

# Inspiron Gaming Desktop Service Manual

**Computer Model:** Inspiron 5680  
**Regulatory Model:** D27M  
**Regulatory Type:** D27M002



# Notes, cautions, and warnings

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**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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Identifier	GUID-5D3B1051-9384-409A-8D5B-9B53BD496DE8
Status	Released

# Before working inside your computer

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

Identifier	GUID-D1AE8571-3E47-4D09-AD7C-6AB2F8F0541F
Status	Released

## Before you begin

- 1 Save and close all open files and exit all open applications.
- 2 Shut down your computer. Click **Start** →  **Power** → **Shut down**.
  -  **NOTE:** If you are using a different operating system, see the documentation of your operating system for shut-down instructions.
- 3 Disconnect your computer and all attached devices from their electrical outlets.
- 4 Disconnect all attached network devices and peripherals, such as keyboard, mouse, and monitor from your computer.
- 5 Remove any media card and optical disc from your computer, if applicable.
- 6 After the computer is unplugged, press and hold the power button for 5 seconds to ground the system board.



Identifier	GUID-06588814-2678-4667-9FF9-C009F4BCE185
Status	Released

# After working inside your computer

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**CAUTION: Leaving stray or loose screws inside your computer may severely damage your computer.**

- 1 Replace all screws and ensure that no stray screws remain inside your computer.
- 2 Connect any external devices, peripherals, or cables you removed before working on your computer.
- 3 Replace any media cards, discs, or any other parts that you removed before working on your computer.
- 4 Connect your computer and all attached devices to their electrical outlets.
- 5 Turn on your computer.

Identifier GUID-71128823-CE64-4E17-9439-DEE95AF668C4

Status Released

# Safety instructions

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Use the following safety guidelines to protect your computer from potential damage and ensure your personal safety.

-  **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
-  **WARNING:** Disconnect all power sources before opening the computer cover or panels. After you finish working inside the computer, replace all covers, panels, and screws before connecting to the electrical outlet.
-  **CAUTION:** To avoid damaging the computer, ensure that the work surface is flat and clean.
-  **CAUTION:** To avoid damaging the components and cards, handle them by their edges, and avoid touching pins and contacts.
-  **CAUTION:** You should only perform troubleshooting and repairs as authorized or directed by the Dell technical assistance team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. See the safety instructions that shipped with the product or at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
-  **CAUTION:** Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate static electricity, which could harm internal components.



 **CAUTION:** When you disconnect a cable, pull on its connector or on its pull tab, not on the cable itself. Some cables have connectors with locking tabs or thumb-screws that you must disengage before disconnecting the cable. When disconnecting cables, keep them evenly aligned to avoid bending any connector pins. When connecting cables, ensure that the ports and connectors are correctly oriented and aligned.

 **CAUTION:** Press and eject any installed card from the media-card reader.

Identifier	GUID-DEA55279-6FE6-4A1F-A152-21F8A5572B33
Status	Released

## Recommended tools

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The procedures in this document may require the following tools:

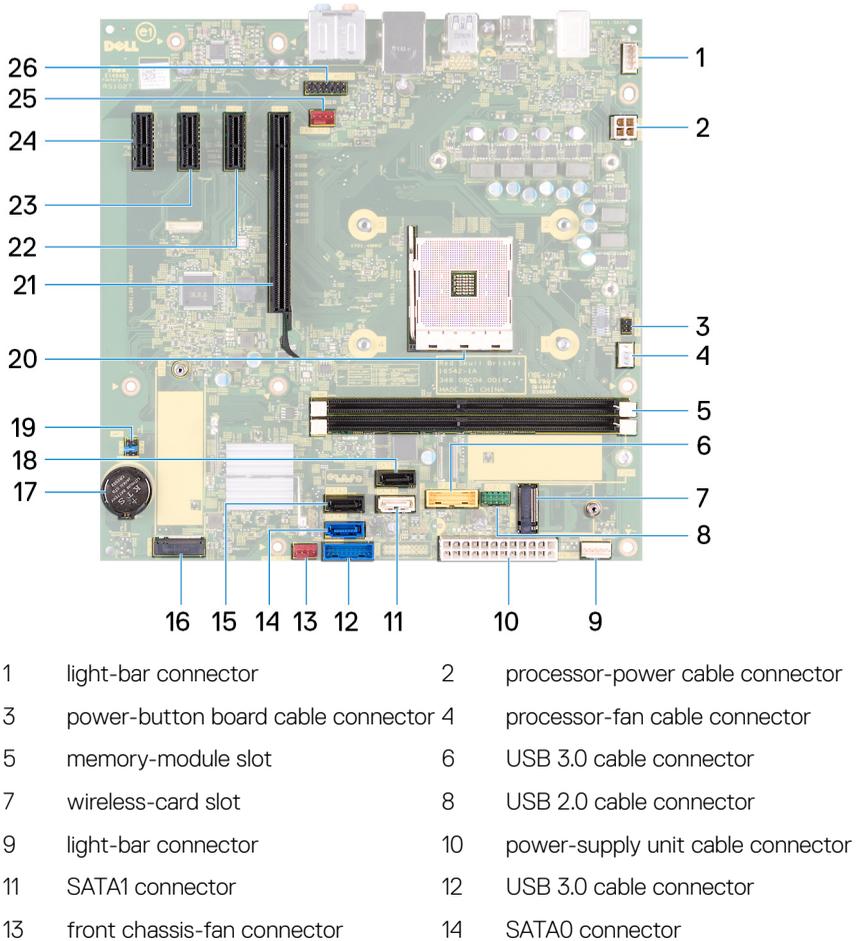
- Phillips screwdriver #1
- Plastic scribe



Identifier GUID-0FB72875-2CE1-490D-8E55-4083E488BE9E

Status Released

# System board components



- |    |                       |    |                       |
|----|-----------------------|----|-----------------------|
| 15 | SATA2 connector       | 16 | M.2 SATA connector    |
| 17 | coin-cell battery     | 18 | SATA3 connector       |
| 19 | jumper plug           | 20 | processor socket      |
| 21 | graphics-card slot    | 22 | PCIe slot 2           |
| 23 | PCIe slot 3           | 24 | PCIe slot 4           |
| 25 | chassis-fan connector | 26 | front-audio connector |



Identifier GUID-789AF2C8-1745-435F-947E-DB7581BEF8E6

Status Released

## Screw list

The following table provides the list of screws that are used for securing different components to the computer.

**Table 1. Screw list**

Component	Secured to	Screw type	Quantity	Screw image
Right-side cover	Chassis	6-32UNCx6.3	2	
Light bar	Chassis	M3x5	1	
Solid-state drive	System board	M2x3.5	1	
Front panel light board	Chassis	M3x5	1	
Logo board	Chassis	M3x5	2	
Wireless card	System board	M2x3.5	1	
3.5" hard drive	Chassis	6-32UNCx3.6	2	
Hard-drive bracket	Hard drive	6-32UNCx3.6	4	
2.5" hard drive	Chassis	6-32UNCx3.6	1	

Component	Secured to	Screw type	Quantity	Screw image
Hard-drive bracket	Hard drive	M3x3.5	4	
Graphics-card bracket	Chassis	6-32UNCx3.6	2	
Graphics card	Chassis	6-32UNCx3.6	1	
Fan	Chassis	6-32UNCx3.6	1	
Power-supply unit	Chassis	6-32UNCx6.3	4	
Front cover	Chassis	6-32UNCx3.6	1	
Optical drive	Chassis	M3x5	1	
Front I/O panel	Chassis	M3x5	2	
Top cover	Chassis	M3x5	1	
Front bezel	Chassis	M3x5	11	
Antenna	Chassis	M3x5	2	
Left-side cover	Chassis	M3x5	2	



<b>Component</b>	<b>Secured to</b>	<b>Screw type</b>	<b>Quantity</b>	<b>Screw image</b>
Bottom cover	Chassis	M3x5	3	
Top bracket	Chassis	M3x5	2	
System board	Chassis	6-32UNCx6.3	8	

Identifier	GUID-32920A3D-EF37-460E-B64C-7149A8013426
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Status	Released
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## Removing the right-side cover

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 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-FDE02A8E-D1D8-4715-84E7-135C5599D81D
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Status	Released
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## Procedure

- 1 Remove the two screws (6-32UNCx6.3) that secure the cover to the chassis.



- 2 Release the computer cover by sliding it towards the back of the computer and lift the cover off the chassis.



Identifier	GUID-1C3945D8-E66C-4259-9384-C8C7E07F7495
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Status	Released
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## Replacing the right-side cover



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-AE843551-0009-44F8-850F-F3C82AA12173
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Status	Released
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## Procedure

- 1 Align the tabs on the computer cover with the slots on the chassis and slide it towards the front of the computer.
- 2 Replace the two screws (6-32UNCx6.3) that secure the computer cover to the chassis.



Identifier	GUID-F7138A23-9ABB-482C-B241-7FB96F36417B
Status	Released

## Removing the front cover

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 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

### Prerequisites

Remove the [right-side cover](#).

Identifier	GUID-E801D239-4162-4E97-95F9-0D3A119427F9
Status	Released

### Procedure

- 1 Remove the screw (6-32UNCx3.6) that secures the front cover to the chassis.

- 2 Grasp and release the front cover tabs sequentially from the top, by moving them outward from the front bezel.



Identifier	GUID-44D4910E-043B-495A-A75E-DCBD5E9F4C43
Status	Released

## Replacing the front cover

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 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-DFAAB95D-7FA7-4F38-A607-DD3EC00CDD4C
Status	Released

## Procedure

- 1 Align and insert the front-cover tabs into the front-panel slots and snap into place.
- 2 Replace the screw (6-32UNCx3.6) that secures the front cover to the chassis.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).

Identifier	GUID-47896E9F-B3AA-4486-93CC-B381C3032AFB
Status	Released

## Removing the slim optical drive



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-6504958B-E9AE-45B7-8C36-250B50B118C4
Status	Released

### Prerequisites

- 1 Remove the [right-side cover](#).
- 2 Remove the [front cover](#).

Identifier	GUID-AC2A27D9-4A33-43D5-8589-A29EB436959F
Status	Released

### Procedure

- 1 Disconnect the power cable from the optical drive.
- 2 Disconnect the data cable from the optical drive.



- 3** Pull to slide the slim optical-drive assembly out through the front of the computer.



- 4** Using your finger tips, pry the slim optical-drive bracket from the optical drive.

- 5** Lift the slim optical-drive assembly off the slim optical-drive bracket.



- 6** Remove the slim optical-drive bezel from the optical drive.



Identifier GUID-3856FF46-1B1F-4FC1-AB5B-4269FED00B90

Status Released

## Replacing the slim optical drive

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier GUID-87E3100B-0046-4D1C-9EE2-3EE84BAFA8BB

Status Released

## Procedure

- 1 Align and snap the slim optical-drive bezel to the optical drive.
- 2 Place the slim optical-drive assembly on the slim optical-drive bracket and snap the slim optical-drive assembly in place.
- 3 Slide the slim optical-drive assembly into the slim optical-drive bay through the front of the computer.
- 4 Connect the data cable and power cable to the optical drive.
- 5 Place the computer in an upright position.

Identifier GUID-20BB6126-46D1-491E-A5CF-F259EFDC85F9

Status Released

## Post-requisites

- 1 Replace the [front cover](#).
- 2 Replace the [right-side cover](#).

Identifier	GUID-D2D3628D-0E08-458C-8A93-86FADC96720D
Status	Released

## Removing the light bar

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 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

## Prerequisites

Remove the [right-side cover](#).

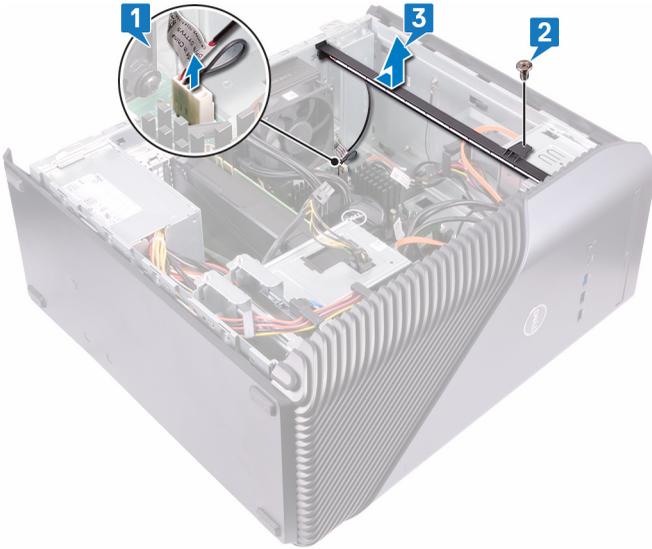
Identifier	GUID-8B9E9AA4-9CF0-49C0-A7D8-A9D122215450
Status	Released

## Procedure

- 1 Disconnect the light bar cable from its connector on the chassis.
- 2 Remove the screw (M3x5) that secures the light bar to the chassis.



- 3** Slide and remove the light bar from the chassis.



Identifier	GUID-05D548D8-E9E9-4FDF-A31B-CA1DF3FEA570
Status	Released

## Replacing the light bar



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-CCC9ECE1-F07B-4761-97AE-E3603B1CD91F
Status	Released

## Procedure

- 1 Align and slide the light bar into the slot on the chassis.
- 2 Replace the screw (M3x5) that secures the light bar to the chassis.
- 3 Connect the light bar cable to its connector on the chassis.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).



Identifier	GUID-4290FDC0-A098-4D76-91B1-4DB14D54CD01
Status	Released

## Removing the memory module

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**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

### Prerequisites

Remove the [right-side cover](#).

Identifier	GUID-DFA59FFD-53E9-4E5B-B5FC-C15AF5C8FFFE
Status	Released

## Procedure

- 1 Lay the computer on the left side and locate the memory card slot on the system board.



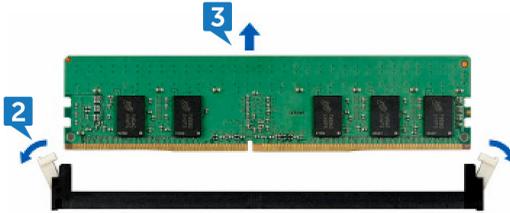
- 2 Using your fingertips, spread apart the securing clip at each end of the memory-module slot until the memory module pops up.



- Slide and remove the memory module from the memory-module slot.

 **NOTE:** If the memory module is difficult to remove, gently ease the memory module back and forth to remove it from the slot.

 **CAUTION:** To prevent damage to the memory module, hold the memory module by the edges. Do not touch the components on the memory module.



Identifier GUID-74047A37-7618-4FC3-8768-7B6A31495EB9

Status Released

## Replacing the memory module

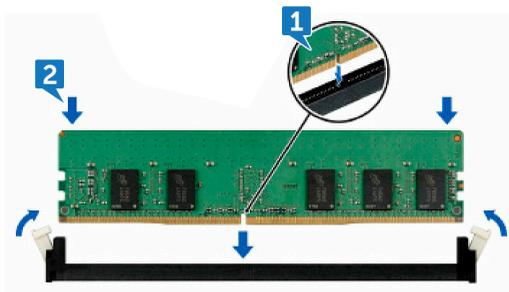
**⚠ WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier GUID-32C750AB-60D0-4A3A-9FE9-CF69AB3BAB27

Status Released

## Procedure

- 1 Align the notch on the memory module with the tab on the memory-module slot and insert the memory module into the memory-module slot.
- 2 Press the memory module down until it clicks into place.



- 3 Place the computer in an upright position.



Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).

Identifier	GUID-386CBA0B-93A8-4910-8394-48CEEC6AEE60
Status	Released

## Removing the front I/O-panel



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-6504958B-E9AE-45B7-8C36-250B50B118C4
Status	Released

### Prerequisites

- 1 Remove the [right-side cover](#).
- 2 Remove the [front cover](#).

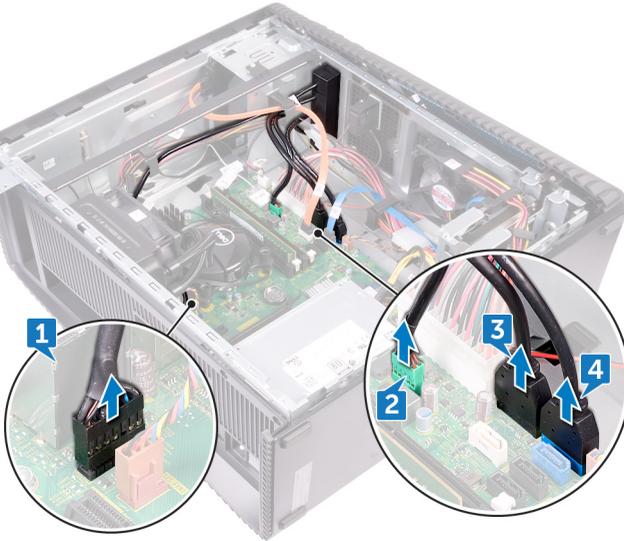
Identifier	GUID-00487A2E-EE48-49F4-9AAD-636BBBD2A7D5
Status	Released

### Procedure

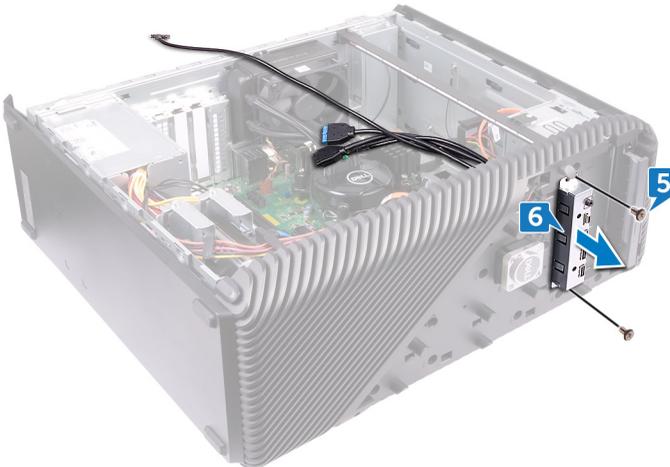
- 1 Lay the computer on the left side and disconnect the front-audio cable from the system board.
- 2 Disconnect the USB 2.0 cable from the system board.
- 3 Disconnect the USB 3.1 (Type-C) cable from the system board.



- 4 Disconnect the USB 3.0 cable from the system board.



- 5 Remove the two screws (M3x5) that secures the front I/O panel to the chassis.
- 6 Pull out the front I/O panel along with the cables, through the front of the computer.



Identifier	GUID-A8A1636E-383F-4859-AA91-CA545C7341DF
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Status	Released
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## Replacing the front I/O-panel



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-E3670601-85A3-4326-BDDC-85F92EA43468
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Status	Released
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## Procedure

- 1 Slide the front I/O panel into the front I/O panel bay through the front of the computer.
- 2 Replace the two screws (M3x5) that secures the front I/O panel to the chassis.
- 3 Connect the front-audio cable, USB 2.0 cable, USB 3.0 cable and USB 3.1 (Type-C) cable to the system board.
- 4 Place the computer in an upright position.

Identifier	GUID-20BB6126-46D1-491E-A5CF-F259EFDC85F9
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Status	Released
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## Post-requisites

- 1 Replace the [front cover](#).
- 2 Replace the [right-side cover](#).



Identifier	GUID-1328A5E6-93D4-47C3-BD7C-DC41AE7FEBB5
Status	Released

## Removing the logo board

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-6504958B-E9AE-45B7-8C36-250B50B118C4
Status	Released

### Prerequisites

- 1 Remove the [right-side cover](#).
- 2 Remove the [front cover](#).

Identifier	GUID-167D3989-93A4-419C-BA84-78147C93F6BB
Status	Released

### Procedure

- 1 Disconnect the logo-board cable from the logo board.
- 2 Disconnect the two screws (M3x5) that secures the logo board to the chassis.



Identifier	GUID-5D4718A2-DEBB-4ABC-9F1F-7E0853060193
Status	Released

## Replacing the logo board

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-B9ACF42E-3D66-433F-AD31-F54B96224D31
Status	Released

## Procedure

- 1 Align the logo board with the slot on the chassis and replace the two screws (M3x5) that secures the logo board to the chassis.
- 2 Connect the logo-board cable to the logo board.

Identifier	GUID-20BB6126-46D1-491E-A5CF-F259EFDC85F9
Status	Released

## Post-requisites

- 1 Replace the [front cover](#).
- 2 Replace the [right-side cover](#).

Identifier	GUID-4AE1D4BE-B8A9-400E-BCB8-B327BA228587
Status	Released

# Removing the front-panel light board

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**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-6504958B-E9AE-45B7-8C36-250B50B118C4
Status	Released

## Prerequisites

- 1 Remove the [right-side cover](#).
- 2 Remove the [front cover](#).

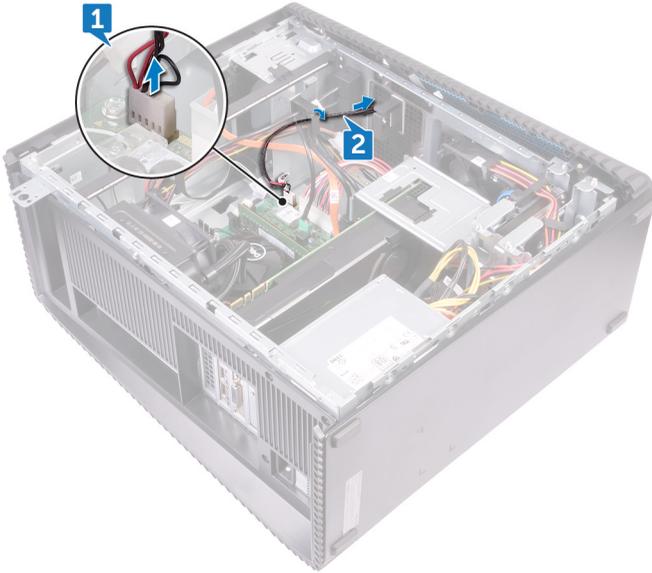
Identifier	GUID-D4DE9476-2C10-44F7-8B64-7BB8D038B1CC
Status	Released

## Procedure

- 1 Lay the computer on the left side and disconnect the front panel light-board cable from the system board.

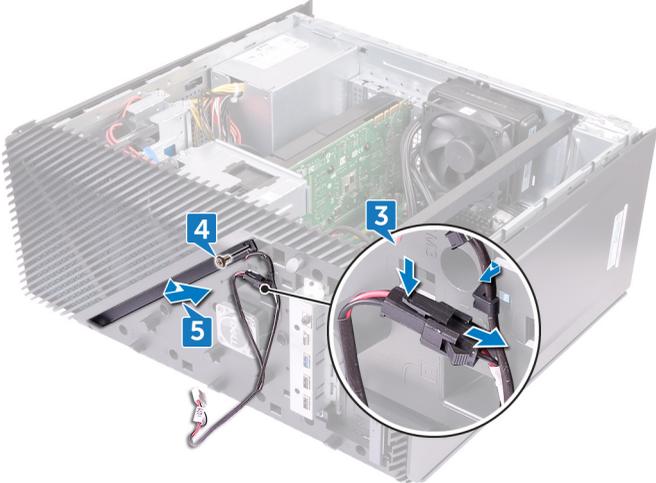


- 2 Remove the front panel light-board cable from the routing guides on the chassis.



- 3 Press the tab and release it from the routing guide on the chassis and disconnect the front light bar cable from the logo board.
- 4 Remove the screw (M3x5) that secures the front panel light-board to the chassis.

5 Remove the front panel light-board from the chassis.



Identifier GUID-A8335674-D604-4255-AABC-E12C2241F994

Status Released

# Replacing the front-panel light board



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier GUID-D1748F4F-A4A8-4987-BCA0-CD438F74F7ED

Status Released

## Procedure

- 1 Align the front panel light-board cable to the slot on the chassis.
- 2 Replace the screw (M3x5) that secures the front panel light-board to the chassis.
- 3 Connect the front panel light-board cable to the logo board.
- 4 Route the cables through the routing guides on the chassis and connect the front panel light-board cable to the system board.
- 5 Place the computer in an upright position.

Identifier GUID-20BB6126-46D1-491E-A5CF-F259EFDC85F9

Status Released

## Post-requisites

- 1 Replace the [front cover](#).
- 2 Replace the [right-side cover](#).

Identifier	GUID-1C25F362-25CF-40CD-8A9B-2B98FB94F5FC
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Status	Released
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## Removing the solid-state drive

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 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

 **CAUTION:** Solid-state drives are fragile. Exercise care when handling the solid-state drive.

 **CAUTION:** To avoid data loss, do not remove the solid-state drive while the computer is in sleep or on state.

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
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Status	Released
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## Prerequisites

Remove the [right-side cover](#).



Identifier	GUID-F2146D9F-F2E2-4CB2-B5CE-0E257EBF58A0
Status	Released

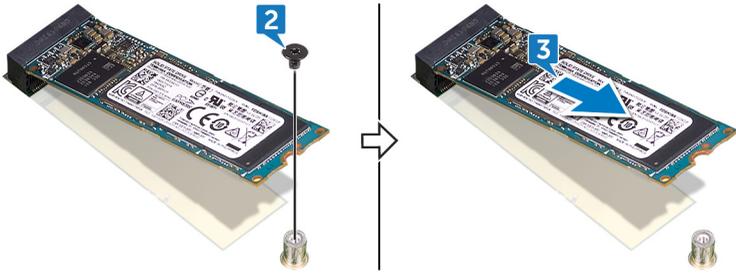
## Procedure

- 1 Lay the computer on the left side and locate the solid-state drive slot on the system board.



- 2 Remove the screw (M2x3.5) that secures the solid-state drive to the system board.

- 3** Slide and lift the solid-state drive off the system board.



Identifier	GUID-792E5316-8EFA-4894-AE68-995416D3FD47
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Status	Released
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## Replacing the solid-state drive

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**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).



**CAUTION:** Solid-state drives are fragile. Exercise care when handling the solid-state drive.

Identifier	GUID-6650A96E-1D81-465F-8F44-5C890DA79F44
Status	Released

## Procedure

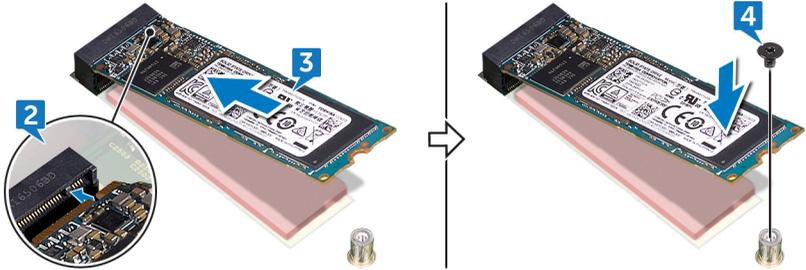
- 1 Adhere the thermal pad to the system board.



- 2 Align the notch on the solid-state drive with the tab on the solid-state drive slot.
- 3 Insert the solid-state drive at a 45-degree angle into the solid-state drive slot.



- 4 Press the other end of the solid-state drive down and replace the screw (M2x3.5) that secures the solid-state drive to the system board.



- 5 Place the computer in an upright position.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).

Identifier	GUID-4AF7A7F4-79DC-43F4-A4DF-63362F890FB6
Status	Released

## Removing the wireless card

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 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

### Prerequisites

Remove the [right-side cover](#).



Identifier	GUID-A96E6565-9F0D-49A4-9C31-203E1174655B
Status	Released

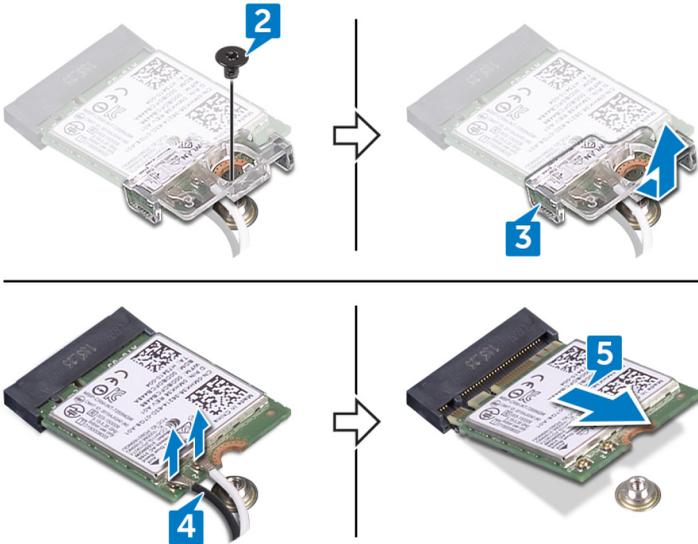
## Procedure

- 1 Lay the computer on the left side and locate the wireless card on the system board.



- 2 Remove the screw (M2x3.5) that secures the wireless card to the system board.
- 3 Lift the wireless-card bracket off the wireless card.
- 4 Disconnect the antenna cables from the wireless card.

- 5 Slide and remove the wireless card from the wireless-card slot.



Identifier	GUID-94E88AEC-6F12-4B0E-AA6A-B28D8E200225
Status	Released

## Replacing the wireless card



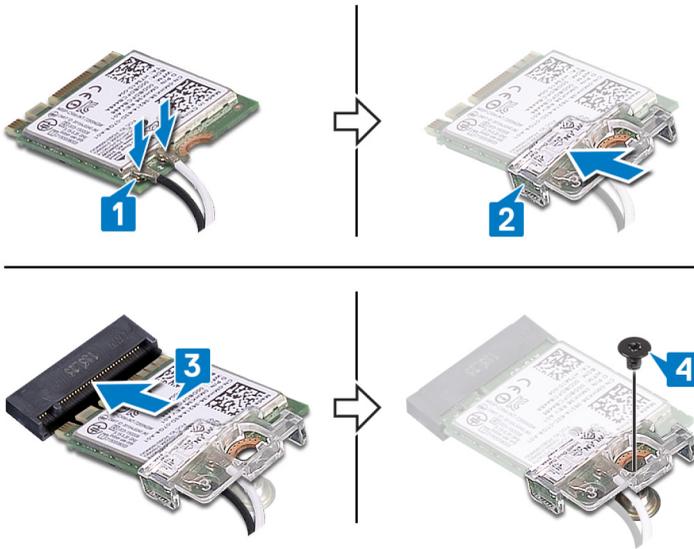
**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-3F279C95-9087-4E9A-A39B-9BFAAC527D1C
Status	Released

## Procedure

- 1 Connect the antenna cables to the wireless card.
- 2 Place the wireless-card bracket over the wireless card.
- 3 Align the notch on the wireless card with the tab on the wireless-card slot and slide the wireless card at an angle into the wireless-card slot.

- 4 Replace the screw (M2x3.5) that secures the wireless card to the system board.



- 5 Place the computer in an upright position.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).



Identifier	GUID-30EEBC49-DE3E-4C3F-8226-86CE5F32F388
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Status	Released
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## Removing the coin-cell battery

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

 **CAUTION:** Removing the coin-cell battery resets the BIOS setup program's settings to default. It is recommended that you note the BIOS setup program's settings before removing the coin-cell battery.

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
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Status	Released
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## Prerequisites

Remove the [right-side cover](#).

Identifier GUID-7D9E6047-0114-44CF-B114-7332A7F15AF4

Status Released

## Procedure

- 1 Lay the computer on the left side and locate the coin-cell battery on the system board.



- 2 Press the tab on the coin-cell battery socket.
- 3 Release the coin-cell battery out of its socket.



Identifier	GUID-5E22F4A0-F01F-4522-8155-BE22A8CA6E5F
Status	Released

## Replacing the coin-cell battery

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-3B0C543D-78BF-49F1-86D8-3EE8B3A25B47
Status	Released

## Procedure

- 1 Insert the coin-cell battery into the battery socket with the positive side facing up, and snap the battery into place.
- 2 Place the computer in an upright position.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).

Identifier	GUID-7E6BEE2D-7C06-4C03-9249-AC21E7E6D309
Status	Released

## Removing the 3.5-inch hard drive

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

### Prerequisites

Remove the [right-side cover](#).

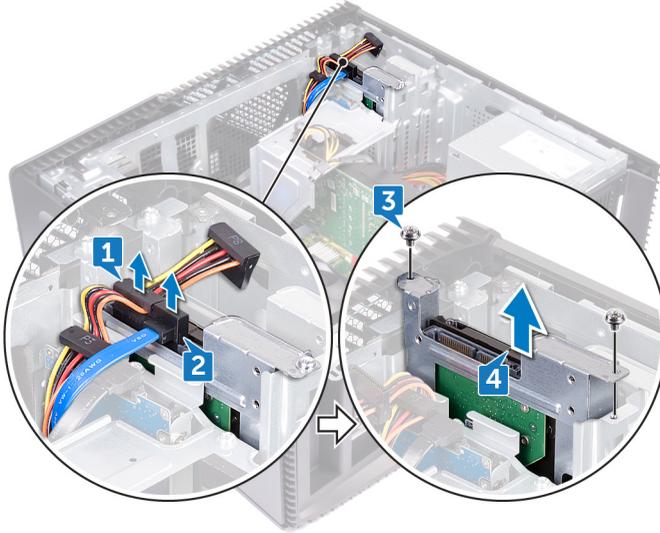
Identifier	GUID-7F30ABD3-B403-45CF-B222-2B673D46B2E5
Status	Released

### Procedure

- 1 Lay the computer on the left side and disconnect the power cable from the hard drive.
- 2 Disconnect the data cable from the hard drive.
- 3 Remove two screws (6-32UNCx3.6) that secure the hard-drive assembly to the side-chassis.



- Lift the hard-drive assembly out of the slot on the side-chassis.



- Remove the four screws (6-32UNCx3.6) that secure the hard-drive bracket to the hard drive.
- Lift the hard drive off the hard-drive bracket.



Identifier	GUID-3D8BE5D4-4E0C-4F44-80AA-09DA16493D7B
Status	Released

## Replacing the 3.5-inch hard drive

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-CD781F95-A833-4011-A61B-F2786319DE00
Status	Released

## Procedure

- 1 Place the hard drive in the hard-drive bracket.
- 2 Align the screw holes on the hard drive with the screw holes on the hard-drive bracket.
- 3 Replace the four screws (6-32UNCx3.6) that secure the hard-drive bracket to the hard drive.
- 4 Slide the hard-drive assembly into the slot on the side-chassis and replace the two screws (6-32UNCx3.6) that secure the hard-drive assembly to the side-chassis.
- 5 Connect the data cables and the power cables to the hard drive.
- 6 Place the computer in an upright position.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).



Identifier	GUID-98B8DA6D-EA14-47F7-86D4-91DF5D12C560
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Status	Released
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## Removing the 2.5-inch hard drive



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
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Status	Released
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## Prerequisites

Remove the [right-side cover](#).

Identifier	GUID-BB07406A-E079-4F1E-BD71-24FA04117D50
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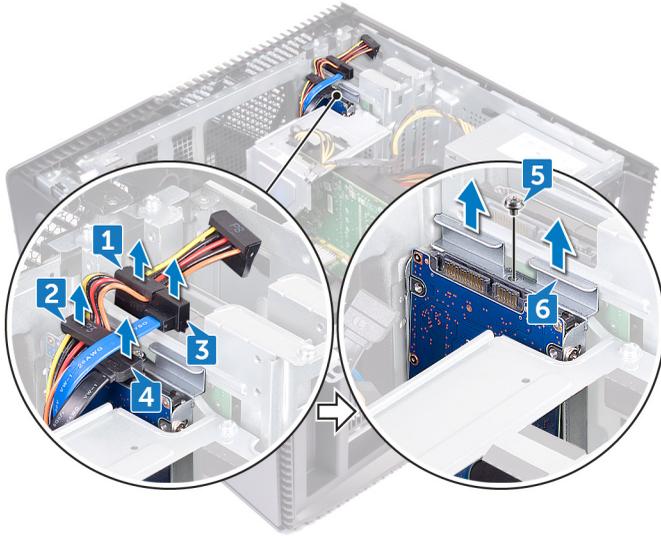
Status	Released
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## Procedure

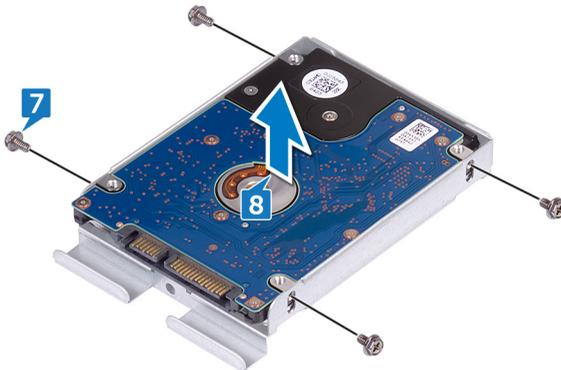
- 1 Lay the computer on the left side and disconnect the power cable from the 3.5-inch hard drive.
- 2 Disconnect the power cable from the 2.5-inch hard drive.
- 3 Disconnect the data cable from the 3.5-inch hard drive.
- 4 Disconnect the data cable from the 2.5-inch hard drive.
- 5 Remove the screw (6-32UNCx3.6) that secures the hard-drive assembly to the side-chassis.

- Lift the hard-drive assembly from the side-chassis.

 **NOTE:** Note the orientation of the hard drive so that you can replace it correctly.



- Remove the four screws (M3x3.5) that secure the hard-drive bracket to the hard drive.
- Lift the hard drive off the hard-drive bracket.



Identifier	GUID-B83E85DF-CF65-40DB-AD70-4C901CB1BC1A
Status	Released

## Replacing the 2.5-inch hard drive

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-9969A885-FB95-48A4-92E6-B956050BB5B8
Status	Released

## Procedure

- 1 Place the hard drive in the hard-drive bracket.
- 2 Align the screw holes on the hard drive with the screw holes on the hard-drive bracket.
- 3 Replace the four screws (M3x3.5) that secure the hard-drive bracket to the hard drive.
- 4 Slide the hard-drive assembly into the slot on the side-chassis and replace the screw (6-32UNCx3.6) that secures the hard-drive assembly to the side-chassis.
- 5 Connect the data cables and the power cables to the hard drive.
- 6 Place the computer in an upright position.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).

Identifier	GUID-FAA962E5-AD4D-4E85-BCA3-D99993D9AFD2
Status	Released

## Removing the fan

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

## Prerequisites

Remove the [right-side cover](#).

Identifier	GUID-E14A124C-43A2-478E-B5DC-FE3245374CF5
Status	Released

## Procedure

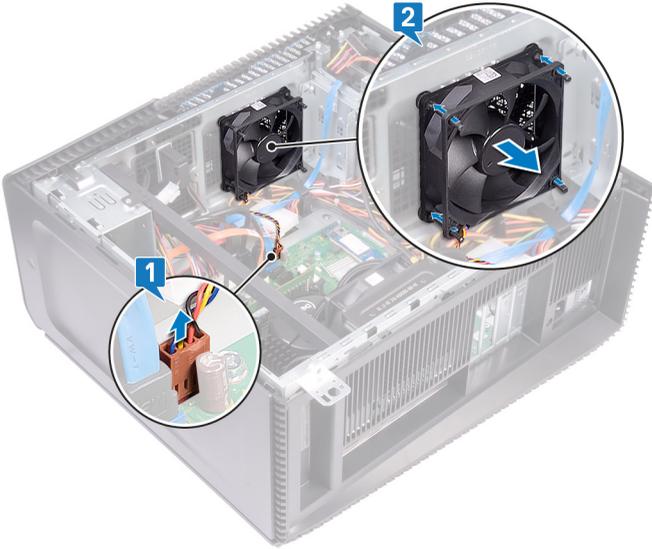
 **NOTE:** Note the orientation of the fan while removing the so that you can replace it correctly.

 **NOTE:** Applicable only for computers shipped with liquid cooling assembly.

- 1 Lay the computer on the left side and remove the system-fan cable from the system board.



- 
- 2** Pull the system fan to release it from the rubber grommets on the chassis and remove the fan from the chassis.



Identifier	GUID-2596AFC0-F1E8-4A0E-A603-7D2CFE582ECE
Status	Released

## Replacing the fan

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-F76DD993-EC46-4DFD-B23A-8474FC549B7A
Status	Released

## Procedure

- 1 Align the slots on the system fan with the rubber grommets on chassis.
- 2 Route the rubber grommets through the slots on system fan and pull the rubber grommets until the fan snaps into position.
- 3 Connect the system-fan cable to the system board.
- 4 Place the computer in an upright position.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).



Identifier	GUID-B4F677A5-AC31-4D04-888C-5BEF42FDA20E
Status	Released

## Removing the graphics card

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

### Prerequisites

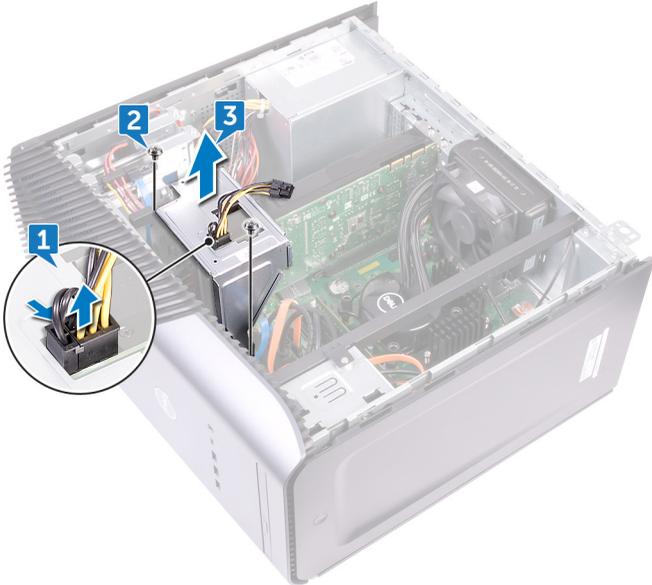
Remove the [right-side cover](#).

Identifier	GUID-E739510C-F979-4B0F-9E14-4A3F7E8D4237
Status	Released

### Procedure

- 1 Press the tab and disconnect the graphics-card cable from the graphics card.
- 2 Lay the computer on the left side and remove the two screws (6-32UNCx3.6) that secures the graphics-card bracket to the chassis.

- 3 Lift the graphics-card bracket off the chassis.



- 4 Remove the two screws (6-32UNCx3.6) that secures the graphics card to the chassis.
- 5 Push the securing tab on the PCIe slot away from the graphics card, grasp the card by its top corner, and ease it out of the slot.



6 Lift the graphics card off the computer.



Identifier	GUID-B39A6E88-5BE8-4905-936B-086878866EBD
Status	Released

## Replacing the graphics card

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-18E03B03-9F85-4F4B-BCF8-AFD70DA271BA
Status	Released

## Procedure

- 1 Align the graphics card with the slot on the chassis.
- 2 Align and place the graphics card into the slot on system board and press down firmly until the graphics card snaps into place.
- 3 Replace the two screws (6-32UNCx3.6) that secure the graphics card to the chassis.
- 4 Align the tab on the graphics-card bracket to the slot on the chassis.
- 5 Align the screw holes on the graphics-card bracket to the screw holes on the chassis and replace the two screws (6-32UNCx3.6) that secures the graphics-card bracket to the chassis.
- 6 Connect the graphics-card cable to the graphics card.
- 7 Place the computer in an upright position.



Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).

Identifier	GUID-46D0A3A8-66E9-497A-B9F9-E623FF02DF0A
Status	Released

## Removing the VR heat sink

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

 **WARNING:** The heat sink may become hot during normal operation. Allow sufficient time for the heat sink to cool before you touch it.

 **CAUTION:** For maximum cooling of the processor, do not touch the heat transfer areas on the heat sink. The oils in your skin can reduce the heat transfer capability of the thermal grease.

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

## Prerequisites

Remove the [right-side cover](#).

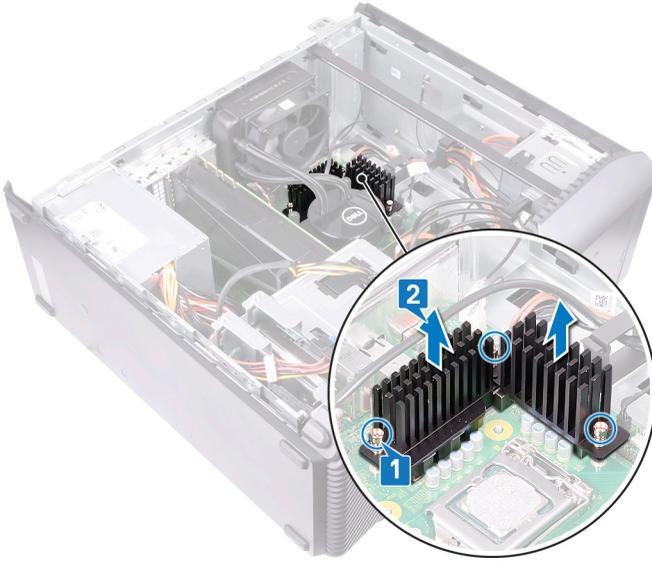
Identifier	GUID-36F3D8DE-DA29-4F6E-A91A-76D51BE38B67
Status	Released

## Procedure

- 1 Loosen the three captive screws that secure the VR heat sink to the system board.



- 2 Lift the VR heat sink out of the chassis.



Identifier	GUID-118BCB52-C6A1-4657-8515-2867C0A7A0C4
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Status	Released
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## Replacing the VR heat sink

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-A6D1D68C-9840-4D06-BD63-960DCD3B0184
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Status	Released
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## Procedure

- 1 Align the three captive screws on the VR heat sink with the slots on the system board.
- 2 Tighten the captive screws that secure the VR heat sink to the system board.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
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Status	Released
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## Post-requisites

Replace the [right-side cover](#).



Identifier	GUID-42E021FE-5B0C-47BB-9498-D96D8CF3292E
Status	Released

# Removing the processor-cooling assembly

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**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-AECECAF7-686B-4CB5-978D-1B3C8E9C8840
Status	Released

## Prerequisites

Remove the [right-side cover](#).

Identifier	GUID-50C6DDF3-A2F9-4431-9104-D22FFF75260C
Status	Released

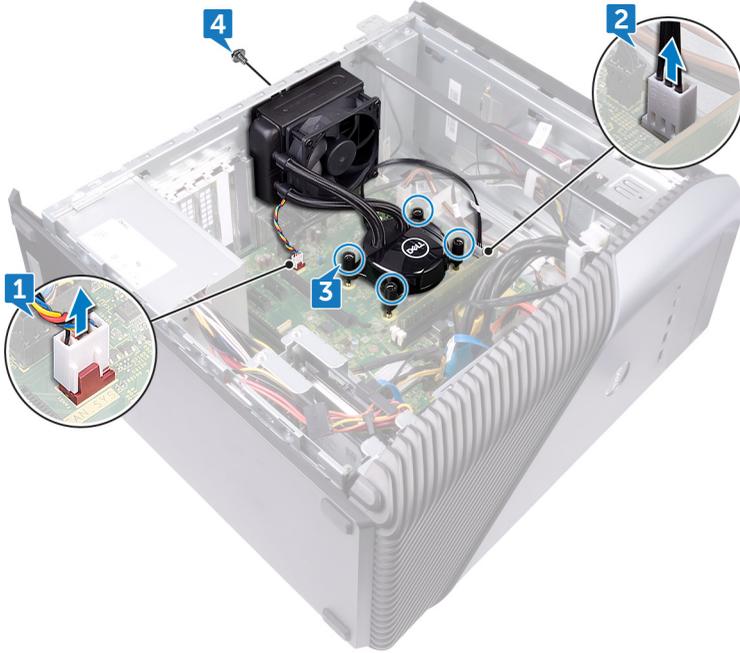
## Procedure



**NOTE:** Applicable only for computers with liquid cooling assembly configuration.

- 1 Lay the computer on the left side and disconnect the fan cable from the system board.
- 2 Disconnect the processor-cooling assembly cable from the system board.
- 3 In the reverse sequential order (as indicated on the processor-cooling assembly), loosen the four captive screws that secure the processor-cooling assembly to the system board.

- 4 Remove the screw (6-32UNCx3.6) that secures the fan to the chassis.



- 5 Lift and release the fan from the chassis.



- 6 Lift the processor-cooling assembly along with the fan off the system board.



Identifier	GUID-CE8A03B5-BE37-480B-91AD-AD42D7FAEB6A
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Status	Released
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# Replacing the processor-cooling assembly

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**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-72F84966-7F26-4E5E-A1AC-C50ED21CF66B
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Status	Released
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## Procedure

- 1 Align the four captive screws on the processor-cooling assembly with the slot on the system board.
- 2 In sequential order (as indicated on the processor-cooling assembly), tighten the captive screws that secure the processor-cooling assembly to the system board.
- 3 Align the tabs on the fan with the slots on the chassis and place the fan in position.
- 4 Replace the screw (6-32UNCx3.6) that secures the fan to the chassis.
- 5 Connect the processor-cooling assembly cable to the system board.
- 6 Place the computer in an upright position.
- 7 Connect the fan cable to the system board.
- 8 Place the computer in an upright position.



Identifier	GUID-1CF3150A-86A6-458D-811B-51E0325C3D96
Status	Released

## Post-requisites

Replace the [right-side cover](#).

Identifier	GUID-54026723-901E-49A7-9E20-7404ECA98BFB
Status	Released

## Removing the processor

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**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-17EE89BA-2AA5-4E96-9773-82D01D87D1E1
Status	Released

## Prerequisites

- 1 Remove the [right-side cover](#).
- 2 Remove the [processor-cooling assembly](#) (optional).



Identifier	GUID-4EBC7A31-BFBB-4CDF-95B1-EF2A6F53B380
Status	Released

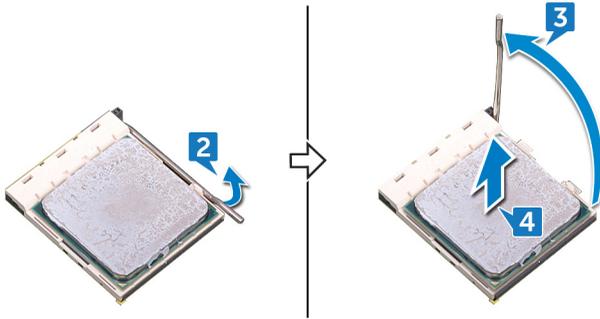
## Procedure

- 1 Lay the computer on the left side and locate the processor on the system board.



- 2 Press the release lever down and then push it away from the processor to release it from the tab.
- 3 Extend the release lever completely and open the processor cover.

- 4 Lift the processor off the processor socket.



Identifier GUID-08EA64DA-0940-45B5-9DEF-7609F5E6BB53

Status Released

## Replacing the processor

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

 **CAUTION:** If either the processor or the heat sink is replaced, use the thermal grease provided in the kit to ensure that thermal conductivity is achieved.

 **NOTE:** A new processor ships with a thermal pad in the package. In some cases, the processor may ship with the thermal pad attached to it.

Identifier GUID-9D3E0464-50A1-4A5D-A720-B60D22F77512

Status Released

## Procedure

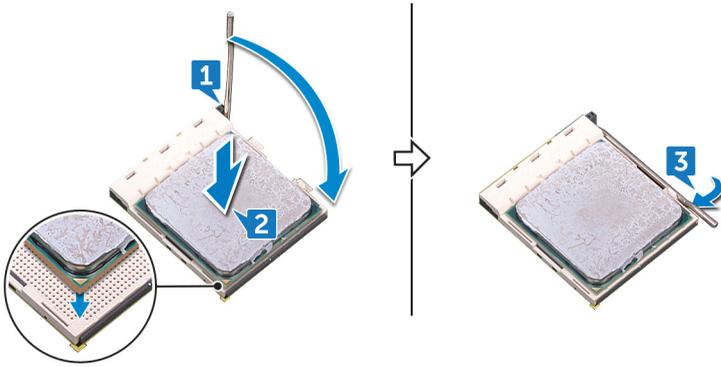
- 1 Ensure that the release lever on the processor socket is fully extended in the open position.

 **CAUTION:** The pin-1 corner of the processor has a triangle that aligns with the triangle on the pin-1 corner on the processor socket. When the processor is properly seated, all four corners are aligned at the same height. If one or more corners of the processor are higher than the others, the processor is not seated properly.

- 2 Align the notches on the processor with the tabs on the processor socket and place the processor in the processor socket.

 **CAUTION:** Ensure that the processor-cover notch is positioned underneath the alignment post.

- 3 When the processor is fully seated in the socket, pivot the release-lever down and place it under the tab on the processor cover.



- 4 Place the computer in an upright position.

Identifier	GUID-25CCC5A4-B2F0-478F-A0C0-BEA7E5B88456
Status	Released

## Post-requisites

- 1 Replace the [processor-cooling assembly](#) (optional).
- 2 Replace the [right-side cover](#).

Identifier	GUID-1F397551-A024-4EA9-8C08-8B7FDE9D50D9
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Status	Released
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## Removing the power-supply unit



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
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Status	Released
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## Prerequisites

Remove the [right-side cover](#).

Identifier	GUID-9CCC06C5-5DFE-4A5C-A3E2-52106D56F9FD
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Status	Released
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## Procedure



**NOTE:** Note the routing of the cables while removing the power-supply unit so that you can replace them correctly.



**NOTE:** Remove the cables from the routing guides on the chassis to avoid potential damage to the cables.

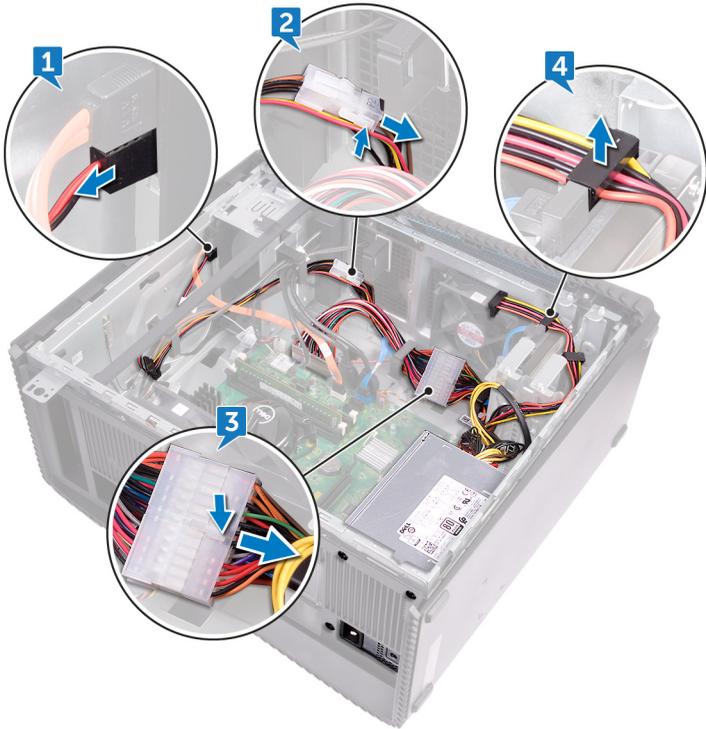


**NOTE:** Disconnect the power cables from their extensions.

- 1 Lay the computer on the left side and disconnect the power cable from the optical drive.
- 2 Press the securing clip and disconnect the power-supply unit cable from the processor-power cable.

- 3 Press the securing clip and disconnect the power-supply unit cable from the system board.
- 4 Disconnect the power cables from the hard disks.

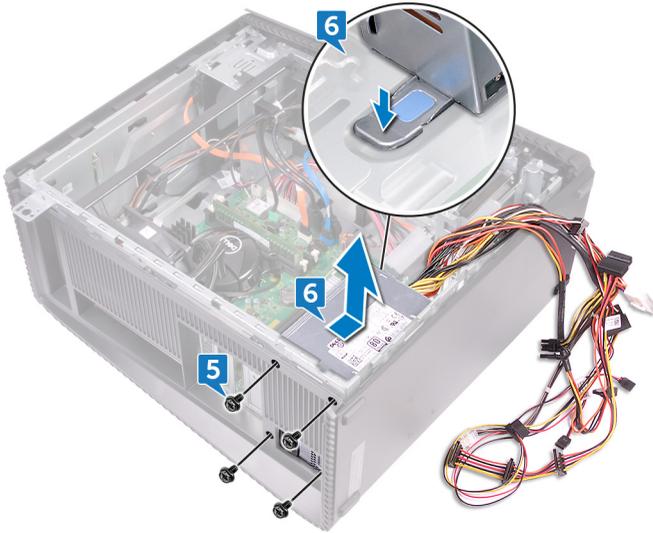
 **NOTE: For computers with graphics card, that has power cable connected, disconnect the power cable from the graphics card.**



- 5 Remove the four screws (6-32UNCx6.3) that secure the power-supply unit to the chassis.



- 6** Press the clamp and slide the power-supply unit towards the front of the chassis and lift the power-supply unit, along with the cables, off the chassis.



Identifier	GUID-CCFAEC7A-D969-4E76-B806-44830D484EDD
Status	Released

## Replacing the power-supply unit

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-19C93B2E-34F3-46F1-9900-4FB4EE3302B9
Status	Released

## Procedure

- 1 Place the power supply on the chassis.
- 2 Slide the power-supply unit towards the back of the chassis until it snaps into place.
- 3 Align the screw holes on the power-supply unit with the screw holes on the chassis.
- 4 Replace the four screws (6-32UNCx6.3) that secure the power-supply unit to the chassis.
- 5 Route the power-supply unit cables through the routing guides on the chassis.
- 6 Connect the power cables to their extensions.
- 7 Connect the processor-power cable and system-board power cable to the system board.
- 8 Connect the power cables to the hard drives and optical drive.
  -  **NOTE:** For computers with graphics card, connect the power cable to the graphics card, if applicable.
- 9 Place the computer in an upright position.



Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).



Identifier	GUID-3F6153AE-D9C1-4062-B211-E93EC9AE091F
Status	Released

## Removing the top cover

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 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

## Prerequisites

Remove the [right-side cover](#).

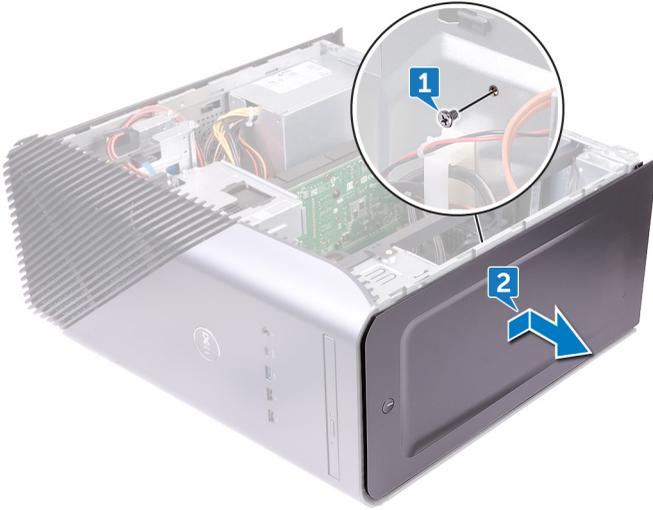
Identifier	GUID-8AE19C8D-3E07-48F6-8ACB-1D18934DABA2
Status	Released

## Procedure

- 1 Lay the computer on the left side and remove the screw (M3x5) that secures the top cover to the chassis.



- 2 Slide the top cover towards the backside of the chassis and remove the top cover from the chassis.



Identifier	GUID-8C492B5B-B5ED-4E67-9666-D18E8041AFFB
Status	Released

## Replacing the top cover

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-EDE4C465-9C95-42A8-A19E-1746EAA9DCF1
Status	Released

## Procedure

- 1 Align the tabs on the top cover with the slots on the chassis.
- 2 Slide the top cover towards the front of the chassis and secure the top cover in place.
- 3 Replace the screw (M3x5) that secures the top cover to the chassis.
- 4 Place the computer in an upright position.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).



Identifier	GUID-E782B6FD-6208-4460-8AD1-2CF3F3D81247
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Status	Released
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## Removing the front bezel



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-E59E0BC3-EB59-4428-B571-13DBE9E646AD
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Status	Released
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## Prerequisites

- 1 Remove the [right-side cover](#).
- 2 Remove the [front cover](#).
- 3 Remove the [slim optical drive](#).
- 4 Remove the [front I/O panel](#).
- 5 Remove the [logo board](#).
- 6 Remove the [front-panel light board](#).
- 7 Remove the [light bar](#).
- 8 Remove the [top cover](#).

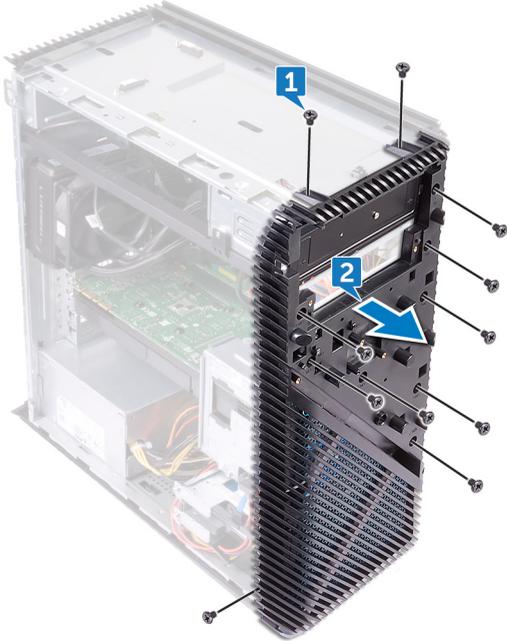
Identifier	GUID-609C00B7-4338-458A-A9EA-9ED7F2B0ACDC
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Status	Released
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## Procedure

- 1 Place the computer in the standing position and remove the 11 screws (M3x5) that secure the front bezel to the chassis.

2 Remove the front bezel from the chassis.



Identifier	GUID-60F23EC0-94F6-45C6-B6CD-17F914DA5206
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Status	Released
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## Replacing the front bezel



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-B853ADE3-B5F6-4FD6-B480-85F8D4F702BF
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Status	Released
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## Procedure

- 1 Align the front bezel to the slots on the chassis.
- 2 Replace the 11 screws (M3x5) that secure the front bezel to the chassis and place the computer with the side-chassis facing up.

Identifier	GUID-A90586B5-61B4-4B52-8254-5580D6F717EE
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Status	Released
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## Post-requisites

- 1 Replace the [top cover](#).
- 2 Replace the [light bar](#).
- 3 Replace the [front-panel light board](#).
- 4 Replace the [logo board](#).
- 5 Replace the [front I/O panel](#).
- 6 Replace the [slim optical drive](#)
- 7 Replace the [front cover](#).
- 8 Replace the [right-side cover](#).

Identifier	GUID-A35BD2D5-B3B3-4708-AF1C-D61C58B9F952
Status	Released

# Removing the power-button board

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**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-EAC5C624-90F9-4EC5-B1C4-09F36F7AFB3D
Status	Released

## Prerequisites

- 1 Remove the [right-side cover](#).
- 2 Remove the [front cover](#).
- 3 Remove the [slim optical drive](#)
- 4 Remove the [top cover](#).

Identifier	GUID-FDCE4B9E-5EFE-42A5-8C24-3DEB7EA5786D
Status	Released

## Procedure

- 1 Lay the computer on the left side and disconnect the power-button cable from the system board.

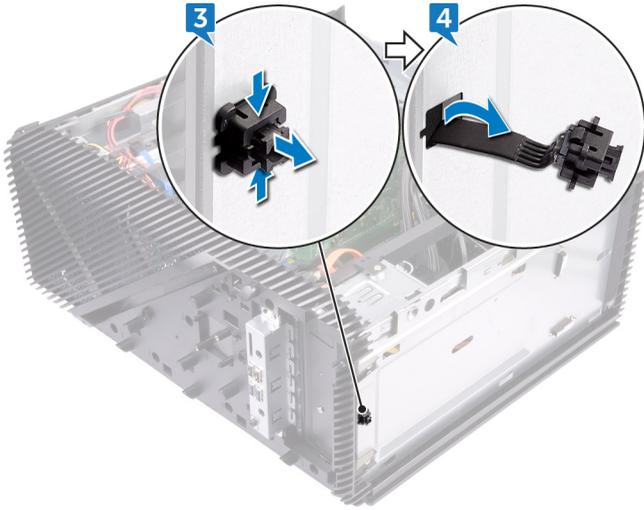


- 2 Remove the power-button cable from the routing guides on the chassis.



- 3 Press the tab on the power-button board to release the module from the top panel.

- 4 Remove the power-button board along with its cable through the slot on the top panel.



Identifier	GUID-FBA68EE4-1E13-4F28-9B84-362694B97060
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Status	Released
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# Replacing the power-button board



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-7B8622B6-1B04-4F8B-8562-2073F98222B5
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Status	Released
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## Procedure

- 1 Route the power-button board cable through the slot on the top panel.
- 2 Align and snap the power-button module into the slot on the top panel.
- 3 Route the power-button board cable through the routing guides on the chassis.
- 4 Connect the power-button board cable to the system board.
- 5 Place the computer in an upright position.

Identifier	GUID-83DC91C4-C1A4-4F8C-8645-FCB3A20EADC6
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Status	Released
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## Post-requisites

- 1 Replace the [top cover](#).
- 2 Replace the [slim optical drive](#).
- 3 Replace the [front cover](#).
- 4 Replace the [right-side cover](#).

Identifier	GUID-C93E16BC-C281-4F9C-BCD1-FBC4C1863FA6
Status	Released

## Removing the antenna

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-C3BA5FE1-0F96-455A-BC72-DFBA39E17E49
Status	Released

## Prerequisites

- 1 Remove the [right-side cover](#).
- 2 Remove the [wireless card](#).

Identifier	GUID-2D5B5663-E942-4CF0-A5B8-E18B188A66C0
Status	Released

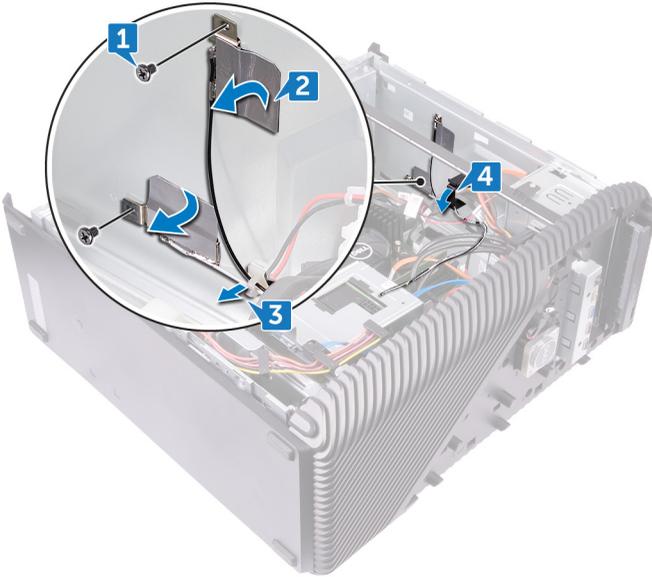
## Procedure

 **NOTE:** Note the routing of white antenna cable and black antenna cable on the chassis while removing them so that you can replace them correctly.

- 1 Lay the computer on the left side and remove the screw (M3x5) that secures the antenna cables to the chassis.
- 2 Peel the tape that secures the antenna cables to the chassis.
- 3 Remove the screw (M3x5) and the tape that secures the antenna cables to the chassis.



- 4 Remove the antenna cables from the routing guide on the chassis.



Identifier	GUID-4EA9E50B-4962-4DF8-BA6D-D799E29ECAFA9
Status	Released

## Replacing the antenna

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-4C48EE62-6322-4CE1-9AED-0A105C50228C
Status	Released

## Procedure

- 1 Align the antenna cables to the slots on chassis and adhere the antenna cables to the chassis.
- 2 Replace the two screws (M3x5) that secures the antenna cables to the chassis.
- 3 Route the antenna cables through the routing guides on the chassis.
- 4 Place the computer in an upright position.

Identifier	GUID-4CA46303-07A4-4444-B1B8-0A56DC8859D1
Status	Released

## Post-requisites

- 1 Replace the [wireless card](#).
- 2 Replace the [right-side cover](#).



Identifier	GUID-EC1A09DC-8665-444F-92B5-24F964CE49CE
Status	Released

## Removing the left-side cover

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 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

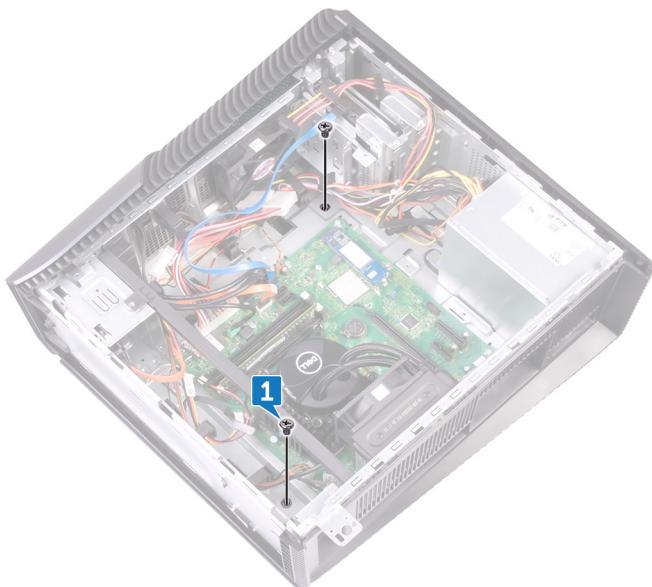
### Prerequisites

Remove the [right-side cover](#).

Identifier	GUID-B13E9F61-4543-4701-A730-D2979868682C
Status	Released

## Procedure

- 1 Lay the computer on the left side and remove the two screws (M3x5) that secure the left-side cover to the chassis.



- 2 Carefully turn over the computer.



- 3 Slide and lift the left-side cover off the chassis.



Identifier	GUID-0FB2BC0B-3E46-4E18-94CD-B3BC995EA713
Status	Released

## Replacing the left-side cover

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-C8374410-0D12-442F-984E-202F35DCF26A
Status	Released

## Procedure

- 1 Align the tabs on the left-side cover with the slots on the chassis and snap the left-side cover to lock it in place.
- 2 Replace the two screws (M3x5) that secure the left-side cover to the chassis.
- 3 Place the computer in an upright position.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

## Post-requisites

Replace the [right-side cover](#).



Identifier	GUID-2EEB123D-D085-4BE8-994B-0F693D55ECE8
Status	Released

## Removing the bottom cover

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

## Prerequisites

Remove the [right-side cover](#).

Identifier	GUID-A1F6F6E1-1E4F-46EA-AF48-B5399B746AFB
Status	Released

## Procedure

- 1 Lay the computer on the left side and remove the three screws (M3x5) that secure the bottom cover to the chassis.

- Slide and remove the bottom cover from the chassis.



Identifier	GUID-482EB960-4B34-4F58-8F2B-9B766EF21AB3
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Status	Released
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## Replacing the bottom cover



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-902BE708-7137-4430-AE4A-706257994C2E
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Status	Released
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## Procedure

- 1 Tilt the computer towards the front until the base is facing up.
- 2 Align the tabs on the bottom cover with the slots on the chassis and snap the bottom cover to lock it in place.
- 3 Replace the three screws (M3x5) that secure the bottom cover to the chassis.
- 4 Place the computer in an upright position.

Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
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Status	Released
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## Post-requisites

Replace the [right-side cover](#).

Identifier	GUID-21C23FE4-8B12-456E-B414-D67A0DEECEB4
Status	Released

## Removing the rear cover

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-7081090C-D0CB-4699-AD12-081D917CD697
Status	Released

## Prerequisites

- 1 Remove the [right-side cover](#).
- 2 Remove the [power-supply unit](#).
- 3 Remove the [top cover](#).
- 4 Remove the [left-side cover](#).
- 5 Remove the [bottom cover](#).

Identifier	GUID-BC638F05-4563-481E-8F50-71B45F32C327
Status	Released

## Procedure

- 1 Remove the two screws (M3x5) that secures the top bracket to the chassis.



- 2 Lift the top bracket off the chassis.



- 3 Place the computer with the left side-chassis facing up and release the slots on the rear cover from the tabs on the chassis and remove the rear cover from the chassis.



Identifier	GUID-51F6F052-95CC-40F8-98EC-1716F71D0367
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Status	Released
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## Replacing the rear cover



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-6B9C3CF4-AA72-46D5-B68E-7737582DA97A
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Status	Released
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## Procedure

- 1 Align the slots on the rear cover with the tabs on the chassis and snap the cover in place.
- 2 Align the screw holes on the top bracket with the screw holes on the chassis.
- 3 Replace the two screw (M3x5) that secures the top bracket to the chassis.
- 4 Place the computer in an upright position.

Identifier	GUID-74EBB0A2-17BC-461C-B911-2A9DCFA42F67
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Status	Released
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## Post-requisites

- 1 Replace the [bottom cover](#).
- 2 Replace the [left-side cover](#).
- 3 Replace the [top cover](#).
- 4 Replace the [power-supply unit](#).
- 5 Replace the [right-side cover](#).

Identifier	GUID-B54497E8-5AD5-4FF9-AD4A-F32FDBEDE1E8
Status	Released

## Removing the system board

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

 **NOTE:** Your computer's Service Tag is stored in the system board. You must enter the Service Tag in the BIOS setup program after you replace the system board.

 **NOTE:** Replacing the system board removes any changes you have made to the BIOS using the BIOS setup program. You must make the appropriate changes again after you replace the system board.

 **NOTE:** Before disconnecting the cables from the system board, note the location of the connectors so that you can reconnect the cables correctly after you replace the system board.

Identifier	GUID-F279E038-B1BA-419F-A01F-3A2F6A911426
Status	Released

## Prerequisites

- 1 Remove the [right-side cover](#).
- 2 Remove the [memory module](#).
- 3 Remove the [solid-state drive](#).
- 4 Remove the [wireless card](#).
- 5 Remove the [graphics card](#).
- 6 Remove the [VR heat sink](#).
- 7 Remove the [processor-cooling assembly](#) (optional).
- 8 Remove the [processor](#).



Identifier	GUID-0E76769E-3642-46B0-9FF8-9DC5EE301892
Status	Released

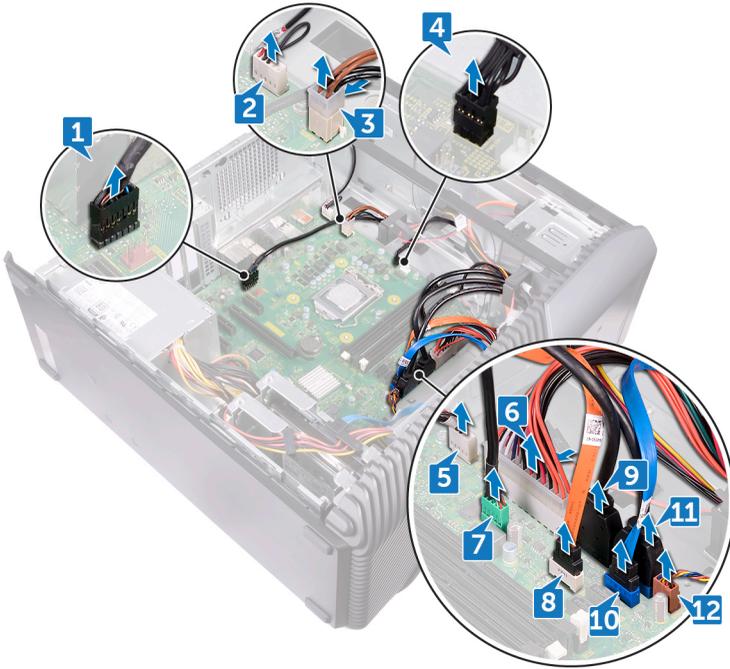
## Procedure



**NOTE: Note the routing of all cables while removing the system board so that you can replace them correctly.**

- 1 Lay the computer on the left side and disconnect the front-audio cable from the system board.
- 2 Disconnect the light-bar cable from the system board.
- 3 Disconnect the processor-power cable from the system board.
- 4 Press the securing clip and disconnect the power-button board cable from the system board.
- 5 Disconnect the light-bar cable from the system board.
- 6 Press the securing clip and disconnect the power-supply unit cable from the system board.
- 7 Disconnect the USB 2.0 cable from the system board.
- 8 Disconnect the SATA1 cable from the system board.
- 9 Disconnect the USB 3.1 (Type-C) cable from the system board.
- 10 Disconnect the SATA0 cable from the system board.
- 11 Disconnect the USB 3.0 cable from the system board.

**12** Disconnect the front chassis-fan cable from the system board.



**13** Remove the eight screws (6-32UNCx6.3) that secure the system board to the chassis.



- 14** Lift the system board and remove it from the chassis.



Identifier GUID-67274E98-E2F1-4B7B-A903-F38BA6B62028

Status Released

## Replacing the system board

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

 **NOTE:** Your computer's Service Tag is stored in the system board. You must enter the Service Tag in the BIOS setup program after you replace the system board.

 **NOTE:** Replacing the system board removes any changes you have made to the BIOS using the BIOS setup program. You must make the appropriate changes again after you replace the system board.

Identifier GUID-F12384DA-5A8B-4529-A93B-4618502A5B4A

Status Released

## Procedure

- 1 Align the system board with the slots on the chassis and place the system board in position.
- 2 Replace the eight screws (6-32UNCx6.3) that secure the system board to the chassis.
- 3 Route the front chassis-fan cable, USB 3.0 cable, SATA0 cable, USB 3.1 (Type-C) cable, SATA1 cable, USB 2.0 cable, power-supply unit cable, light-bar cable, power-button board cable, processor-power cable, light-bar cable, front-audio cable through their routing guides and connect the cables to their respective connectors on the system board.
- 4 Place the computer in an upright position.



Identifier	GUID-BC347508-94A8-4CC0-95DA-E5D9C11B7E16
Status	Released

## Post-requisites

- 1 Replace the [processor](#).
- 2 Replace the [processor-cooling assembly](#) (optional).
- 3 Replace the [VR heat sink](#).
- 4 Replace the [graphics card](#).
- 5 Replace the [wireless card](#).
- 6 Replace the [solid-state drive](#).
- 7 Replace the [memory module](#).
- 8 Replace the [right-side cover](#).



Identifier	GUID-7C4079DF-9FF4-48AC-A162-4A939A8B2557
Status	Released

## BIOS setup program

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Identifier	GUID-81F87C9E-449F-4237-AD63-AA5CB955CC91
Status	Released

## BIOS overview

The BIOS manages data flow between the computer's operating system and attached devices such as hard disk, video adapter, keyboard, mouse, and printer.

Identifier	GUID-1432A924-49E9-4080-961D-2AFBDAF42039
Status	Released

## Entering BIOS setup program

- 1 Turn on (or restart) your computer.
- 2 During POST, when the DELL logo is displayed, watch for the F2 prompt to appear, and then press F2 immediately.



**NOTE: The F2 prompt indicates that the keyboard is initialized. This prompt can appear very quickly, so you must watch for it, and then press F2. If you press F2 before the F2 prompt, this keystroke is lost. If you wait too long and the operating system logo appears, continue to wait until you see the desktop. Then, turn off your computer and try again.**

Identifier	GUID-89E44495-666D-4C7D-93DB-B92B9D586728
Status	Released

## Clearing Forgotten Passwords



**WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

### Prerequisites

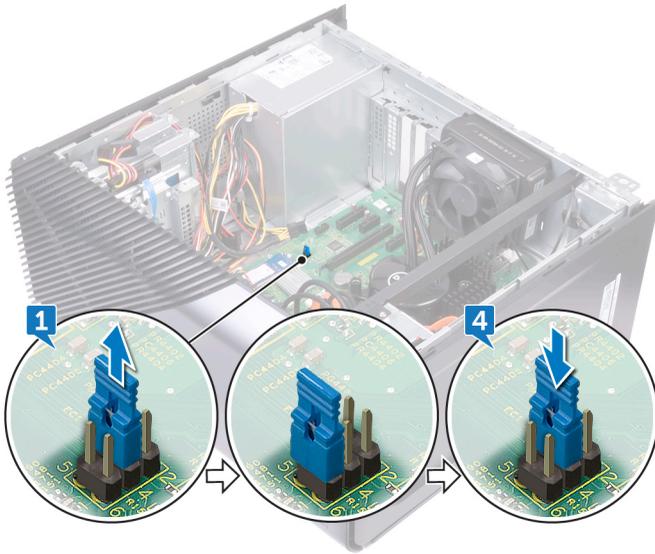
Remove the [right-side cover](#).

Identifier	GUID-2F14952B-BE39-4941-8BD5-065AABB0149F
Status	Released

### Procedure

- 1 Remove the jumper plug from the password jumper-pins.
- 2 Turn on your computer and wait until the operating system is completely loaded.
- 3 Shut down your computer.

- 4 Replace the jumper plug in its original location.



Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

### Post-requisites

Replace the [right-side cover](#).

Identifier	GUID-E5107AD9-2ECB-42E5-AEAF-04C85BDC3117
Status	Released

## Clearing CMOS Settings

-  **WARNING:** Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).



Identifier	GUID-1631ACD3-92F3-4946-AEAD-FF882430ADEE
Status	Released

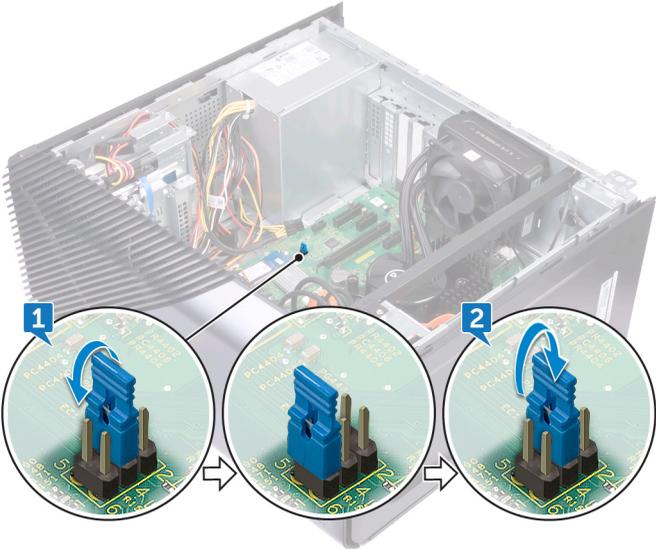
### Prerequisites

Remove the [right-side cover](#).

Identifier	GUID-9121B45B-CF05-4D91-BAF0-62F61BF65434
Status	Released

### Procedure

- 1 Remove the jumper plug from the password jumper-pins (PSWD) and connect it to the CMOS jumper-pins.
- 2 Wait for 5 seconds and then replace the jumper plug to its original location.



Identifier	GUID-8242C53A-B8DC-4B1A-B0E1-4631712DC2AC
Status	Released

### Post-requisites

Replace the [right-side cover](#).



Identifier	GUID-F5899359-C2E1-41C0-9663-4C79969506EB
Status	Released

# Flashing the BIOS

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You may need to flash (update) the BIOS when an update is available or when you replace the system board.

Follow these steps to flash the BIOS:

- 1 Turn on your computer.
- 2 Go to [www.dell.com/support](http://www.dell.com/support).
- 3 Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.



**NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.**

- 4 Click **Drivers & downloads** → **Find it myself**.
- 5 Select the operating system installed on your computer.
- 6 Scroll down the page and expand **BIOS**.
- 7 Click **Download** to download the latest version of the BIOS for your computer.
- 8 After the download is complete, navigate to the folder where you saved the BIOS update file.
- 9 Double-click the BIOS update file icon and follow the instructions on the screen.



Identifier GUID-F80A08EC-BFDD-4599-ABAC-E9FCDB318C24

Status Released

## Diagnostics

The following table provides the different LED states and what they indicate.

**Table 2. LED states**

Power LED state	Description
Off	<ul style="list-style-type: none"><li>• Hibernate or suspend to disk (S4)</li><li>• Power is pff (S5)</li></ul>
Solid Amber	Boot failure: This is a system fault error condition, including the power supply. Only the +5VSB rail on the power supply is working correctly.
Blinking Amber	Boot Failure: The computer is receiving electrical power, and power supplied by the power supply is normal. A device might be malfunctioning or incorrectly installed. Refer to the table below for <b>Amber Blinking Pattern</b> diagnostics suggestion and possible failures.
Solid White	System is in S0 state, the normal power state of a functioning machine.
Blinking White	System is in a low power state, either S1 or S3. This does not indicate a fault condition.

The computer POST (Power On Self Test) ensures that it meets the basic computer requirements and the hardware is working appropriately before the boot process begins. If the computer passes the POST, the computer continues to start in a normal mode. However, if the computer fails the POST, the computer emits a series of LED codes during the start-up. The system LED is integrated on the Power button.

The following table shows different light patterns and what they indicate.

**Table 3. Jumper settings**

<b>Jumper</b>	<b>Function</b>	<b>Operation</b>
JMP1	Service mode	1 - 2 Short: Disable
		1 - 2 Open: Default
	Password	3 - 4 Short: Default
		3 - 4 Open: Clear
	CMOS	5 - 6 Short: Clear
		5 - 6 open: Default



Identifier	GUID-AF18382F-D265-43C2-85DA-28FFB5875F37
Status	Released

# 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 4. Self-help resources**

Information about Dell products and services

[www.dell.com](http://www.dell.com)

Dell Help & Support app



Accessing help

In Windows search, type **Help** and **Support**, and press Enter.

Online help for operating system

[www.dell.com/support/windows](http://www.dell.com/support/windows)

[www.dell.com/support/linux](http://www.dell.com/support/linux)

Troubleshooting information, user manuals, setup instructions, product specifications, technical help blogs, drivers, software updates, and so on.

[www.dell.com/support](http://www.dell.com/support)

Dell knowledge base articles for a variety of computer concerns.

- 1 Go to [www.dell.com/support](http://www.dell.com/support).
- 2 Type the subject or keyword in the **Search** box.
- 3 Click **Search** to retrieve the related articles.

Learn and know the following information about your product:

See *Me and My Dell* at [www.dell.com/support/manuals](http://www.dell.com/support/manuals).

- Product specifications

- Operating system
- Setting up and using your product
- Data backup
- Troubleshooting and diagnostics
- Factory and system restore
- BIOS information

To locate the *Me and My Dell* relevant to your product, identify your product through one of the following:

- Select **Detect Product**.
- Locate your product through the drop-down menu under **View Products**.
- Enter the **Service Tag number** or **Product ID** in the search bar.

## 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 and product, and some services may not be available in your country.**



**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.**

