingerprint reader specifications

Description	Values
Sensor technology	Touch
Sensor resolution	500 dpi
Sensor area	5.5 mm x 4.5 mm
Sensor pixel size	108 x 88

## Video

Table 19. Discrete graphics specifications

Discrete graphics			
Controller	External display support	Memory size	Memory type
NVIDIA GeForce GTX N18P	One HDMI 2.0b port	4 GB	GDDR5

Table 20. Integrated graphics specifications

Integrated graphics			
Controller	External display support	Memory size	Processor
Intel UHD 630 Graphics	One HDMI 2.0b port	Shared system memory	9th generation Intel Core i5/i7/i9

## Computer environment

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

Table 21. Computer environment

Description	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°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	1.3 GRMS
Shock (maximum)	110 G†	160 G†
Altitude (maximum)	-15.2 m to 3,048 m (-50 ft to 10,000 ft)	-15.2 m to 10,668 m (-50 ft to 35,000 ft)

\* 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.

# Keyboard shortcuts

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


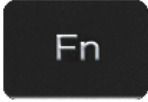

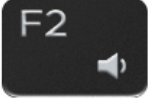
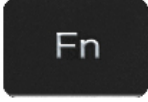
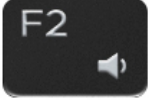
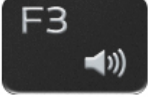

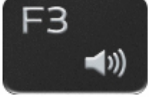










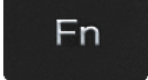

Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. The symbol shown on the lower part of the key refers to the character that is typed out when the key is pressed. If you press shift and the key, the symbol shown on the upper part of the key is typed out. For example, if you press **2**, 2 is typed out; if you press **Shift + 2**, @ is typed out.


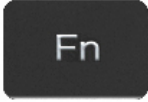





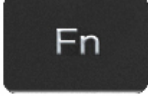
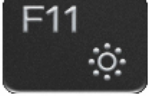



The keys F1-F12 at the top row of the keyboard are function keys for multi-media control, as indicated by the icon at the bottom of the key. Press the function key to invoke the task represented by the icon. For example, pressing F1 mutes the audio (refer to the table below).

However, if the function keys F1-F12 are needed for specific software applications, multi-media functionality can be disabled by pressing **Fn + Esc**. Subsequently, multi-media control can be invoked by pressing **Fn** and the respective function key. For example, mute audio by pressing **Fn + F1**.

**NOTE:** You can also define the primary behavior of the function keys (F1–F12) by changing Function Key Behavior in BIOS setup program.

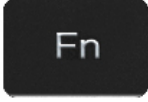





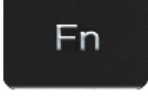






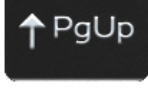
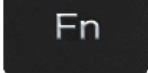

Table 22. List of keyboard shortcuts

Function key	Re-defined key (for multi-media control)	Behavior
	 + 	Mute audio
	 + 	Decrease volume
	 + 	Increase volume
	 + 	Play previous track/chapter
	 + 	Play/Pause
	 + 	Play next track/chapter
	 + 	Switch to external display

Function key	Re-defined key (for multi-media control)	Behavior
	 + 	Search
	 + 	Toggle keyboard backlight (optional)
	 + 	Decrease brightness
	 + 	Increase brightness

The **Fn** key is also used with selected keys on the keyboard to invoke other secondary functions.

**Table 23. List of keyboard shortcuts**



Function key	Behavior
 + 	Pause/Break
 + 	Toggle scroll lock
 + 	Toggle between power and battery-status light/hard-drive activity light
 + 	System request
 + 	Open application menu
 + 	Toggle Fn-key lock
 + 	Up/page up
 + 	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 24. 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>
Troubleshooting information, user manuals, setup instructions, product specifications, technical help blogs, drivers, software updates, and so on.	<a href="http://www.dell.com/support">www.dell.com/support</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. Type the subject or keyword in the <b>Search</b> box.</li> <li>3. Click <b>Search</b> to retrieve the related articles.</li> </ol>
Learn and know the following information about your product:	See <i>Me and My Dell</i> at <a href="http://www.dell.com/support/manuals">www.dell.com/support/manuals</a> .
<ul style="list-style-type: none"> <li>• Product specifications</li> <li>• Operating system</li> <li>• Setting up and using your product</li> <li>• Data backup</li> <li>• Troubleshooting and diagnostics</li> <li>• Factory and system restore</li> <li>• BIOS information</li> </ul>	<p>To locate the <i>Me and My Dell</i> relevant to your product, identify your product through one of the following:</p> <ul style="list-style-type: none"> <li>• Select <b>Detect Product</b>.</li> <li>• Locate your product through the drop-down menu under <b>View Products</b>.</li> <li>• Enter the <b>Service Tag number</b> or <b>Product ID</b> in the search bar.</li> </ul>

## 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 on your purchase invoice, packing slip, bill, or Dell product catalog.**