Latitude 7285 2-in-1

Owner's Manual

Regulatory Model: T02J
Regulatory Type: T02J001

Notes, Cautions, and Warnings

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

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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Contents

1

System specifications

NOTE: Offerings may vary by region. The following specifications are only those required by law to ship with your computer. For more information about the configuration of your computer, go to Help and Support in your Windows operating system and select the option to view information about your computer.

Topics:

Processor specifications

Feature	Specification
Types	• 7th Generation Intel Core i5-7Y54 (4M Cache, up to 3.2 GHz) supports Windows 10 only • 7th Generation Intel Core i5-7Y57 (4M Cache, up to 3.30 GHz), vPro supports Windows 10 only • 7th Generation Intel Core i7-7Y75 (4M Cache, up to 3.60 GHz), vPro supports Windows 10 only

System specifications

Feature	Specification
Chipset	Integrated in the processor
DRAM bus width	64-bit; 2 channels

Memory specifications

Feature	Specification
Memory connector	Onboard memory
Memory capacity	8 GB and 16 GB (on board)
Memory type	LPDDR3—1866 MHz

Video specifications

Feature	Specification
Type	Integrated on system board
UMA controller	Intel Integrated HD Graphics 615
External display support	Optional Dell Adapter - USB Type-C to HDMI/VGA/ Ethernet/USB 3.0/DisplayPort **NOTE: Supports VGA, DisplayPort, HDMI through the docking station.**

Audio specifications

Feature	Specification
Types	High-definition audio
Controller	Realtek ALC3253
Stereo conversion	24-bit—analog-to-digital and digital-to-analog
Internal interface	High-definition audio
External interface	Microphone-in, stereo headphones, and speakers universal connector
Speakers	Two
Internal speaker amplifier	2 W (RMS) per channel
Volume controls	Volume up and Volume down buttons

Port and connector specifications

Feature	Specification
Audio	• Realtek ALC3253-CG Controller • Microphone-in and stereo headphones/speakers universal connector
Video	• Two DisplayPorts over USB Type-C
Memory card reader	microSD 3.0
Micro Subscriber Identity Module (uSIM) card	Optional

Feature	Specification
USIM	Optional micro-SIM card slot
Security Lock	Noble Wedge Lock slot
Other	• Windows Home Button • Power Button • I2C for the Dock Pin Keyboard connection

Communication specifications

Features	Specification
Wireless LAN	Intel Dual-Band Wireless-AC 8265 Wi-Fi + BT 4.2 Wireless Card (2x2). Bluetooth Optional
Mobile Broadband (Optional)	• Dell Wireless Qualcomm Snapdragon X7 LTE-A (DW5811e) for AT&T, Verizon, & Sprint (US) • Dell Wireless Qualcomm Snapdragon X7 LTE-A (DW5811e) (EMEA/ROW) • Dell Wireless Qualcomm Snapdragon X7 HSPA+ (DW5811e) (China/Indonesia/India) • Dell Wireless Qualcomm Snapdragon X7 LTE-A (DW5816e for Japan)
WiGig (Optional)	Intel Tri-Band Wireless-AC 18265 WiGig + Wi-Fi + BT4.2 Wireless Card WiFi Display (Miracast)

Camera specifications

Feature	Specification
Type	• Front Camera- 720P fixed focus • Rear Camera- 8MP auto focus • IR Camera- VGA IR camera
Sensor type	CMOS sensor technology (Front and Rear camera)
Imaging rate	Up to 30 frames per second
Video Resolution	• Front Camera- 1280 x 720 pixels • Rear Camera- 3264 x 2448 pixels

Display specifications

Feature	Specification
Type	12.3" 3:2 Touch with Corning Gorilla Glass 4 Antireflective, and Antismudge
Luminance	400 nits
Height	10.37 inches (263.50 mm)
Width	7.28 inches (185.06 mm)
Diagonal	12.0 inches (312.42 mm)
Maximum resolution	2880 x 1920
Refresh rate	60 Hz

Feature	Specification
Maximum viewing angles—horizontal	+/-80°
Maximum viewing angles—vertical	+/-80°
Pixel pitch	0.135 mm

AC adapter specifications

Feature	Specification
Type	45 W USB Type-C
Input voltage	100 V AC–240 V AC
Input current—maximum	1.5 A
Input frequency	50 Hz to 60 Hz
Output current	3.34 A (continuous)
Rated output voltage	20 VDC
Weight	0.64 lbs (0.29 kg)
Dimensions	• 1.1 x 1.9 x 4.3 inches • 28 x 47 x 108 mm
Temperature range—Operating	0°C to 40°C (32°F to 104°F)
Temperature range—Non-Operating	–40°C to 70°C (–40°F to 158°F)

Battery specifications

Feature	Specification
Type	• 34 Whr Polymer battery with ExpressCharge • 34 Whr Long Life Cycle Battery (2-cell)
34 Whr Polymer battery with ExpressCharge:	
Length	184.00 mm (7.24 inches)
Width	97.00 mm (3.82 inches)
Height	5.9 mm (0.232 inch)
Weight	185.0 g (0.40 lb)
Voltage	11.4 VDC

Feature	Specification
34 Whr Long Life Cycle Battery (2-cell):	
Length	233.06 mm (9.170 inches)
Width	90.73 mm (3.572 inches)
Height	5.9 mm (0.232 inch)
Weight	250.00 g (0.55 lb)
Voltage	11.4 VDC
Temperature range	
Operating	• Charge: 0°C to 50°C (32°F to 122°F) • Discharge: 0°C to 70°C (32°F to 158°F)
Non-operating	- 20°C to 85°C (- 4°F to 185°F)
Life span	300 discharge per charge cycles

Physical specifications

Feature	Specification
Weight - Tablet only	1.5 lb (0.7kg)
Weight - Tablet +Keyboard	3.01 lb (1.36 kg)
Width	10.8 inches (274.8 mm)
Height	0.3 inch (7.9 mm)
Depth	8.2 inches (209.2 mm)

Active pen specifications

Feature	Specification
Model number	PN557W
Length	6.33 inches (160.6 mm)
Diameter	0.37 inch (9.5 mm)
Pressure Resolution	2048 levels
Accuracy/Resolution	• Pen contact accuracy is 0.2 mm at 0° tilt; < 0.4 mm at up to 60° tilt in either stationary or in motion state • Pen hover accuracy is less than 2 mm within hovering height of more or equal to 10 mm in either stationary or in motion state
Weight (including battery)	20.4 g with batteries
Battery	• Stylus: Primary non- rechargeable AAAA alkaline (1x) • End cap: 319 lithium coin cell (2x)

Feature	Specification
Battery life	• Primary AAAA: 12 months for 3 hours/day, 5 days/week • 319 coin cell (2x): 12 months or more
Stylus Tip	• Tip — 0.11 inch (2.8 mm) • Diameter —0.07 inch (1.8 mm)

Wireless charging mat specifications

Feature	Specification
Model Number	PM30W17
PTU Rated Power	20W (AirFuel mode) 30W (Dell on Dell mode)
Weight	645 g (Charging Mat only)
Dimension:	
Legnth	12.28 inch (312.00 mm)
Width	11.17 inch (283.82 mm)
Height	0.69 inch (17.73 mm)
DC Cable length	2.0 m
AC Cable length	1.0 m

Environmental specifications

Temperature	Specifications
Operating	0°C to 35°C (32°F to 95°F)
Storage	–40°C to 65°C (–40°F to 149°F)
Relative humidity —maximum	**Specifications**
Operating	10% to 90% (non-condensing)
Storage	10% to 95% (non-condensing)
Altitude— maximum	**Specifications**
Operating	0 m to 3048 m (0 to 10,000 ft)
Non-operating	0 m to 10,668 m (0 ft to 35,000 ft)
Airborne contaminant level	G2 or lower as defined by ISA S71.04–1985

2

Using your tablet

This section covers how to power on and turn off your tablet including how to install the micro SD and micro SIM cards.

Topics:

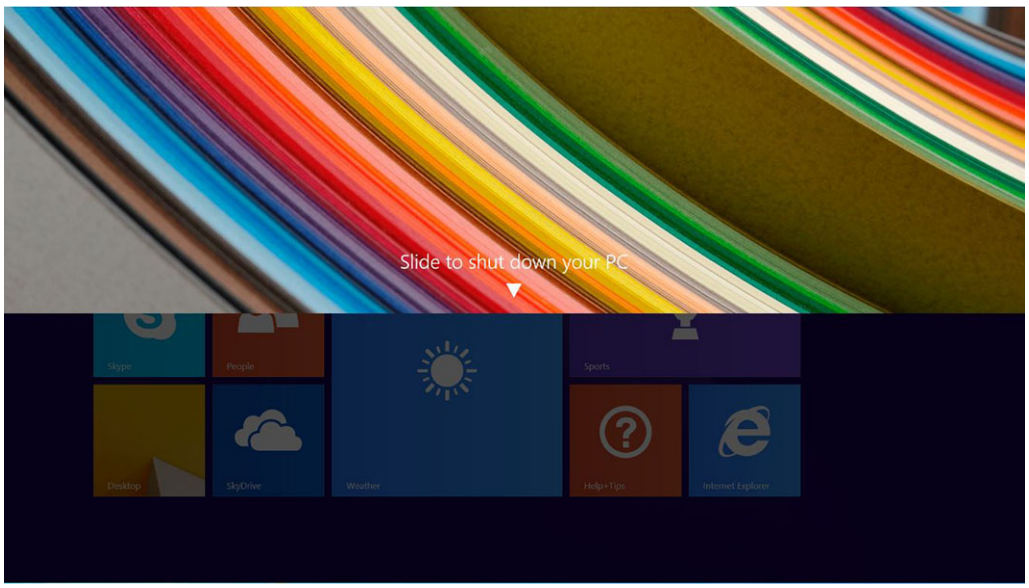
Turning off Your Tablet

Turning off your tablet completely shuts down your tablet. You can turn off your tablet by two ways:

- Using power button
- Using charms menu

1 To turn off your tablet using power button:

a Press and hold the **Power** button until you see "Slide to shut down your PC" on the screen.



NOTE: After you press and hold the Power button, by default, the tablet enters sleep mode. However, if you change the power button setting to shut down, the tablet shuts down. To change the power button setting, go to Control Panel > Power Options > Change Plan Setting > Change Advanced Power Settings. To access Control Panel, swipe at the right edge of the screen, tap Search, enter Control Panel in the search box, and then click Control Panel.

b Slide to shut down your tablet.

NOTE: You can also turn off your tablet without sliding down the screen. Press and hold the Power button for >10 seconds to turn off your tablet. You can perform this force shutdown, if your tablet is not responding / behaving unexpectedly or touch is not working.

2 To turn off your tablet using the charms menu:

a Swipe from the right edge of the display to access the **Charms** menu.

b Touch **Settings** —> **Power** —> **Shut down** to turn off the tablet.

Before Working Inside Your Tablet

Use the following safety guidelines to help protect your tablet from potential damage and to help to ensure your personal safety. Unless otherwise noted, each procedure included in this document assumes that the following condition exists:

- You have read the safety information that shipped with your tablet.

WARNING: Before working inside your tablet, read the safety information that shipped with your tablet. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance

CAUTION: Many repairs may only be done by a certified service technician. You should only perform troubleshooting and simple repairs as authorized in your product documentation, or as directed by the online or telephone service and support team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow the safety instructions that came with the product.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface, such as a connector on the back of the tablet.

CAUTION: Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket.

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; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

NOTE: The color of your tablet and certain components may appear differently than shown in this document.

To avoid damaging your tablet, perform the following steps before you begin working inside the tablet.

1 Ensure that your work surface is flat and clean to prevent the tablet cover from being scratched.

2 Turn off your tablet (see Turning Off Your Tablet).

3 If the tablet is connected to a docking device (docked) such as the optional docking station or keyboard dock, un-dock it.
4 Disconnect the power adapter from the tablet.
5 Press and hold the power button for a few seconds to remove the flea power from the system board.

CAUTION: To guard against electrical shock, always unplug your tablet from the electrical outlet.

CAUTION: Before touching anything inside your tablet, ground yourself by touching an unpainted metal surface, such as the metal at the back of the tablet. While you work, periodically touch an unpainted metal surface to dissipate static electricity, which could harm internal components.

6 Remove the storage SD card from the tablet.

After working inside your tablet

NOTE: Leaving stray loose screws inside your table may severely damage your tablet.

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

3

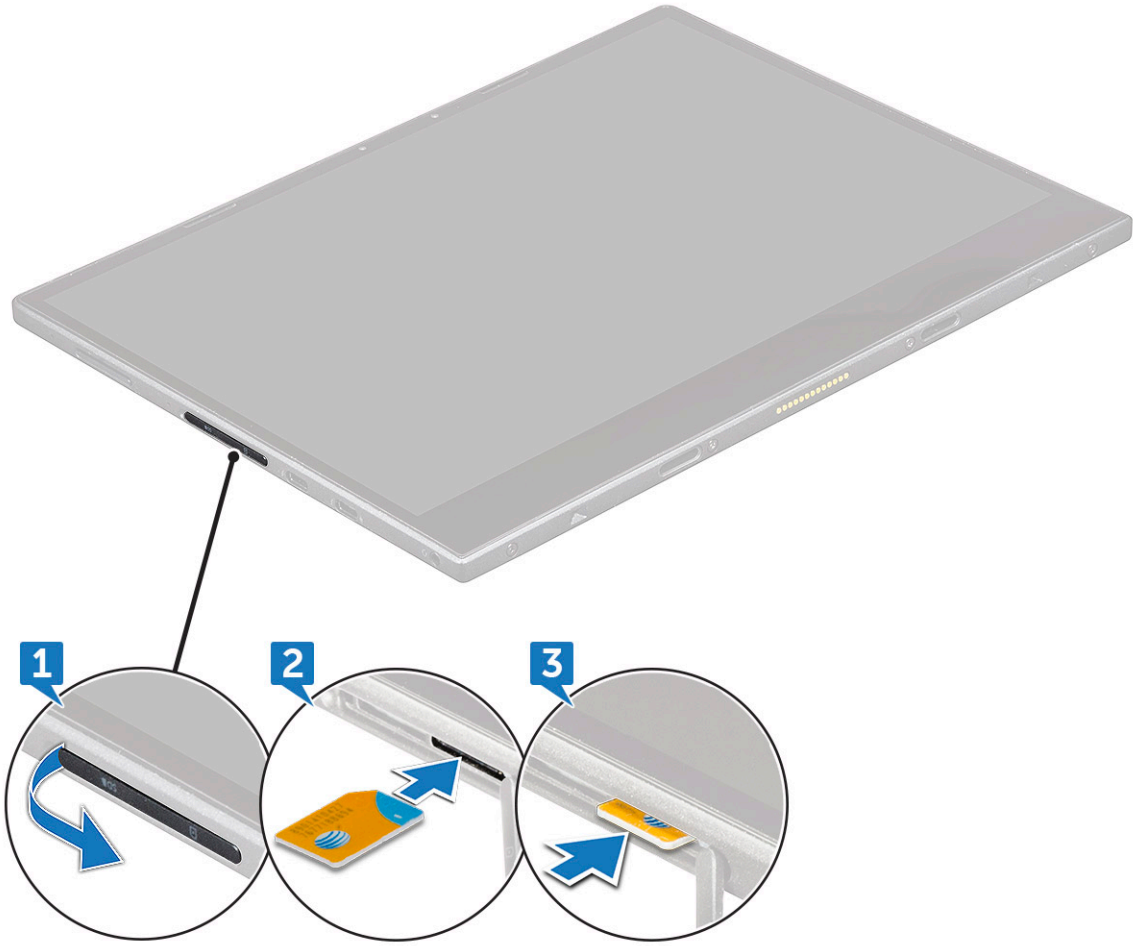
Removing and Installing components

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

Topics:

microSIM card

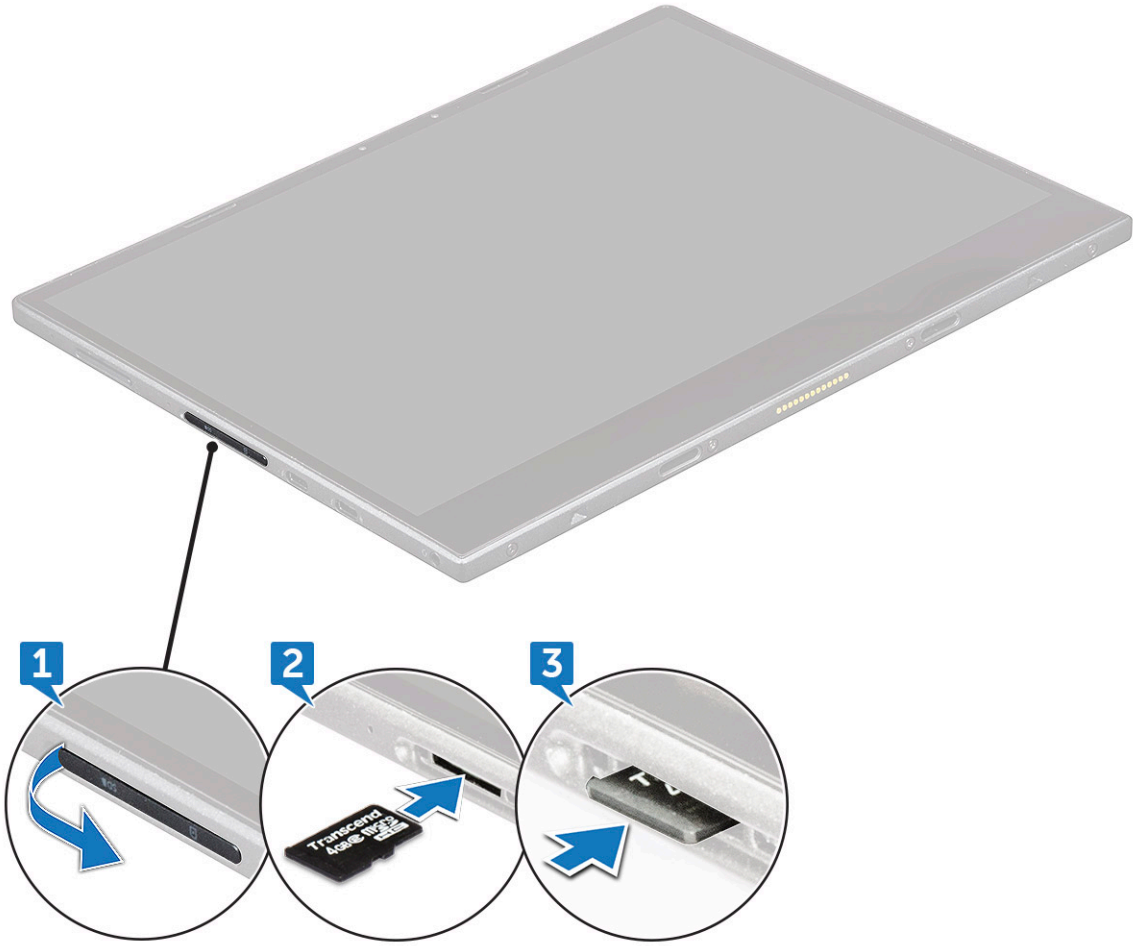
1 Insert a paperclip or a microSIM card removal tool into the pinhole on the microSIM card tray [1].
2 Insert the microSIM card into the slots indicated on the slot [2].
3 Align the cover with the groove on the tablet and slide it inside to secure the microSIM [3].



4 You can perform the same steps to remove the microSIM.

microSD card

1 Insert a paperclip or a microSD card removal tool into the pinhole on the microSD card tray [1].
2 Insert the microSD card into the slots indicated on the slot [2].
3 Align the cover with the groove on the tablet and slide it inside to secure the microSD [3].

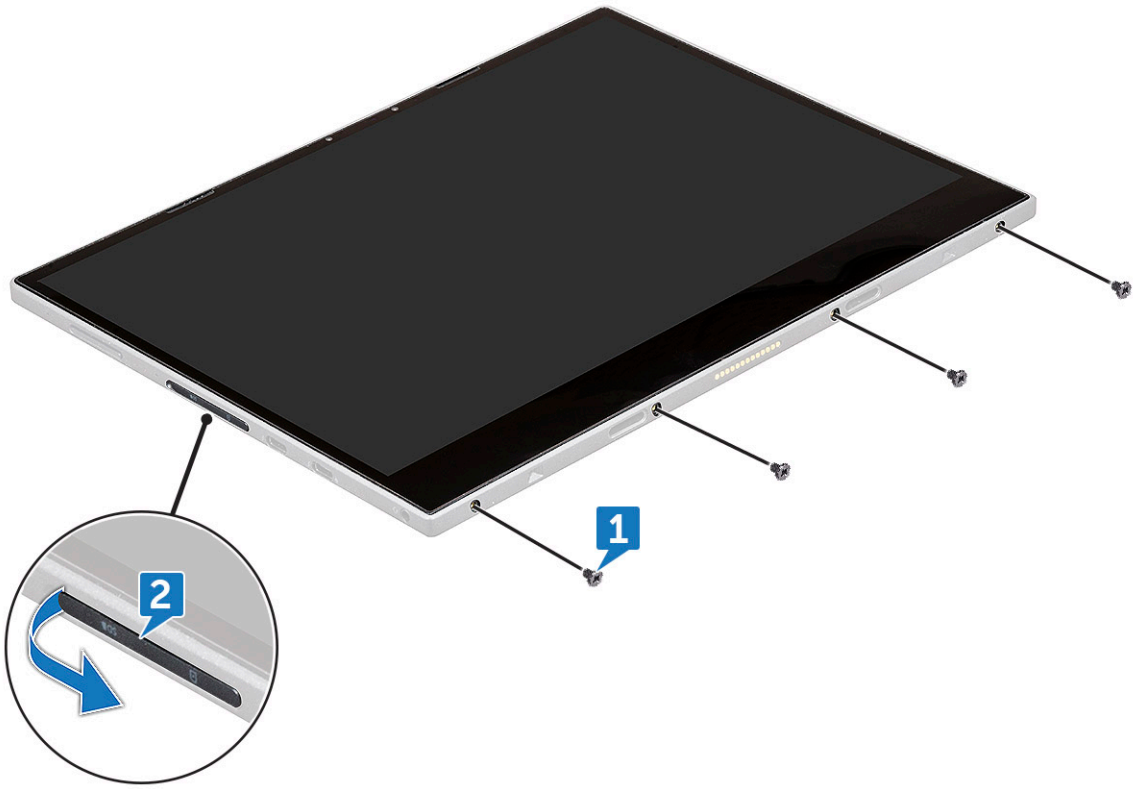


4 You can perform the same steps to remove the microSD.

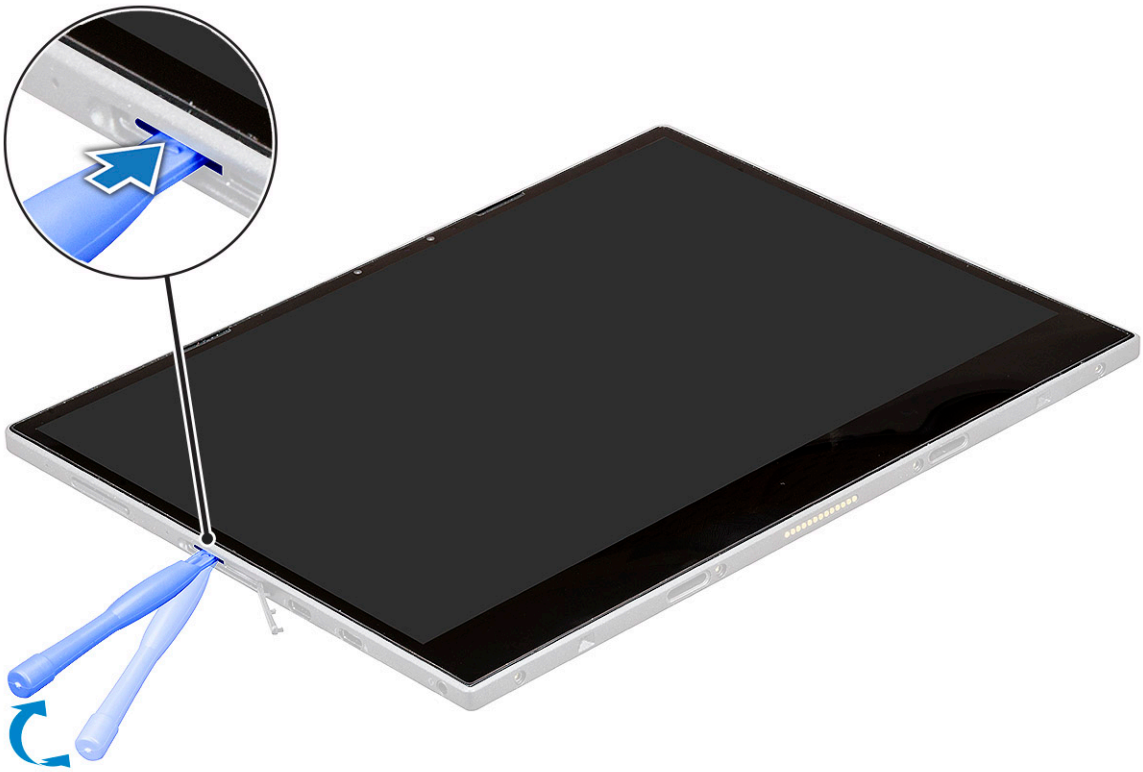
Display Panel

Removing the display panel

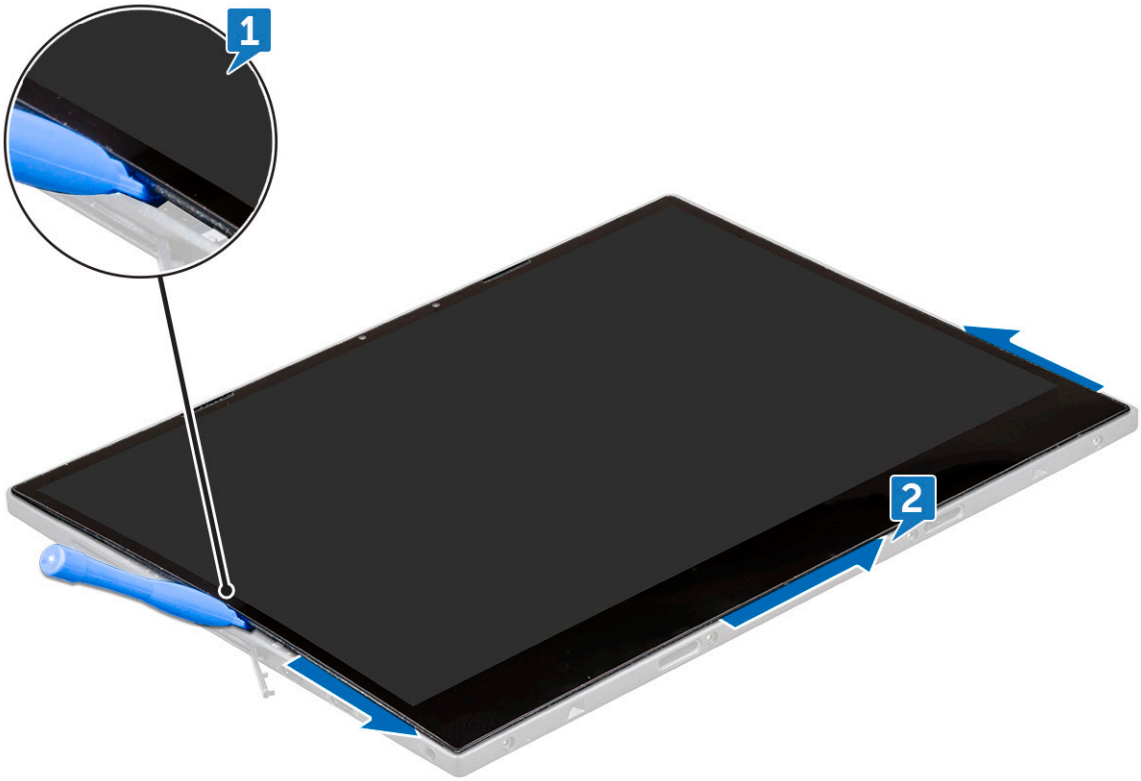
1 Follow the procedure in Before working inside your tablet.
2 Remove the microSIM card and microSD card.
3 To release the display panel (with plastic scribe):
   a Remove the M2x4 (4) screws that secure the display panel to the tablet [1].
   b Use a plastic scribe to remove the microSIM/microSD cover [2].



4 Insert a plastic scribe into the microSIM/microSD slot.



5 Pry the edges starting from microSIM/microSD slot [1, 2].

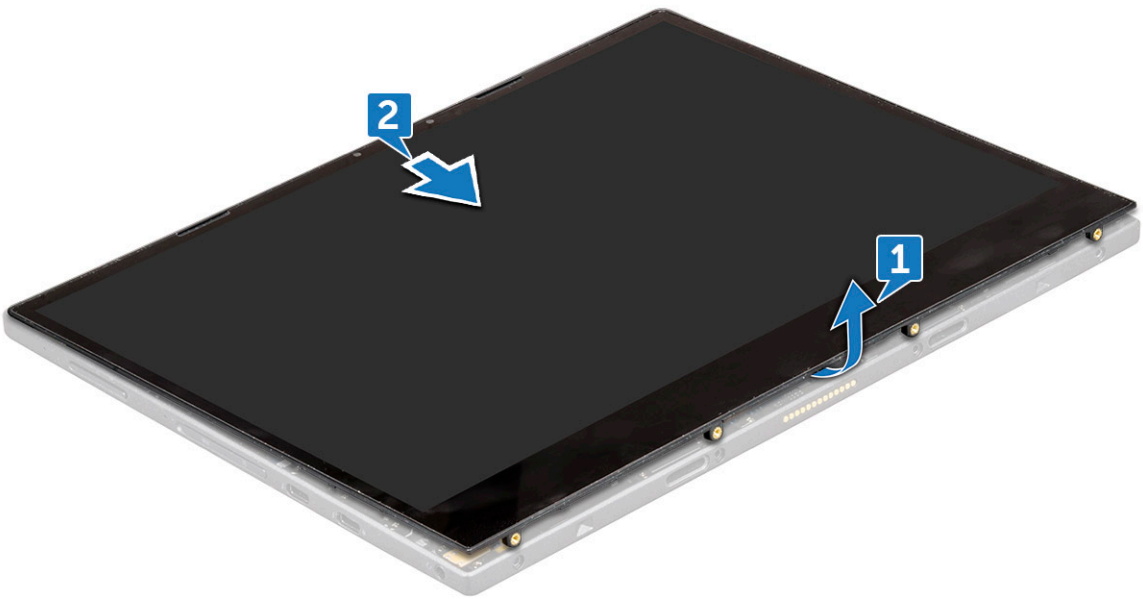


6 To release the display panel (with suction cup):

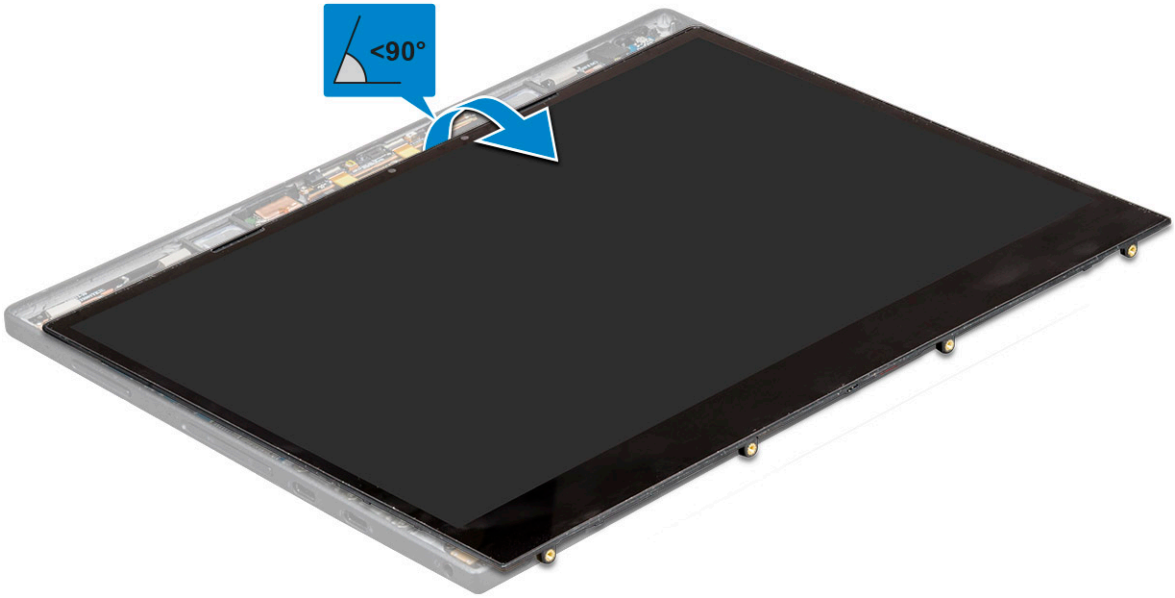
a Remove the M2x4 (4) screws that secure the display panel to the tablet [1].

b Attach a suction cup to the display panel above the left docking slot, located at the bottom of the system, while inserting a plastic scribe into the left docking slot to stabilize the system, and then carefully pull open the display panel using the suction cup.

7 Lift the display panel from the tablet.



8 Slide the display panel [1], and flip the display panel [2].



CAUTION: Do not open the display panel more than 90 degrees as this may damage the display cable.

9 Before removing display panel:

a Gently place the bottom edge of the display panel inside the bottom edge of the rear cover.

b Flip open the display panel to a 180 degree angle and lay it flat on the surface.

10 To disconnect the display cable:

a Remove the M1.6x2.5 (1) screw that secures the metal bracket on the system board [1].

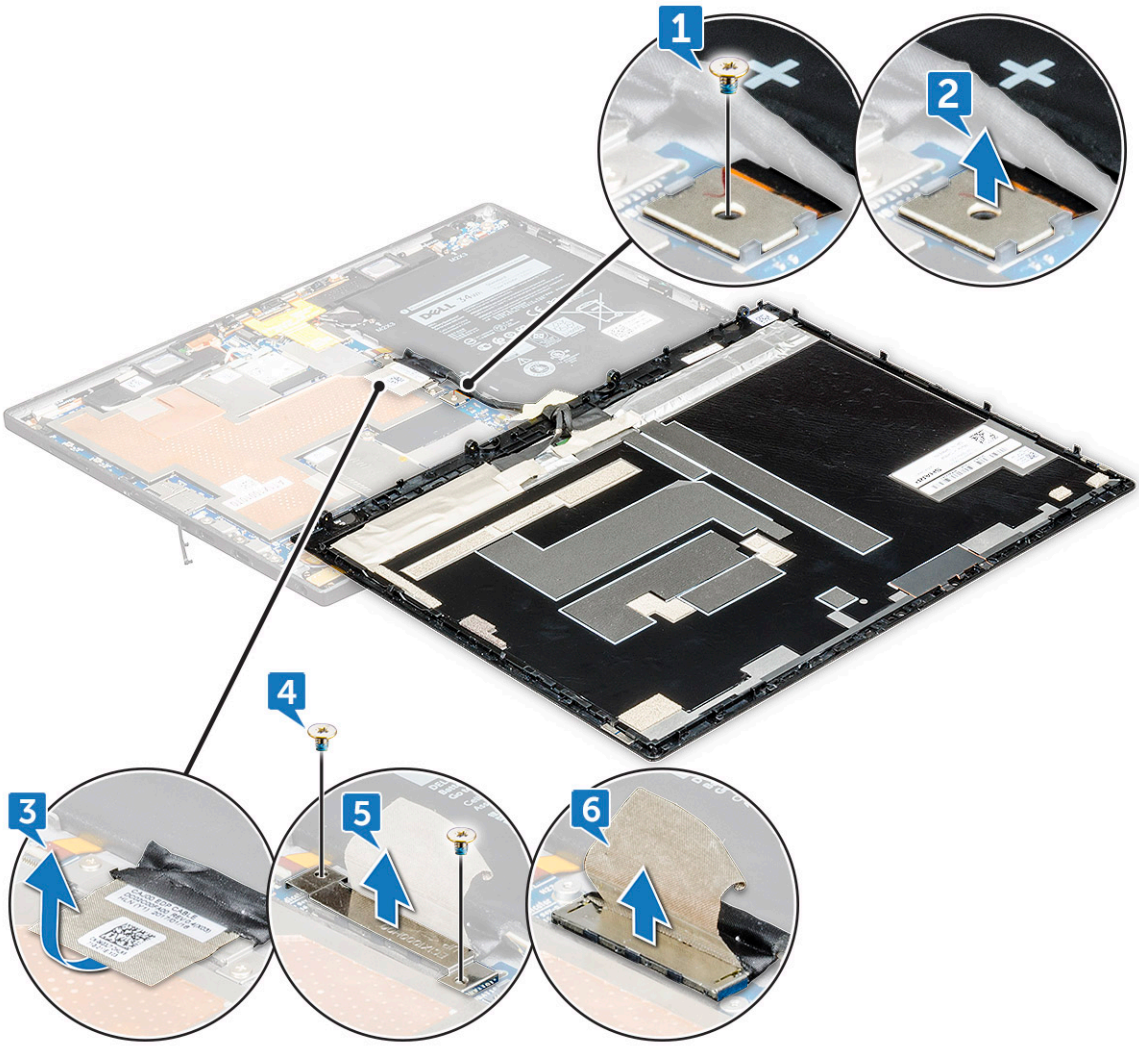
b Lift the metal tab and disconnect the battery cable [2].

c Remove the adhesive tape that secure the display cable on the system board [3].

d Remove the M1.6x2.5 (2) screws that secures display cable [4].

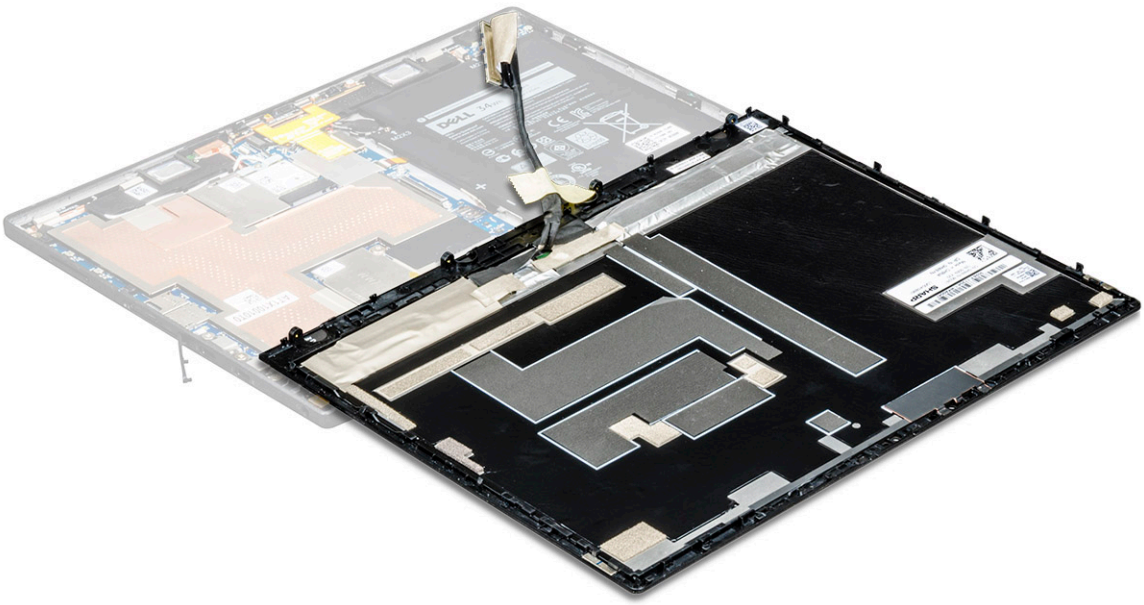
e Lift the metal tab from the system board [5].

f Lift the tab and disconnect the display cable [6].



NOTE: Only disconnect the display cable from the system board. DO NOT disconnect the display cable from the display panel.

11 Remove the display panel from the tablet.



Installing the display panel

1 Place the display panel on a plane surface.
2 Connect the display cable to the connector on the system boar

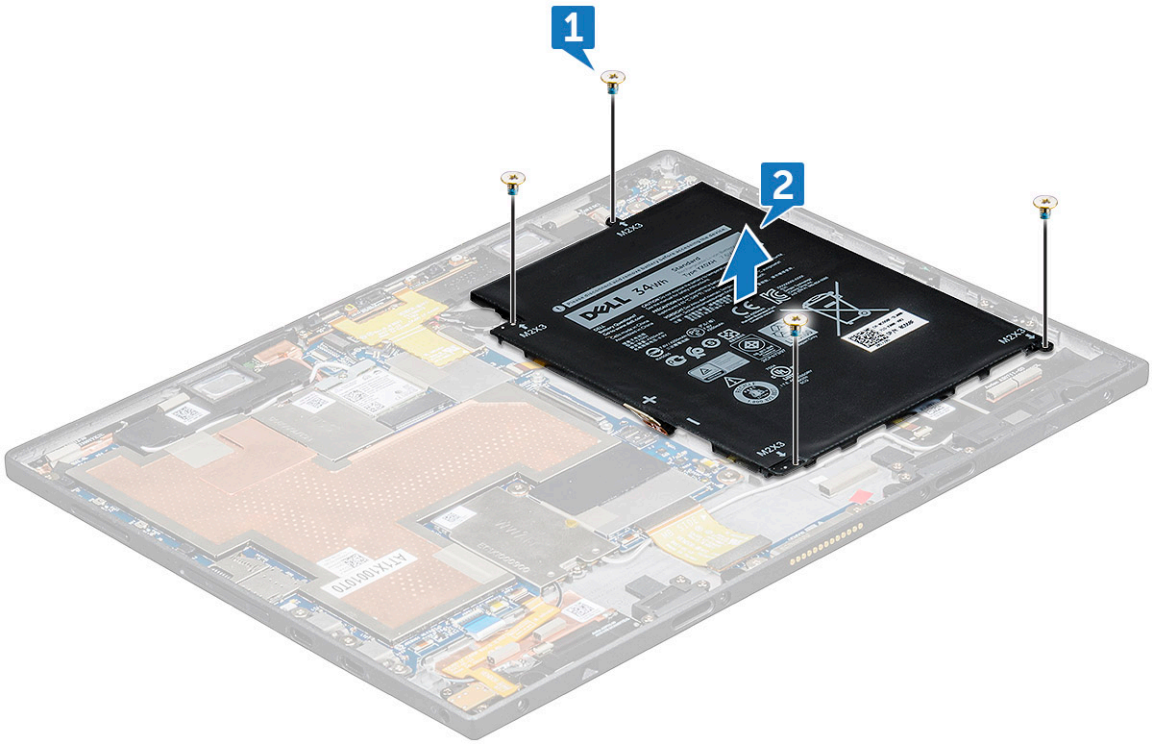
NOTE: Make sure to insert the cable under the clips, if not, the system may not display video after reassembling.

3 Place the metal bracket and replace the M1.6x2.5 (2) screws to secure the display panel.
4 Connect the battery cable to the connector on the system board.
5 Place the metal bracket and replace the M1.6x2.5 (1) screw that secures the connector on the system board.
6 Install the display panel on the tablet and press the edges until they snap-in.
7 Replace the M2x4 (4) screws to secure the tablet to the display panel.
8 Install microSIM card and microSD card.
9 Follow the procedure in After working inside your tablet.

Battery

Removing the battery

1 Follow the procedure in Before working inside your tablet.
2 Remove the:
   a microSIM card and microSD card
   b display panel
3 To remove the battery:
   a Remove the M2x3 (4) screws that secure the battery to the tablet [1].
   b Lift the battery from the tablet [2].



NOTE: Once the battery cable is disconnected, practice caution not to damage the battery connector on the system board. The pins of the battery connector are extremely fragile, be careful not to bend the pins.

NOTE: For defective system boards, technicians must always ensure that they attach the battery connector cap when re-packaging it for return.

Installing the battery

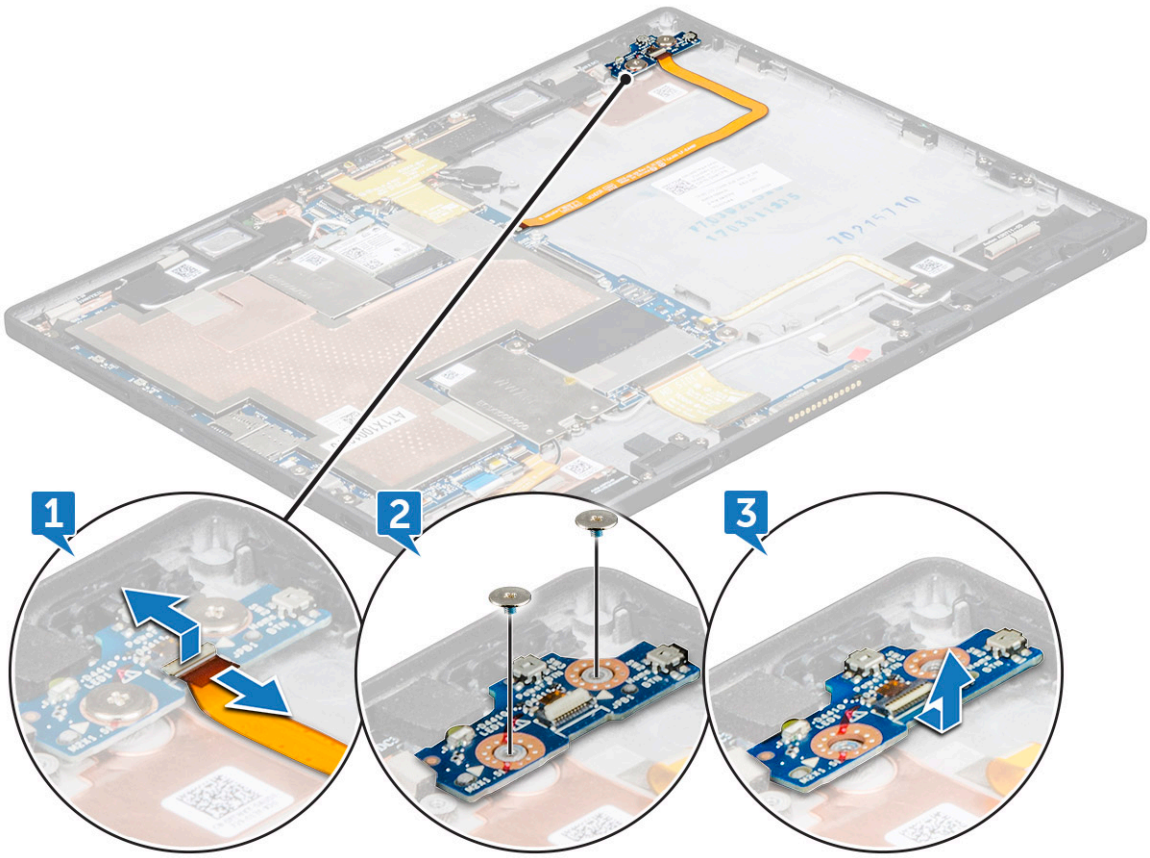
1 Insert the battery into the slot on the tablet.
2 Replace the M2x3 (4) screws to secure the battery to the tablet.
3 Install the:
   a display panel
   b microSIM card and microSD card
4 Follow the procedure in After working inside your tablet.

Power switch board

Removing the power button board

1 Follow the procedure in Before working inside your tablet.
2 Remove the:
   a microSIM card and microSD card
   b display panel
   c battery
3 To remove the power button board:
   a Lift the latch and disconnect the power button cable from the tablet [1].

b Remove the M2x1.5 (2) screws that secure the power button board on the tablet [2].
c Slide and remove the power button board from the tablet [3].



Installing the power button board

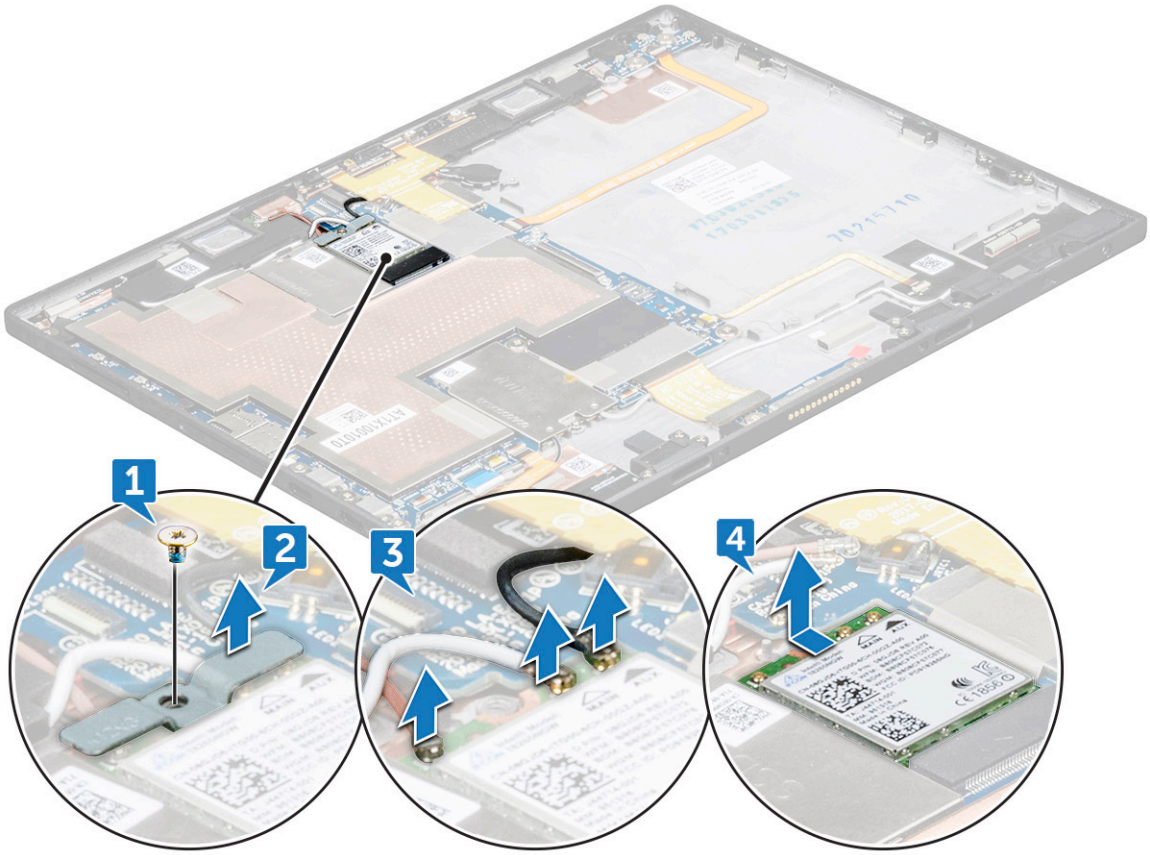
1 Insert the power button board into the slot on the tablet.
2 Replace the M2x1.5 (2) screws to secure the power button board to the tablet.
3 Connect the power button board cable and close the latch on the tablet.
4 Install the:
  a battery
  b display panel
  c microSIM card and microSD card
5 Follow the procedure in After working inside your tablet.

WLAN card

Removing the WLAN card

1 Follow the procedure in Before working inside your tablet.
2 Remove the:
  a microSIM card and microSD card
  b display panel
  c battery
3 To remove the WLAN card:

a Remove the M2x2.0 (1) screw securing the WLAN bracket [1].
b Lift the WLAN bracket away from the system board [2].
c Disconnect the antenna cables from the WLAN card [3].
d Slide and lift the WLAN card from the connector on the system board 4].



Installing the WLAN card

1 Insert the WLAN card into the connector on the system board.
2 Connect the antenna cables to the WLAN card.
3 Insert the WLAN bracket to the WLAN card.
4 Replace the M2x2.0 (1) screw to secure the WLAN bracket.
5 Install the:
  a battery
  b display panel
  c microSIM card and microSD card
6 Follow the procedure in After working inside your tablet.

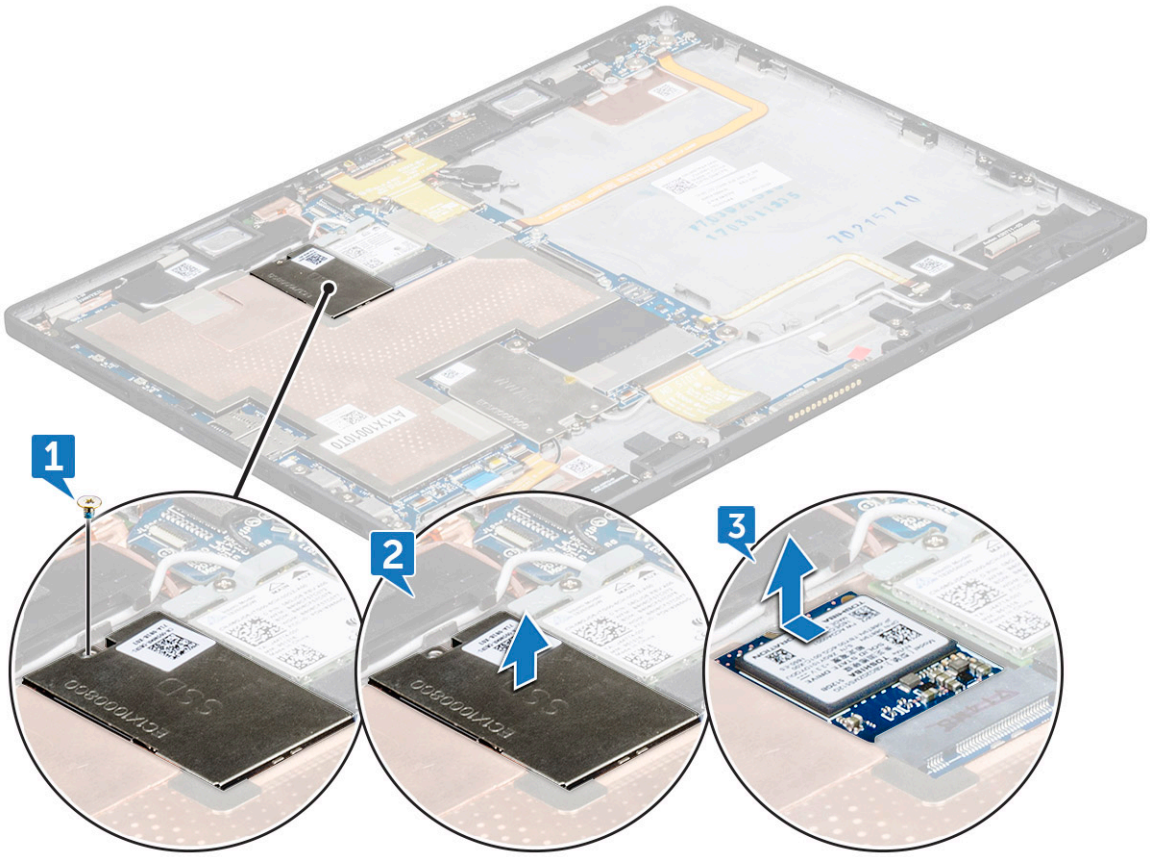
PCIe Solid State Drive (SSD)

Removing the SSD module

1 Follow the procedure in Before working inside your tablet.
2 Remove the:
  a microSIM card and microSD card

b display panel
c battery

3 To remove the SSD module:
a Remove the M2x2.0 (1) screw securing the SSD shield [1].
b Lift the SSD shield away from the tablet [2].
c Slide and lift the SSD module from the slot on the tablet [3].



Installing the SSD module

1 Insert the SSD module into the connector on the system board.
2 Install the SSD shield on the SSD module.
3 Replace the M2x2.0 (1) screw to secure SSD shield.

NOTE: Align the shield carefully or else it may break.

4 Install the:
a battery
b display panel
c microSIM card and microSD card
5 Follow the procedure in After working inside your tablet.

WWAN card

Removing the WWAN card

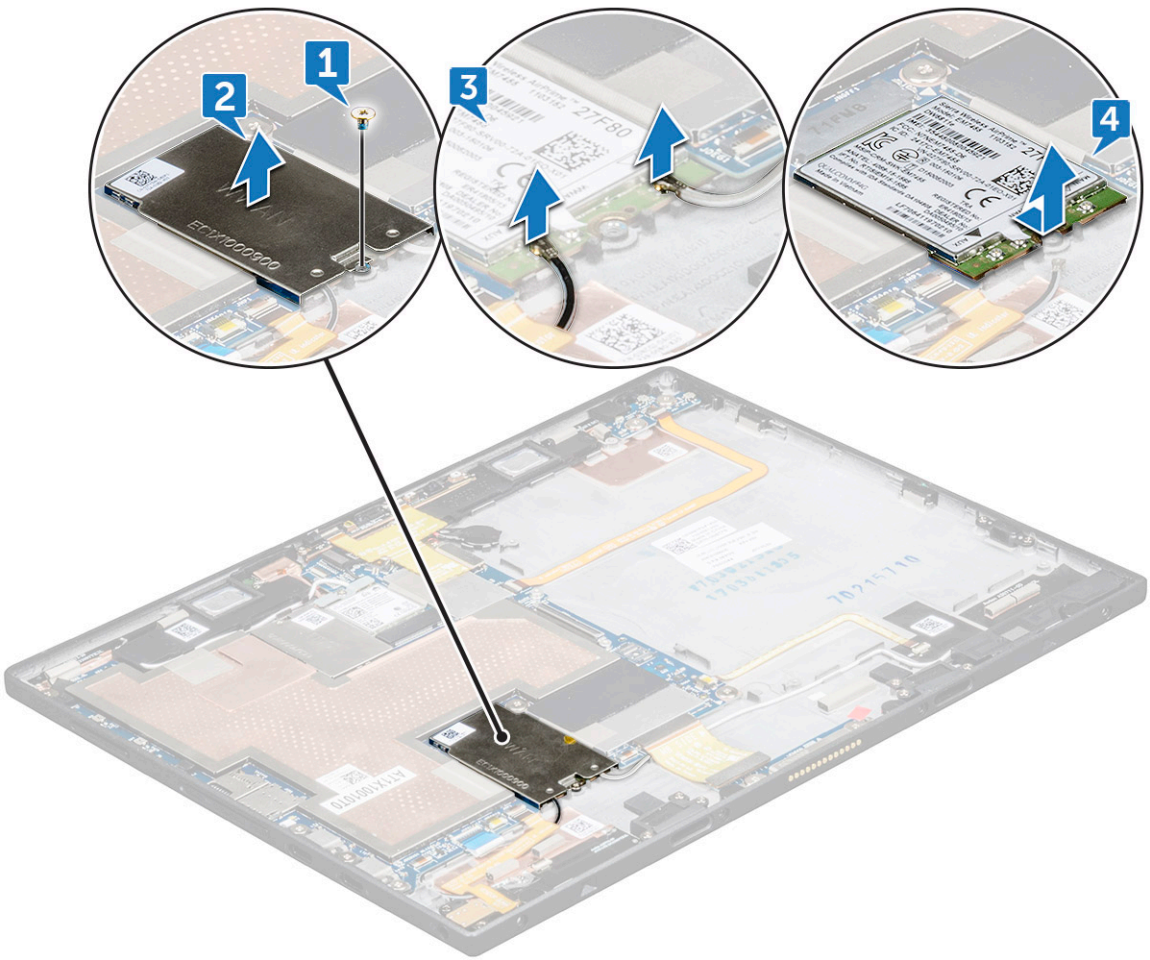
1 Follow the procedure in Before working inside your tablet.

2 Remove the:

- a microSIM card and microSD card
- b display panel
- c battery

3 To remove the WWAN card:

- a Remove the M2x2.0 (1) screw securing the WWAN bracket [1].
- b Lift the WWAN bracket from the tablet [2].
- c Disconnect the antenna cables from the WWAN card [3].
- d Slide and lift the WWAN card from the connector on the system board [4].



Installing the WWAN card

1 Insert the WWAN card into the connector on the system board.

2 Connect the antenna cables to the WWAN card.

3 Insert the WLAN bracket to the WWAN card.

4 Replace the M2x2.0 (1) screw to secure WWAN bracket.

5 Install the:
   a battery
   b display panel
   c microSIM card and microSD card

6 Follow the procedure in After working inside your tablet.

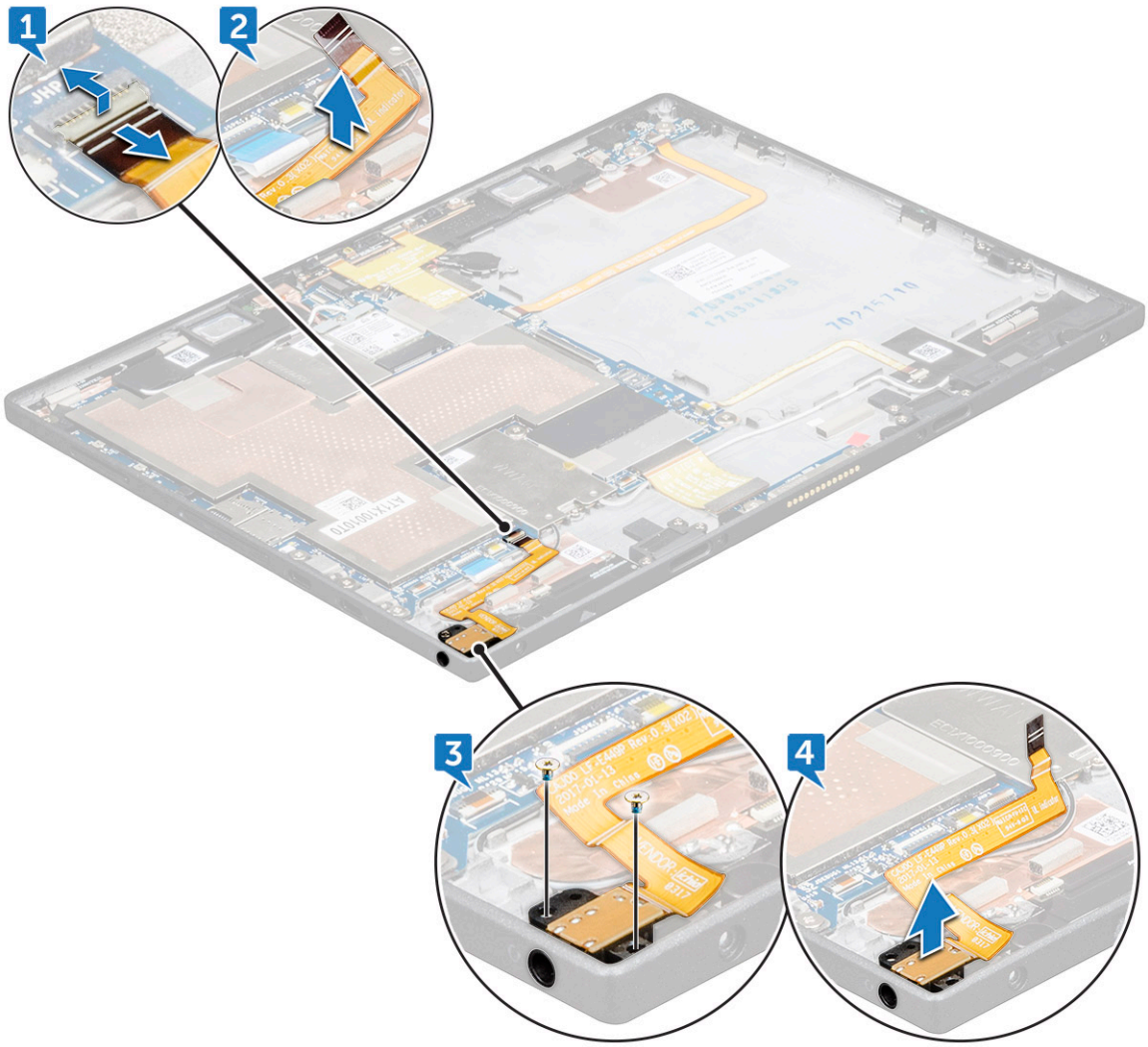
Audio board

Removing the audio port

1 Follow the procedure in Before working inside your tablet.

2 Remove the:
   a microSIM card and microSD card
   b display panel
   c battery

3 To remove the audio port:
   a Lift the latch and disconnect the audio port connector [1].
   b Peel the audio port cable from the tablet [2].
   c Remove the M2X3 (2) screw that secures the audio port on the system board [3].
   d Lift the audio port from the system board [4].



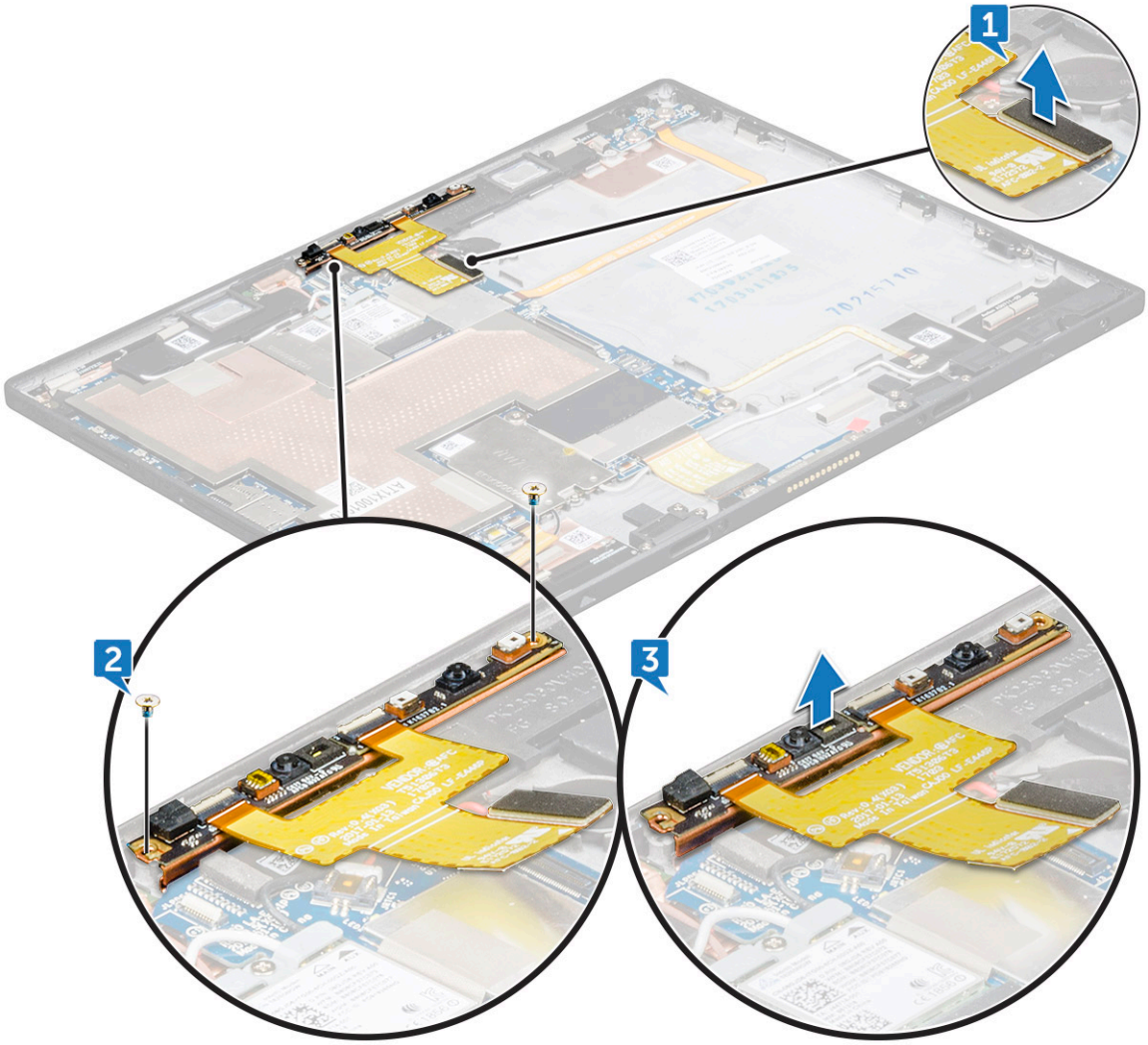
Installing the audio port

1 Place and insert the audio port into the connector on the system board.
2 Replace the M2X3 (2) screw to secure audio port on the system board.
3 Affix the audio port on the system board.
4 Connect the audio port cable to the connector.
5 Install the:
   a battery
   b display panel
   c microSIM card and microSD card
6 Follow the procedure in After working inside your tablet.

Front facing camera

Removing the front camera

1 Follow the procedure in Before working inside your tablet.
2 Remove the:
   a microSIM card and microSD card
   b display panel
   c battery
3 To remove the front facing camera:
   a Lift the latch and disconnect the camera connector [1].
   b Remove the M1.6x2.5 (2) screws that secure the camera on the system board [2].
   c Lift the front camera from the tablet [3].



Installing the front camera

1 Insert the camera module into the slot on the tablet.
2 Replace the M1.6x2.5 (2) screws to secure the front camera module.
3 Connect the front camera cable to the system board..
4 Install the:
   a battery
   b display panel
   c microSIM card and microSD card
5 Follow the procedure in After working inside your tablet.

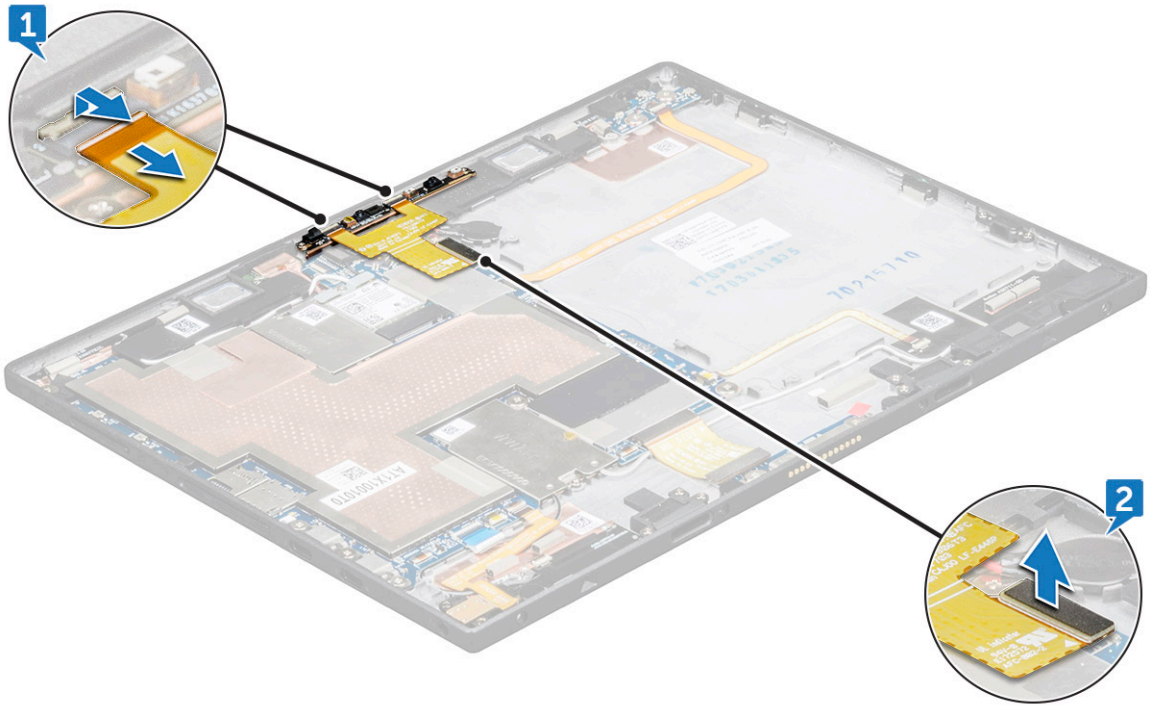
Rear facing camera

Removing the rear camera

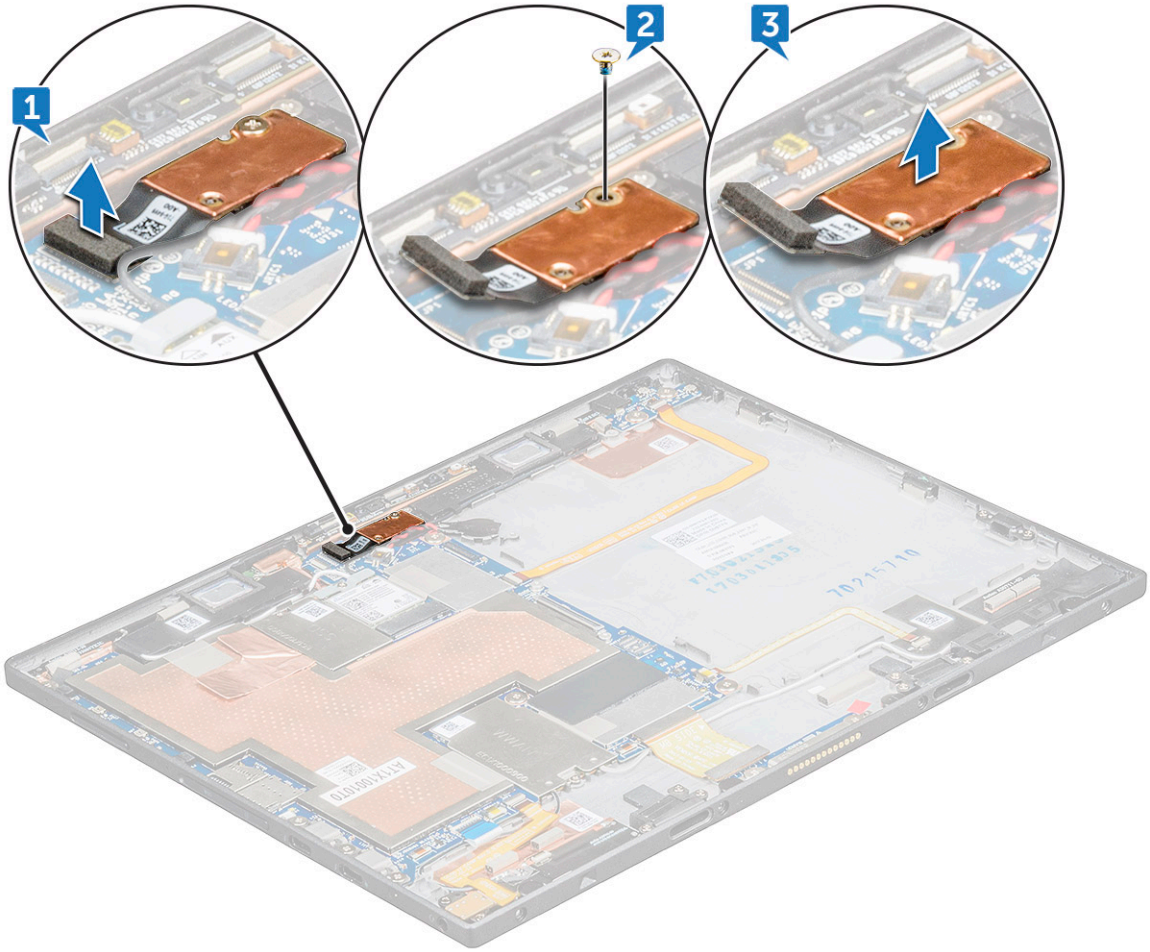
1 Follow the procedure in Before working inside your tablet.
2 Remove the:

a microSIM card and microSD card
b display panel
c battery

3 To disconnect front camera cable:
a Lift the latch and disconnect the front camera cable [1].
b Remove the front camera cable from the system board [2].



4 To remove the rear camera:
a Disconnect the rear camera cable from the system board [1].
b Remove the M1.6x2.5 (1) screw securing the rear camera module [2].
c Lift the camera module from the tablet [3].



Installing the rear camera

1 Insert the rear camera module into the slot on the tablet.
2 Replace the M1.6x2.5 (1) screw to secure the rear camera module.
3 Connect the rear camera cable to the system board.
4 Connect the front camera cable to the system board.
5 Install the:
   a battery
   b display panel
   c microSIM card and microSD card
6 Follow the procedure in After working inside your tablet.

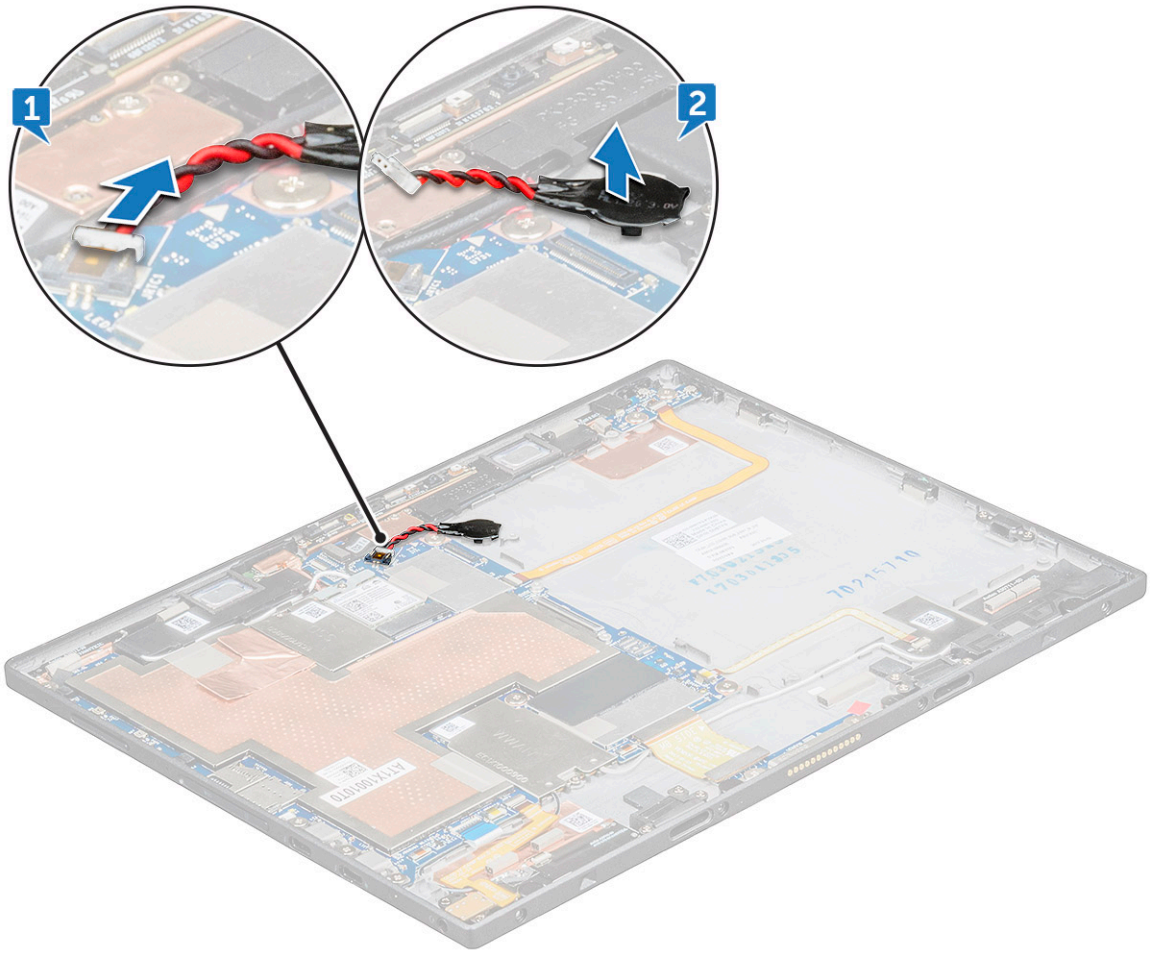
Coin cell battery

Removing the coin cell battery

1 Follow the procedure in Before working inside your tablet.
2 Remove the:
   a microSIM card and microSD card
   b display panel

c battery
d front facing camera

3 To remove the coin cell battery:
   a Disconnect the coin cell battery cable from the connector on the system board [1].
   b Pry the coin cell battery to release from the adhesive and lift it away from the system board [2].



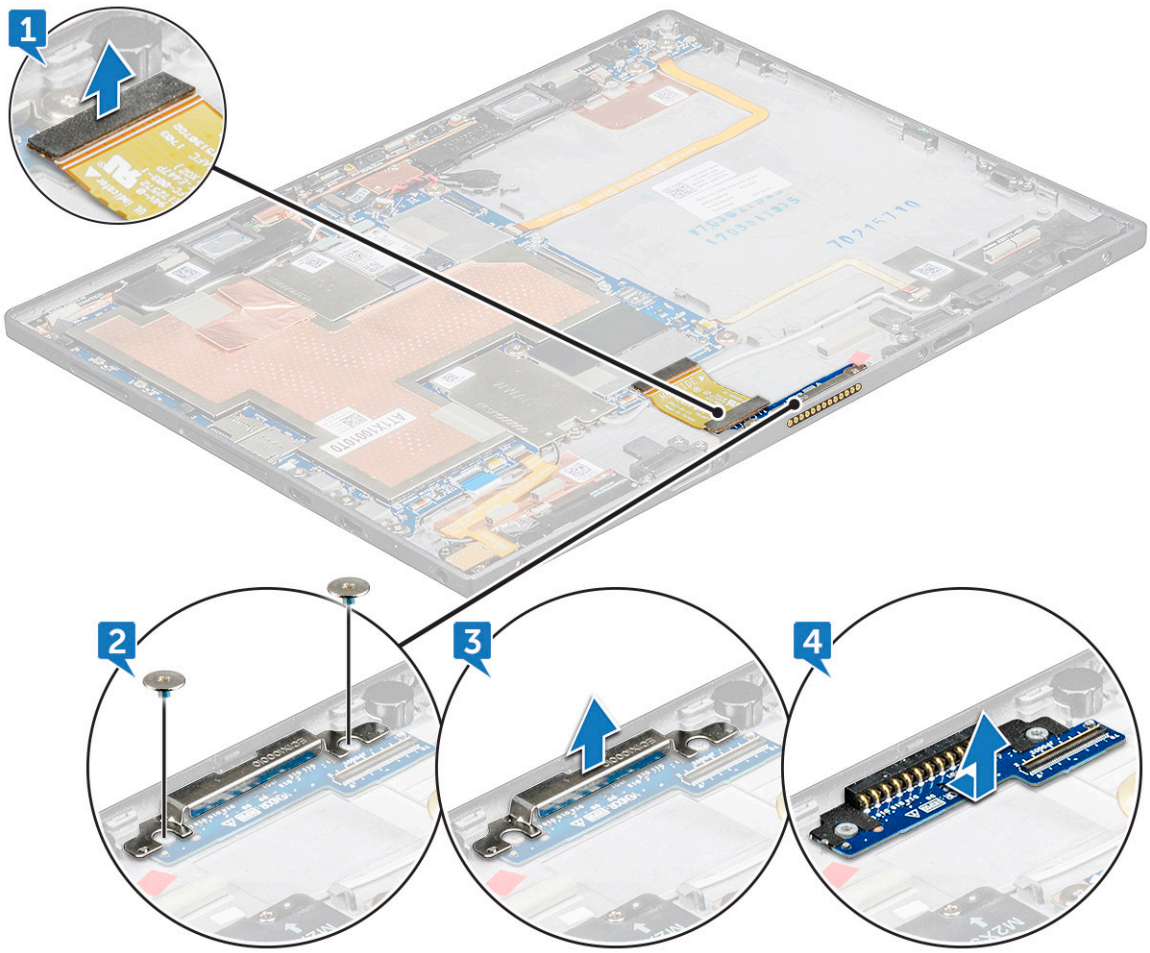
Installing the coin cell battery

1 Place the coin cell battery into the slot on the system board.
2 Connect the coin cell battery cable to the connector on the system board.
3 Install the:
   a front facing camera
   b battery
   c display panel
   d microSIM card and microSD card
4 Follow the procedure in After working inside your tablet.

Docking board

Removing the docking board

1 Follow the procedure in Before working inside your tablet.
2 Remove the:
   a microSIM card and microSD card
   b display panel
   c battery
3 To release the docking board:
   a Disconnect the docking board cable from the system board [1].
   b Remove the M1.6x4 (2) screws securing the docking board bracket to the docking board [2].
   c Remove the docking board bracket [3].
   d Lift the docking board from the tablet [4].



Installing the docking board

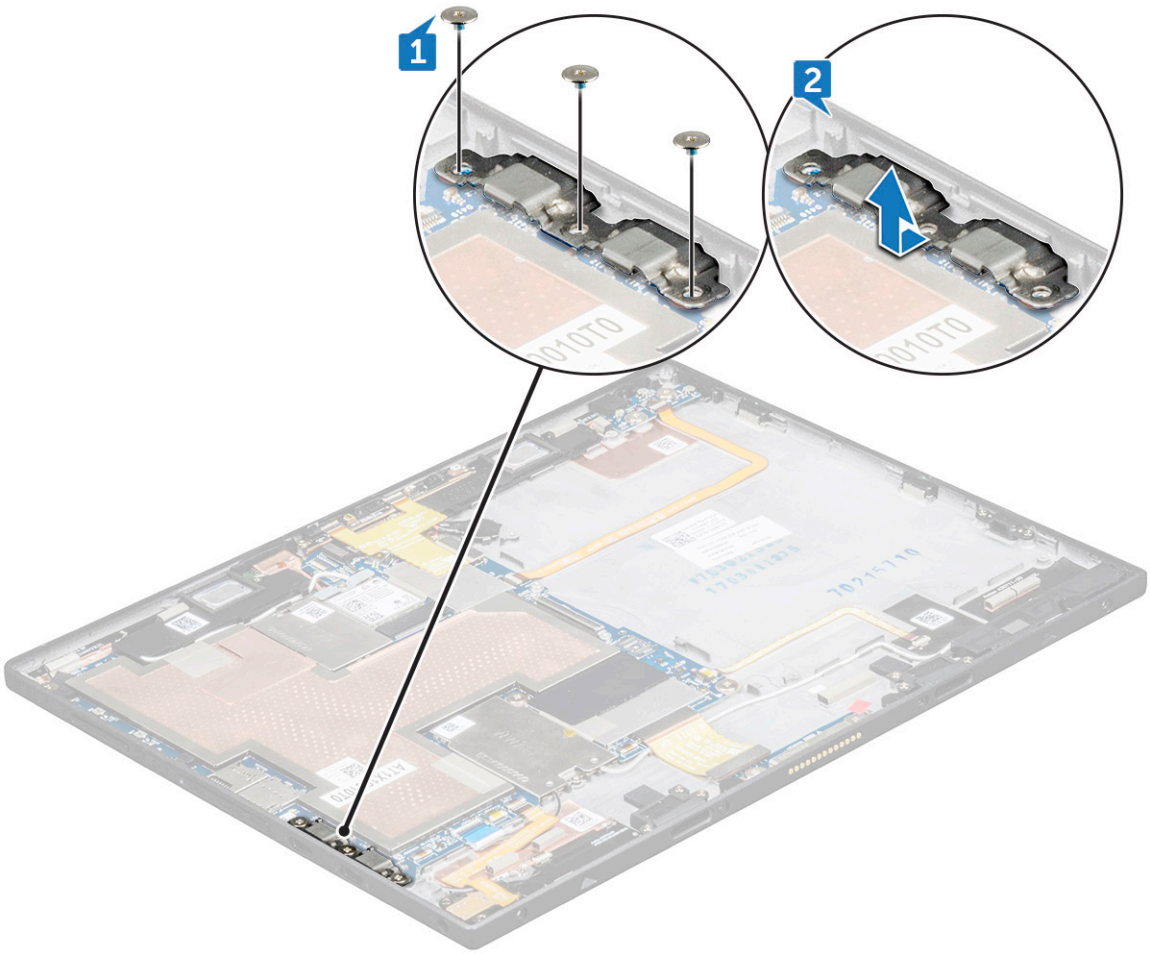
1 Insert the docking board into the slot on the tablet.
2 Place the docking board metal on the docking board.

3 Replace the M1.6x4 (2) screws to secure the docking board to the tablet.
4 Connect the docking board cable to the connector on the system board.
5 Install the:
   a battery
   b display panel
   c microSIM card and microSD card
6 Follow the procedure in After working inside your tablet.

Thunderbolt over Type-C USB bracket

Removing the thunderbolt over Type-C bracket

1 Follow the procedure in Before working inside your tablet.
2 Remove the:
   a microSIM card and microSD card
   b display panel
   c battery
3 To release the thunderbolt over Type-C bracket:
   a Remove the M2x2.0 (3) screws securing the thunderbolt over Type-C bracket to the tablet [1].
   b Slide and lift the thunderbolt over Type-C bracket from the tablet [2].



Installing the thunderbolt over Type-C USB bracket

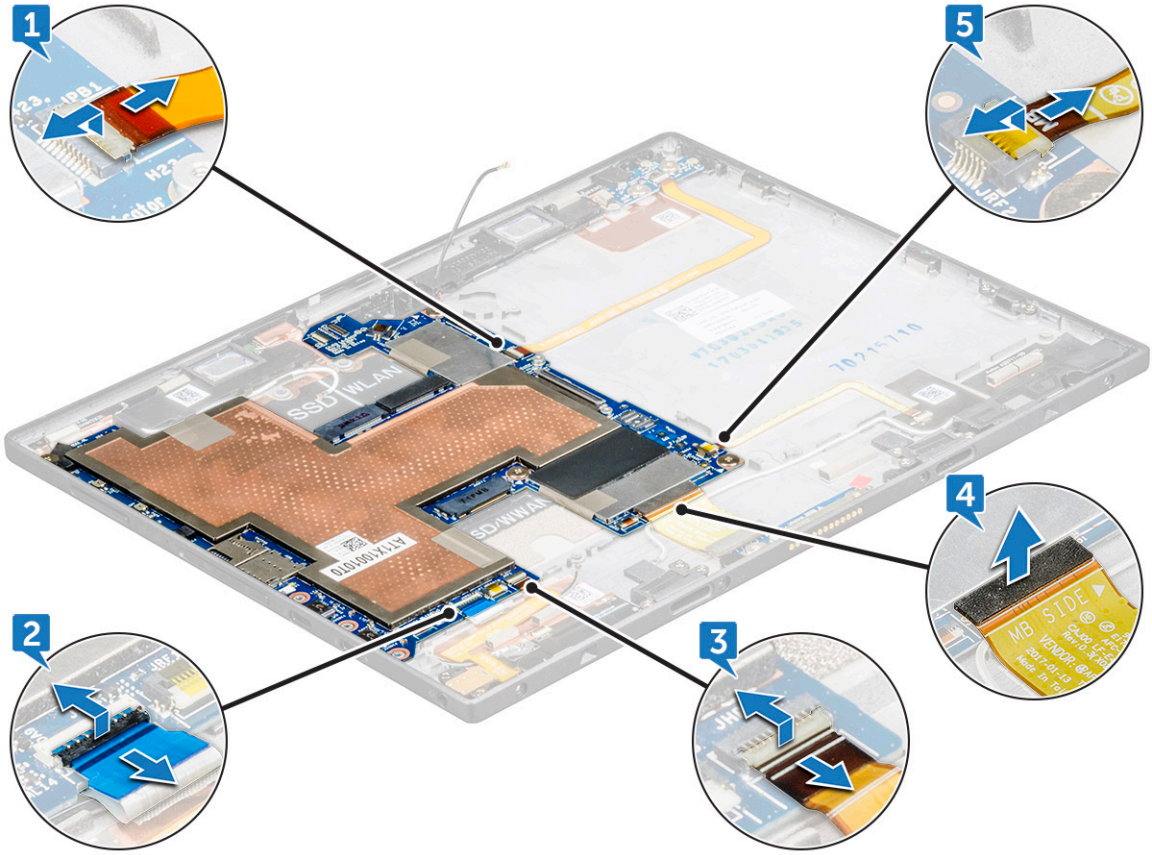
1 Insert the thunderbolt over Type-C USB bracket into the slot on the tablet.
2 Replace the M2x2.0 (3) screws to secure the thunderbolt over Type-C USB bracket to the tablet.
3 Install the:
   a battery
   b display panel
   c microSIM card and microSD card
4 Follow the procedure in After working inside your tablet.

System Board

Removing the system board

NOTE: Heat sink is not a separate service part but is included with the system board. Do not remove the heat sink from the system board

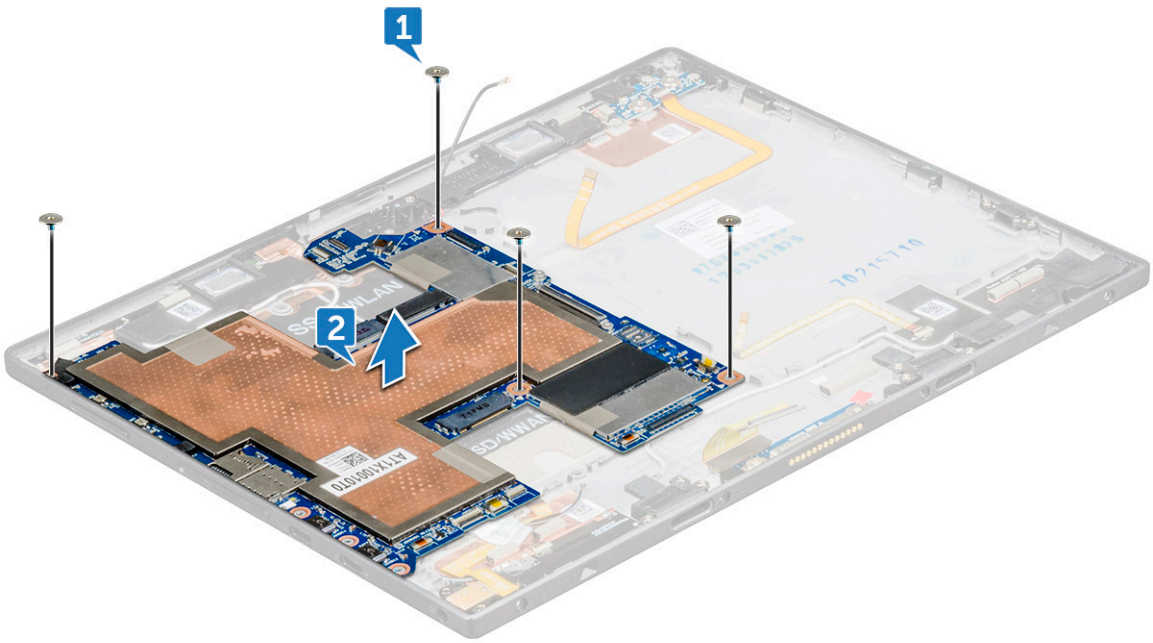
1 Follow the procedure in Before working inside your tablet.
2 Remove the:
   a microSIM card and microSD card
   b display panel
   c battery
   d WLAN card
   e SSD card
   f WWAN card
   g front camera
   h rear camera
   i coin cell battery
   j thunderbolt over Type-C USB bracket
3 Disconnect the following cables from the system board:
   a power button cable [1]
   b USH board cable [2]
   c audio board cable [3]
   d docking board cable [4]
   e USH board cable [5]



4 To remove system board:

a Remove the M1.6x1.5 (4) screw that secures the system board to the tablet [1].

b Lift the system board from the tablet [2].



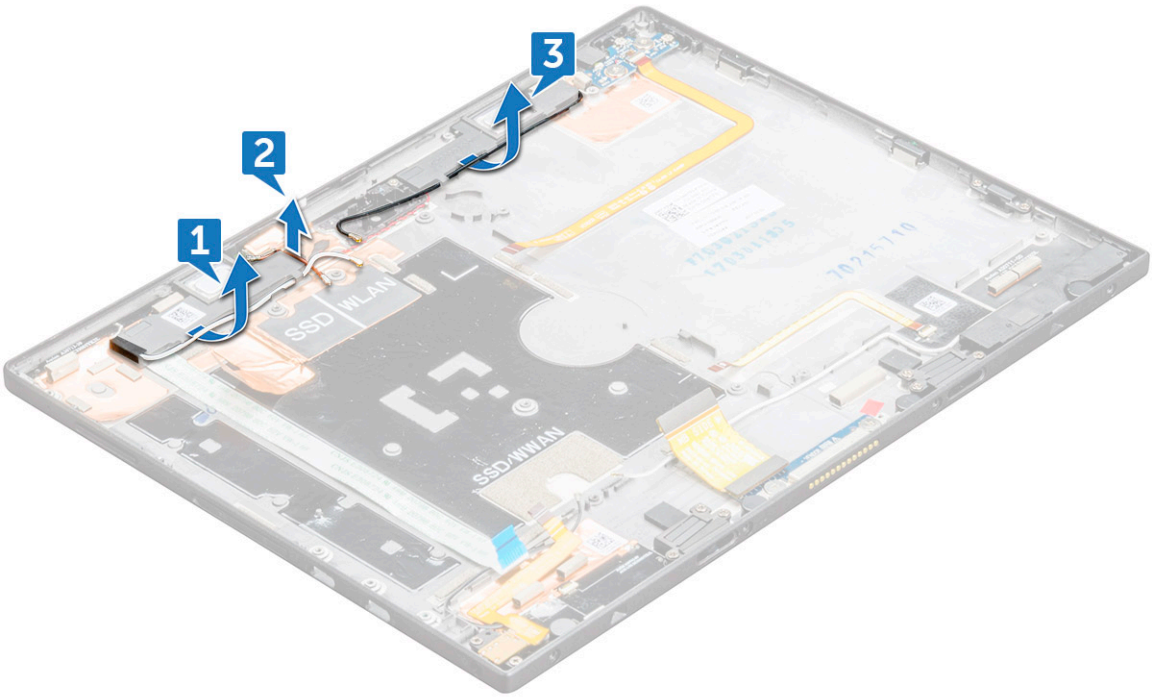
Installing the system board

1 Align the system board with the screw holders on the tablet.
2 Replace the M1.6x1.5 (4) screws to secure the system board to the tablet.
3 Connect the USH board cable, docking board cable, audio board cable, power button cable to the connectors on the system board.
4 Install the:
   a thunderbolt over Type-C USB bracket
   b coin cell battery
   c rear camera
   d front camera
   e WWAN card
   f SSD card
   g WLAN card
   h battery
   i display panel
   j microSIM card and microSD card
5 Follow the procedure in After working inside your tablet.

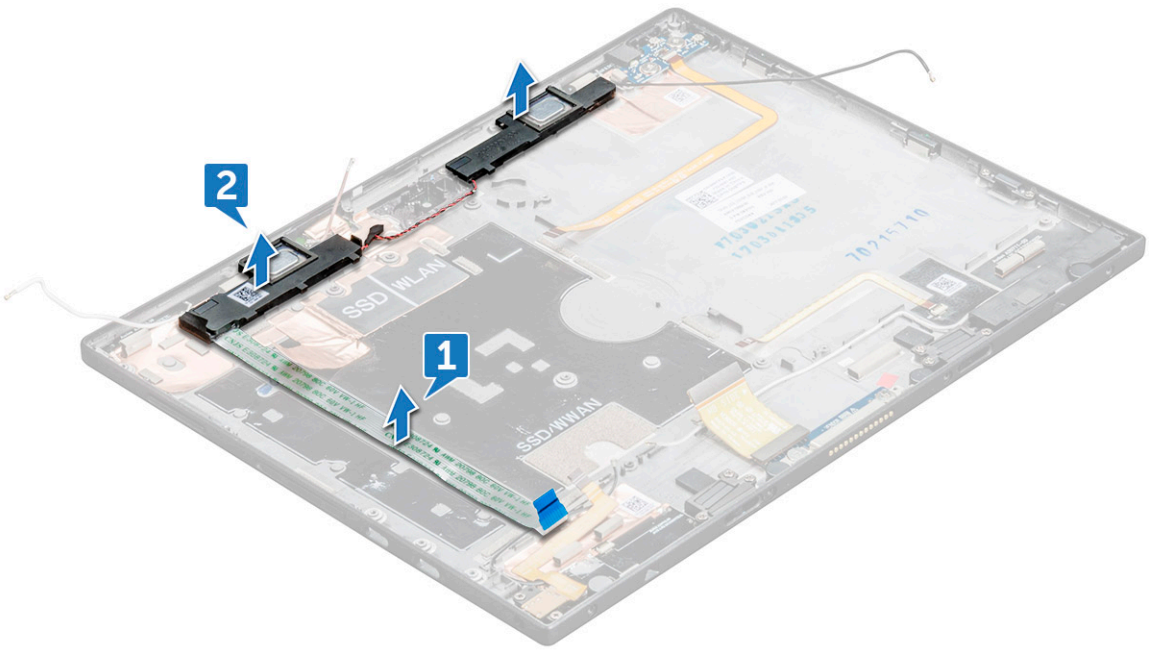
Speaker

Removing the speaker

1 Follow the procedure in Before working inside your tablet.
2 Remove the:
   a microSIM card and microSD card
   b display panel
   c battery
   d WLAN card
   e SSD card
   f WWAN card
   g front camera
   h rear camera
   i coin cell battery
   j thunderbolt over Type-C USB bracket
   k system board
3 Unroute the WLAN cable from the speaker retension clip [1,2,3].



4 To remove the speaker:
   a Peel the speaker adhesive cable from the tablet [1].
   b Lift the speaker from the tablet [2].



Installing the speaker

1 Align the speaker with the holders on the tablet.
2 Affix the speaker adhesive tape on the tablet.

3 Route the WLAN cable through the retention clips on the tablet.

4 Install the:
   a system board
   b thunderbolt over Type-C USB bracket
   c coin cell battery
   d rear camera
   e front camera
   f WWAN card
   g SSD card
   h WLAN card
   i battery
   j display panel
   k microSIM card and microSD card

5 Follow the procedure in After working inside your tablet.

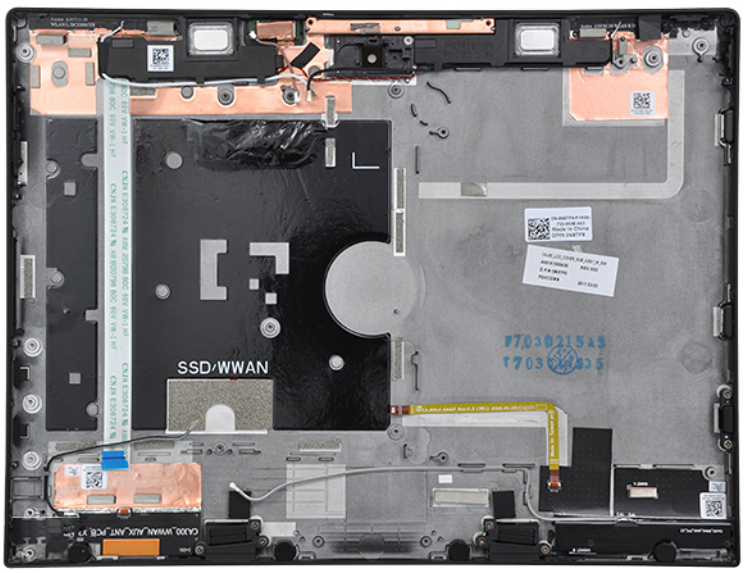
Back cover

Replacing the back cover

1 Follow the procedure in Before working inside your tablet.

2 Remove the:
   a microSIM card and microSD card
   b display panel
   c battery
   d power button board
   e WLAN card
   f SSD card
   g WWAN card
   h audio port
   i front camera
   j rear camera
   k coin cell battery
   l Docking board
   m thunderbolt over Type-C USB bracket
   n system board

3 The component you are left with is the back cover.



4 Install the following component:
   a system board
   b thunderbolt over Type-C USB bracket
   c docking board
   d coin cell battery
   e rear camera
   f front camera
   g audio port
   h WWAN card
   i SSD card
   j WLAN card
   k power button board
   l battery
   m display panel
   n microSIM card and microSD card
5 Follow the procedure in After working inside your tablet.

4

Technology and components

This chapter details the technology and components available in the system.

Topics:

Power adapter

This system is shipped with 45 W Type-C power adapter.

WARNING: When you disconnect the power adapter cable from the tablet, grasp the connector, not the cable itself, and then pull firmly but gently to avoid damaging the cable.

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

Processors

Kaby Lake — 7th Generation Intel Core processors

The 7th Gen Intel Core processor (Kaby Lake) family is the successor of 6th generation processors (Skylake). It's main features include:

- Intel 14nm Manufacturing Process Technology
- Intel Turbo Boost Technology
- Intel Hyper Threading Technology
- Intel Built-in Visuals
  - Intel HD graphics - exceptional videos, editing smallest details in the videos
  - Intel Quick Sync Video - excellent video conferencing capability, quick video editing and authoring
  - Intel Clear Video HD - visual quality and color fidelity enhancements for HD playback and immersing web browsing
- Integrated memory controller
- Intel Smart Cache

- Optional Intel vPro technology (on i5/i7) with Active Management Technology 11.6
- Intel Rapid Storage Technology

NOTE: Windows 7 and 8 are not supported by systems with 7th generation processors

Chipset

The chipset is integrated on the processor.

Memory features

Latitude 7285 2-in-1 supports the following memory configurations:

- 8 GB 1866MHz LPDDR3
- 16 GB 1866MHz LPDDR3

Display options

This tablet is shipped with 12.3" 1920x1280 Touch with Corning Gorilla Glass, Antireflective and Antismudge display.

Camera features

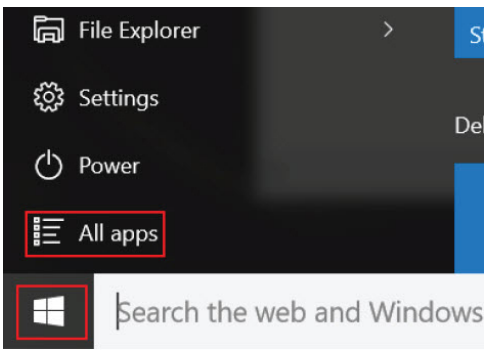
This system is shipped with front facing camera with 5 MP and rear facing camera with 8 MP

Starting the camera

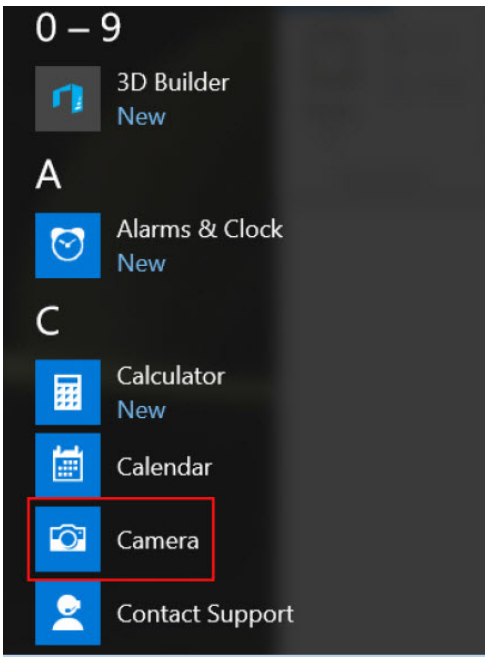
To start the camera, open an application that uses the camera. For instance, if you tap the Dell webcam central software or the Skype software that is shipped with the 2-in-1, the camera turns on. Similarly, if you are chatting on the internet and the application requests to access the webcam, the webcam turns on.

Starting the camera application

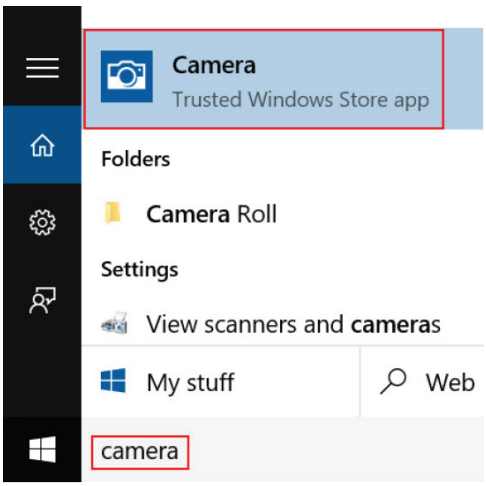
1 Tap or click the **Windows** button and select **All apps**.



2 Select **Camera** from the apps list.



3 If the **Camera** App is not available in the apps list, search for it.



Hard drive options

This system supports M.2 SATA SSD, M.2 PCIe NVMe SSD, and M.2 PCIe NVMe SED.

Drivers

This section lists the drivers associated with the components shipped with your tablet.

System drivers

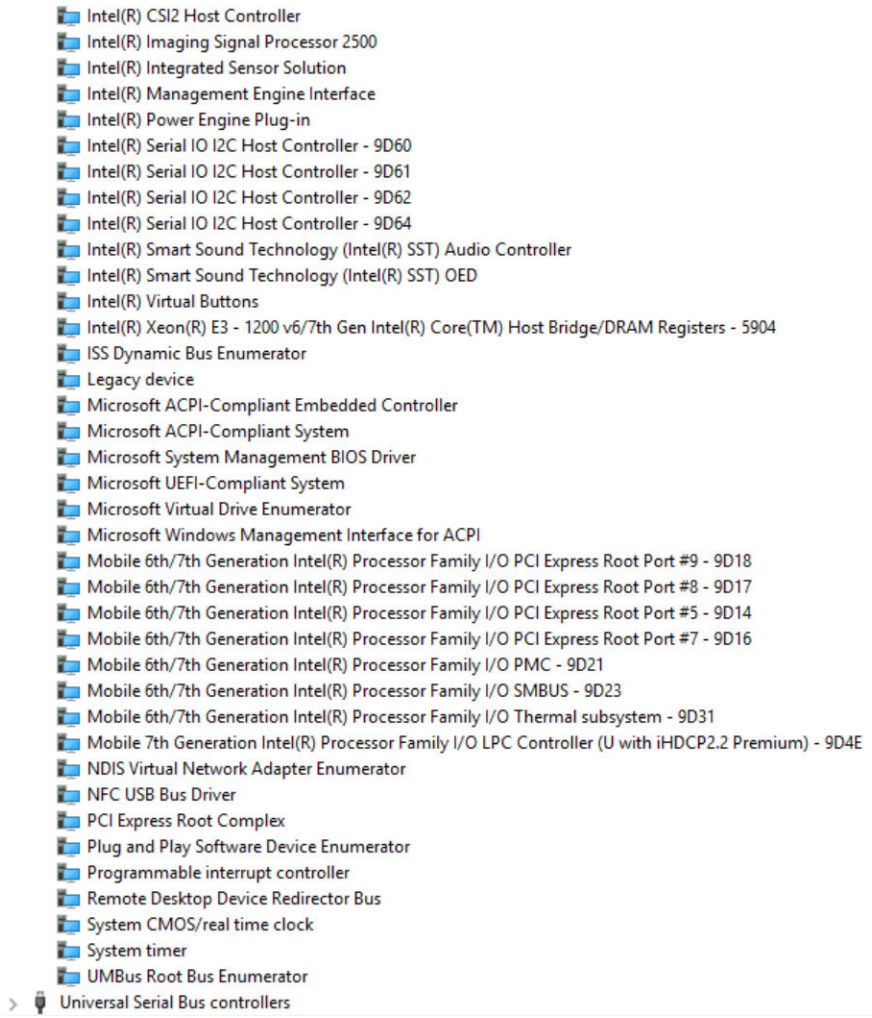


Figure 1. System drivers

Disk driver

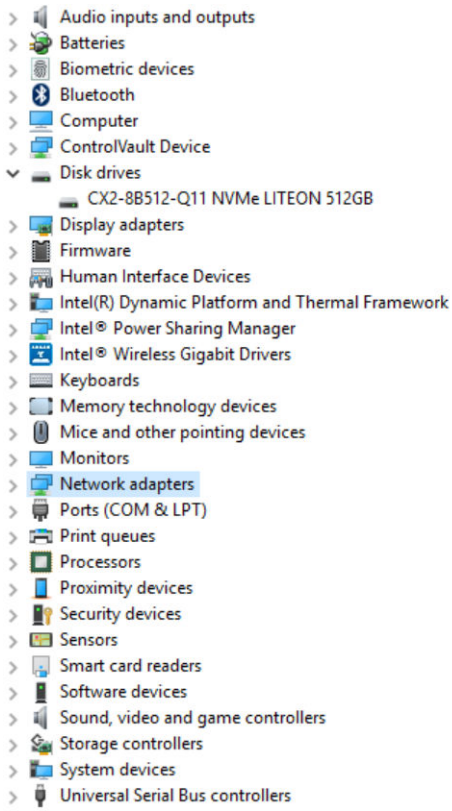


Figure 2. Disk driver

Sound, video and game controller drivers

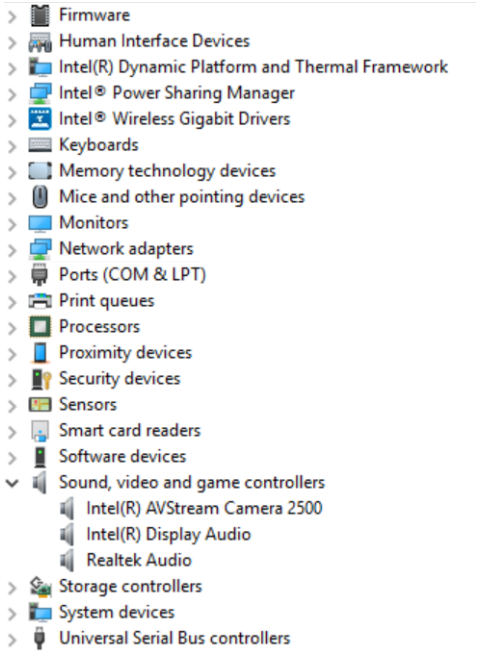


Figure 3. Sound, video, and game controllers

Storage controller drivers

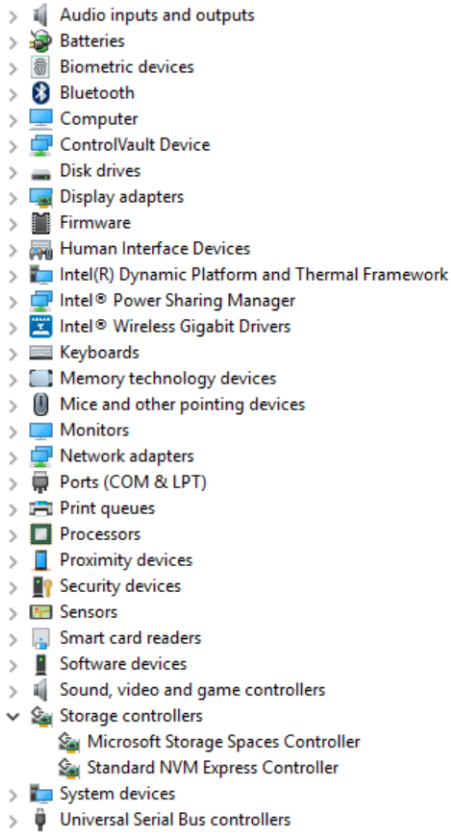


Figure 4. Storage controllers

Network drivers

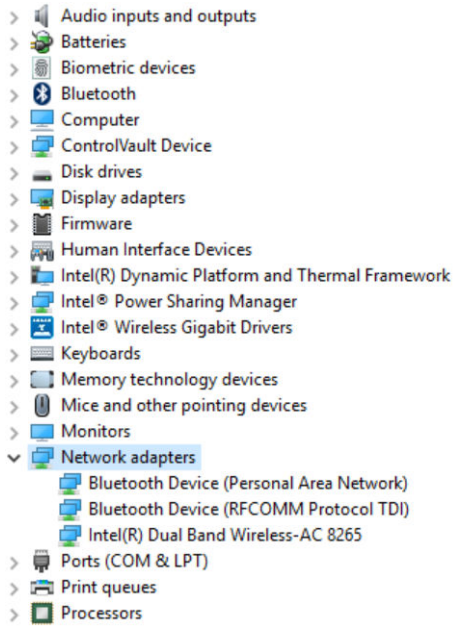


Figure 5. Network drivers

Graphics driver

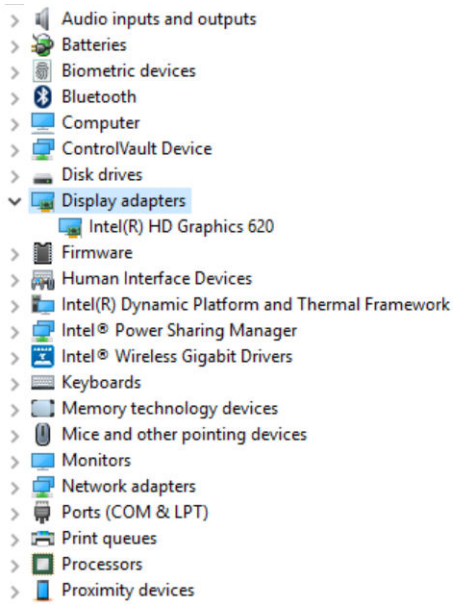


Figure 6. Graphics driver

Thunderbolt over Type-C

Thunderbolt is a hardware interface that combines data, video, audio, and power in a single connection. Thunderbolt combines PCI Express (PCIe) and DisplayPort (DP) into one serial signal, and additionally provides DC power, all in one cable. Thunderbolt 1 and Thunderbolt 2 use the same connector as miniDP (DisplayPort) to connect to peripherals, while Thunderbolt 3 uses a USB Type-C connector.

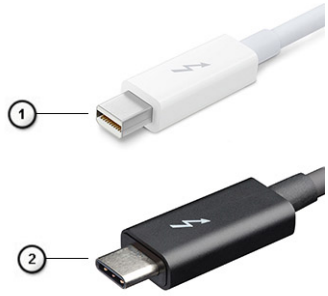


Figure 7. Thunderbolt 1 and Thunderbolt 3

1 Thunderbolt 1 and Thunderbolt 2 (using a miniDP connector)
2 Thunderbolt 3 (using a USB Type-C connector)

Thunderbolt 3 over Type-C

Thunderbolt 3 brings Thunderbolt to USB Type-C at speeds up to 40 Gbps, creating one compact port that does it all - delivering the fastest, most versatile connection to any dock, display or data device like an external hard drive. Thunderbolt 3 uses a USB Type-C connector/port to connect to supported peripherals.

1 Thunderbolt 3 uses USB Type-C connector and cables - It is compact and reversible
2 Thunderbolt 3 supports speed up to 40 Gbps
3 DisplayPort 1.2 – compatible with existing DisplayPort monitors, devices and cables
4 USB Power Delivery - Up to 130W on supported computers

Key Features of Thunderbolt 3 over USB Type-C

1 Thunderbolt, USB, DisplayPort and power on USB Type-C on a single cable (features vary between different products)
2 USB Type-C connector and cables which are compact and reversible
3 Supports Thunderbolt Networking (*varies between different products)
4 Supports up to 4K displays
5 Up to 40 Gbps

NOTE: Data transfer speed may vary between different devices.

Thunderbolt Icons

Thunderbolt Iconography Variations

Protocol	USB Type-A	USB Type-C	Notes
Thunderbolt	Not Applicable		Will use industry standard icon regardless of port style (i.e., mDP or USB Type-C)
Thunderbolt w/ Power Delivery	Not Applicable		Up to 130 Watts via USB Type-C

DisplayPort over USB-C Iconography Variations

Protocol	USB Type-A	USB Type-C	Notes
DisplayPort over USB-C	Not Applicable		Will use the DisplayPort icon
DisplayPort over USB-C w/ Power Delivery	Not Applicable		Up to 130 Watts via USB Type-C

Dell Active Pen

- Natural writing feel for a pen on paper experience
- Industry leading accuracy, built with Wacom feel IT technologies
- Active stylus with hovering and pressure-sensitive tip (2048 levels of pressure)
- Magnetic attach feature with built-in magnet for increased fastening strength
- Removed Pen clip and added Tethering functionality
- Customizable* 2 barrel buttons and Top button
- Quick launch and note taking over lock screen (requires Bluetooth pairing)
- LED light to show Bluetooth pairing status
- 12 months battery life**, with AAAA battery

*Need to install “Active Control Panel” from **dell.com/support/drivers**

**Based on 3 hours daily usage for 5 days a week

Wireless charging mat

- PM30W17 is an AirFuel certified resonant type wireless charging mat.
- Offers easy and convenient charging for notebooks.
- Charge your notebook conveniently by simply placing it on the mat without having to plug in power cables.
- Compatible with selected Dell notebooks.
- Suitable for Category 5 AirFuel certified PRUs.
- Dell-branded products carry a 1-year limited hardware warranty

CAUTION: Do not insert any objects between the keyboard and the wireless charging mat or between the wireless charging mat and the table. Specifically, avoid CD/DVDs, RFID cards/devices, credit cards and other thin metal objects. These devices may be damaged if they are placed as stated above.

5

System setup

System setup enables you to manage your tabletdesktopnotebook hardware and specify BIOS level options. From the System setup, you can:

- Change the NVRAM settings after you add or remove hardware
- View the system hardware configuration
- Enable or disable integrated devices
- Set performance and power management thresholds
- Manage your computer security

Topics:

Entering BIOS without keyboard

1 Press the power button to turn on your tablet.
2 Press and hold the **Volume Up** button when the Dell logo appears on the screen.
3 When the **F12** boot selection menu appears, select **BIOS Setup** using the **Volume Up** button.
4 Press the **Volume Down** button to enter BIOS setup program.

System setup options

NOTE: Depending on the tabletnotebook and its installed devices, the items listed in this section may or may not appear.

General screen options

This section lists the primary hardware features of your computer.

Option	Description
System Information	Lists the primary hardware features of your computer. • System Information: Displays BIOS Version, Service Tag, Asset Tag, Ownership Tag, Ownership Date, Manufacture Date, Express Service Code, the Signed Firmware update—enabled by default • Memory Information: Displays Memory Installed, Memory Available, Memory Speed, Memory Channels Mode, Memory Technology • Processor Information: Displays Processor Type, Core Count, Processor ID, Current Clock Speed, Minimum Clock Speed, Maximum Clock Speed, Processor L2 Cache, Processor L3 Cache, HT Capable, and 64-Bit Technology

Option	Description
	• Device Information: Displays M.2 PCIe SSD-0, M.2 PCIe SSD-1Passthrough MAC address, Video Controller, Video BIOS Version, Video Memory, Panel Type, Native Resolution, Audio Controller, Wi-Fi Device, WiGig Device, Cellular Device, Bluetooth Device
Battery Information	Displays the battery status health and whether the AC adapter is installed.
Boot Sequence	Boot sequence: Windows boot manager (selected by default) Boot list options: • Legacy • UEFI (selected by default)
Advanced Boot Options	This option allows you the legacy option ROMs to load. The options are: • Enable Legacy Options ROMs (selected by default) • Enable Attempt Legacy Boot • Enable UEFI Network Stack
UEFI Boot Path Security	• Always, except internal HDD (selected by default) • Always • Never
Date/Time	Allows you to change the date and time.

System Configuration screen options

Option	Description
SATA Operation	Allows you to configure the internal SATA hard-drive controller. The options are: • Disabled • AHCI • RAID On: (selected by default).
Drives	Allows you to configure the SATA drives on board. All drives are enabled by default. The options are: • M.2 PCI-e SSD-0 (selected by default) • M.2 PCI-e SSD-1 (selected by default)
SMART Reporting	This field controls whether hard drive errors for integrated drives are reported during system startup. This technology is part of the SMART (Self-Monitoring Analysis and Reporting Technology) specification. This option is disabled by default. • Enable SMART Reporting
USB Configuration	This is an optional feature. This field configures the integrated USB controller. If Boot Support is enabled, the system is allowed to boot any type of USB Mass Storage Devices—HDD, memory key, floppy. If USB port is enabled, device attached to this port is enabled and available for OS.

Option	Description
	If USB port is disabled, the OS cannot see any device attached to this port. The options are: • Enable USB Boot Support (selected by default) • Enable External USB Port (selected by default) **NOTE: A USB Keyboard and/or mouse connected to the platforms USB ports will continue to function within BIOS Setup if this options is disabled.**
Dell Type-C Dock Configuration	This field lets you always allow Dell docks. Always Allows Dell Docks (selected by default)
Thunderbolt Adapter Configuration	The options for Thunderbolt Adapter Configuration are: • Enable Thunderbolt Technology Support (selected by default) • Enable Thunderbolt Adapter Boot Support (selected by default) • Enable Thunderbolt Adapter Pre-boot Modules (selected by default) • Security Level — No Security • Security Level — User Authorization (selected by default) • Security Level — Secure Connect • Security Level — Display Port Only
Audio	This field enables or disables the integrated audio controller. By default, the **Enable Audio** option is selected. The options are: • Enable Microphone (selected by default) • Enable Internal Speaker (selected by default)
Keyboard Illumination	This field lets you choose the operating mode of the keyboard illumination feature. The keyboard brightness level can be set from 0% to 100%. The options are: • Disabled (selected by default) • Dim • Bright
Keyboard Backlight Timeout on AC	The Keyboard Backlight Timeout dims out with AC option. The main keyboard illumination feature is not affected. Keyboard Illumination will continue to support the various illumination levels. This field has an effect when the backlight is enabled. The options are: • 5 sec • 10 sec (selected by default) • 15 sec • 30 sec • 1 min • 5 min • 15 min • Never
Keyboard Backlight Timeout on Battery	The Keyboard Backlight Timeout dims out with the Battery option. The main keyboard illumination feature is not affected. Keyboard Illumination will continue to support the various illumination levels. This field has an effect when the backlight is enabled. The options are:

Option	Description
	• 5 sec • 10 sec (selected by default) • 15 sec • 30 sec • 1 min • 5 min • 15 min • Never
Keyboard Backlight with AC	The Keyboard Backlight with AC option does not affect the main keyboard illumination feature. Keyboard Illumination will continue to support the various illumination levels. This field has an effect when the backlight is enabled. This option is enabled by default.
Unobtrusive Mode	This option, when enabled by pressing Fn+F7, turns off all light and sound emissions in the system. To resume normal operation, press Fn+F7 again. This option is disabled by default.
Miscellaneous Devices	Allows you to enable or disable the following devices: • Enable Front Camera (selected by default) • Enable Secure Digital (SD) card (selected by default) • Enable Back Camera (selected by default) • Secure Digital (SD) Card Read-Only Mode

Video screen options

Option	Description
LCD Brightness	Allows you to set the display brightness depending upon the power source—On Battery and On AC. The LCD brightness is independent for battery and AC adapter. It can be set using the slider.

NOTE: The video setting is visible only when a video card is installed into the system.

Security screen options

Option	Description
Admin Password	Allows you to set, change, or delete the administrator (admin) password. **NOTE: You must set the admin password before you set the system or hard drive password. Deleting the admin password automatically deletes the system password and the hard drive password.** **NOTE: Successful password changes take effect immediately.** Default setting: Not set
System Password	Allows you to set, change, or delete the system password. **NOTE: Successful password changes take effect immediately.** Default setting: Not set
Strong Password	Allows you to enforce the option to always set strong passwords.

Option	Description
	Default Setting: Enable Strong Password is not selected. **NOTE: If Strong Password is enabled, the Admin and System passwords must contain at least one uppercase character, one lowercase character and should be at least 8 characters long.**
Password Configuration	Allows you to specify the minimum and maximum password lengths of the Administrator and System passwords. • min-4—by default, if you want to change, you can increase the number • max-32—you can decrease the number
Password Bypass	Allows you to enable or disable the permission to bypass the System and the Internal HDD password, when they are set. The options are: • Disabled (selected by default) • Reboot bypass
Password Change	Allows you to enable the disable permission to the System and Hard Drive passwords when the admin password is set. Default setting: **Allow Non-Admin Password Changes** (selected by default).
Non-Admin Setup Changes	Allows you to determine whether changes to the setup options are allowed when an Administrator Password is set. If disabled the setup options are locked by the admin password. Option "allow wireless switch changes" is not selected by default.
UEFI capsule firmware updates	This option controls whether the system allows BIOS updates using UEFI capsule update packages. This option is enabled by default.
TPM 2.0 Security	Allows you to enable the Trusted Platform Module (TPM) during POST. The options are: • TPM On (selected by default) • Clear • PPI Bypass for Enable Commands (selected by default) • PPI Bypass for Disabled Commands • Attestation enable (selected by default) • Key storage enable (selected by default) • SHA-256 (selected by default) • Disabled • Enabled (selected by default) **NOTE: To upgrade or downgrade TPM 2.0, download the TPM wrapper tool software.**
Computrace	Allows you to activate or disable the optional Computrace software The options are: • Deactivate • Disable • Activate (selected by default) **NOTE: The Activate and Disable options will permanently activate or disable the feature and no further changes are allowed**
CPU XD Support	Allows you to enable the **Execute Disable** mode of the processor. Enable CPU XD Support (selected by default).

Option	Description
Admin Setup Lockout	Allows you to prevent users from entering Setup when an Administrator password is set. Default Setting: This option is disabled.
Master password lockout	This option is not enabled by default.

Secure Boot screen options

Option	Description
Secure Boot Enable	This option enables or disables the **Secure Boot** feature. • Disabled (selected by default) • Enabled
Expert Key Management	Allows you to manipulate the security key databases only if the system is in Custom Mode. The **Enable Custom Mode** option is disabled by default. The options are: • PK—enabled by default • KEK • db • dbx If you enable the Custom Mode, the relevant options for PK, KEK, db, and dbx appear. The options are: • Save to File—Saves the key to a user-selected file • Replace from File—Replaces the current key with a key from a user-selected file • Append from File—Adds a key to the current database from a user-selected file • Delete—Deletes the selected key • Reset All Keys—Resets to default setting • Delete All Keys—Deletes all the keys **NOTE: If you disable the Custom Mode, all the changes made are erased and the keys restore to default settings.**

Intel software guard extensions screen options

Option	Description
Intel SGX Enable	This field specifies you to provide a secured environment for running code/storing sensitive information in the context of the main OS. The options are: • Disabled • Enabled • Software controlled Default setting: Software controlled
Enclave Memory Size	This option allows you to set the **SGX Enclave Reserve Memory Size**. The options are: • 32 MB

Option	Description
	• 64 MB • 128 MB (selected by default)

Performance screen options

Option	Description
Multi-Core Support	This field specifies whether the process has one or all cores enabled. The performance of some applications improves with the additional cores. This option is enabled by default. Allows you to enable or disable multi-core support for the processor. The installed processor supports two cores. If you enable Multi-Core Support, two cores are enabled. If you disable Multi-Core Support, one core is enabled. • Enable Multi-Core Support Default setting: The option is enabled.
Intel SpeedStep	Allows you to enable or disable the Intel SpeedStep feature. • Enable Intel SpeedStep Default setting: The option is enabled.
C-States Control	Allows you to enable or disable the additional processor sleep states. • C states Default setting: The option is enabled.
Intel TurboBoost	Allows you to enable or disable the Intel TurboBoost mode of the processor. • Enable Intel TurboBoost Default setting: The option is enabled.
HyperThread Control	Allows you to enable or disable the Hyper-Threading in the processor. • Disabled • Enabled Default setting: Enabled is selected.

Power management screen options

Option	Description
Lid Switch	The Lid Switch option is enabled by default.
AC Behavior	Allows you to enable or disable the computer from turning on automatically when an AC adapter is connected. Default setting: Wake on AC is not selected.
Auto On Time	Allows you to set the time at which the computer must turn on automatically. The options are:

Option	Description
	• Disabled (selected by default) • Every Day • Weekdays • Select Days
USB Wake Support	Allows you to enable USB devices to wake the system from Standby. **NOTE: This feature is only functional when the AC power adapter is connected. If the AC power adapter is removed during Standby, the system setup removes power from all the USB ports to conserve battery power.** • Wake on Dell USB-C dock (selected by default)
Wireless Radio Control	Allows you to enable or disable the feature that automatically switches from wired or wireless networks without depending on the physical connection. • Control WLAN Radio • Control WWAN Radio Default setting: The options are disabled.
Peak Shift	This option enables you to minimize the AC power consumption during the peak power times of day. After you enable this option, your system runs only in battery even if the AC is attached. • Enable peak shift • Set battery threshold (15% to 100%) - 15 %
Advanced Battery Charge Configuration	This option enables you to maximize the battery health. By enabling this option, your system uses the standard charging algorithm and other techniques, during the non work hours to improve the battery health. **Enable Advanced Battery Charge Mode**
Primary Battery Charge Configuration	Allows you to select the charging mode for the battery. The options are: • Adaptive (selected by default) • Standard—Fully charges your battery at a standard rate. • ExpressCharge—The battery charges over a shorter time using Dell's fast charging technology This option is enabled by default. • Primarily AC use • Custom If Custom Charge is selected, you can also configure Custom Charge Start and Custom Charge Stop. **NOTE: All charging mode may not be available for all the batteries. To enable this option, disable the Advanced Battery Charge Configuration option.**
Battery Slice Charge Configuration	The options are: • Standard • ExpressCharge (selected by default)

POST behavior screen options

Option	Description
Adapter Warnings	Allows you to enable or disable the system setup (BIOS) warning messages when you use certain power adapters. Default setting: Enable Adapter Warnings
Keypad (Embedded)	Allows you to choose one of two methods to enable the keypad that is embedded in the internal keyboard. • Fn Key Only (selected by default) • By Numlock **NOTE: When setup is running, this option has no effect. Setup works in Fn Key Only mode.**
Numlock Enable	Allows you to enable the Numlock option when the computer boots. Enable Network. This option is enabled by default.
Fn Key Emulation	Allows you to set the option where the Scroll Lock key is used to simulate the Fn key feature. Enable Fn Key Emulation (default)
Fn Lock Options	Allows you to let hot key combinations Fn + Esc toggle the primary behavior of F1–F12, between their standard and secondary functions. If you disable this option, you cannot toggle dynamically the primary behavior of these keys. The available options are: • Lock Mode Disable/Standard (selected by default) • Lock Mode Enable/Secondary
Fastboot	Allows you to speed up the boot process by bypassing some of the compatibility steps. The options are: • Minimal (selected by default) • Thorough • Auto
Extended BIOS POST Time	Allows you to create an extra preboot delay. The options are: • 0 seconds (selected by default) • 5 seconds • 10 seconds
Full Screen Log	• Enable Full Screen Logo—not enabled
Warnings and errors	• Prompt on warnings and errors (selected by default) • Continue on warnings • Continue on warnings and errors
Sign of Life Indication	The options are: • Enable Sign of Life Audio Indication • Enable Sign of Life Display Indication (selected by default)

Option	Description
	• Enable Sign of Life Keyboard Backlight Indication

Manageability

Option	Description
USB provision	Enable USB provision is not selected by default
MEBX Hotkey	Allows you to specify whether the MEBx Hotkey function should enabled during the system boot. Enable MEBX Hotkey selected by default.

Virtualization support screen options

Option	Description
Virtualization	Allows you to enable or disable the Intel Virtualization Technology. Enable Intel Virtualization Technology (selected by default).
VT for Direct I/O	Enables or disables the Virtual Machine Monitor (VMM) from utilizing the additional hardware capabilities provided by Intel® Virtualization technology for direct I/O. Enable VT for Direct I/O (selected by default).
Trusted Execution	This option specifies whether a Measured Virtual Machine Monitor (MVMM) can utilize the additional hardware capabilities provided by Intel Trusted Execution Technology. The TPM Virtualization Technology, and the Virtualization technology for direct I/O must be enabled to use this feature. Trusted Execution - disabled by default.

Wireless screen options

Option	Description
Wireless Device Enable	Allows you to enable or disable the internal wireless devices. • WWAN/GPS • WLAN/WiGig • Bluetooth All the options are enabled by default.

NOTE: IMEI number for WWAN can be found on the outer box or the WWAN card.

Maintenance screen options

Option	Description
Service Tag	Displays the Service Tag of your computer.
Asset Tag	Allows you to create a system asset tag if an asset tag is not already set. This option is not set by default.
BIOS Downgrade	This controls flashing of the system firmware to previous revisions. Option '**Allow BIOS downgrade**' is enabled by default.
Data Wipe	This field allows users to erase the data securely from all internal storage devices. Option **Wipe on Next boot** is not enabled by default. The following is the list of devices affected: • Internal SATA HDD/SSD • Internal M.2 SATA SDD • Internal M.2 PCIe SSD • Internal eMMC
BIOS Recovery	This field allows you to recover from certain corrupted BIOS conditions from a recover file on the user primary hard drive or an external USB key. • BIOS Recovery from Hard Drive—enabled by default • BIOS Auto-Recovery • Always perform integrity check—disabled by default

System logs screen options

Option	Description
BIOS Events	Allows you to view and clear the System Setup (BIOS) POST events.
Thermal Events	Allows you to view and clear the System Setup (Thermal) events.
Power Events	Allows you to view and clear the System Setup (Power) events.

Updating the BIOS

It is recommended to update your BIOS (System setup) on replacing the system board or if an update is available. Ensure that your tabletnotebookdesktop battery is fully charged and connected to a power outlet.

1 Restart the tabletnotebookdesktop.
2 Go to **Dell.com/support**.
3 Enter the **Service Tag** or **Express Service Code** and click **Submit**.

NOTE: To locate the Service Tag, click Where is my Service Tag?

NOTE: If you cannot find your Service Tag, click Detect My Product. Proceed with the instructions on screen.

4 If you are unable to locate or find the Service Tag, click the Product Category of your tabletnotebookdesktop.
5 Choose the **Product Type** from the list.
6 Select your tabletnotebookdesktop model and the **Product Support** page of your tabletnotebookdesktop appears.
7 Click **Get drivers** and click **View All Drivers**.

The Drivers and Downloads page opens.

8 On the Drivers and Downloads screen, under the **Operating System** drop-down list, select **BIOS**.

9 Identify the latest BIOS file and click **Download File**.

You can also analyze which drivers need an update. To do this for your product, click **Analyze System for Updates** and follow the instructions on the screen.

10 Select your preferred download method in the **Please select your download method below** window, click **Download File**.

The **File Download** window appears.

11 Click **Save** to save the file on your tabletnotebookdesktop.

12 Click **Run** to install the updated BIOS settings on your tabletnotebookdesktop.

Follow the instructions on the screen.

NOTE: It is recommended not to update the BIOS version for more than 3 revisions. For example: If you want to update the BIOS from 1.0 to 7.0, then install version 4.0 first and then install version 7.0.

System and setup password

You can create a system password and a setup password to secure your computer.

Password type	Description
System password	Password that you must enter to log on to your system.
Setup password	Password that you must enter to access and make changes to the BIOS settings of your computer.

CAUTION: The password features provide a basic level of security for the data on your computer.

CAUTION: Anyone can access the data stored on your computer if it is not locked and left unattended.

NOTE: Your computer is shipped with the system and setup password feature is disabled.

Assigning a system password and setup password

You can assign a new **System Password** only when the status is in **Not Set**.

To enter the system setup, press F2 immediately after a power-on or re-boot.

1 In the **System BIOS** or **System Setup** screen, select **Security** and press Enter.

The **Security** screen is displayed.

2 Select **System Password** and create a password in the **Enter the new password** field.

Use the following guidelines to assign the system password:

- A password can have up to 32 characters.
- The password can contain the numbers 0 through 9.
- Only lower case letters are valid, upper case letters are not allowed.
- Only the following special characters are allowed: space, (”), (+), (,), (-), (.), (/), (;), ([), (\), (]), (`).

3 Type the system password that you entered earlier in the **Confirm new password** field and click **OK**.

4 Press Esc and a message prompts you to save the changes.

5 Press Y to save the changes.

The computer reboots.

Deleting or changing an existing system and/or setup password

Ensure that the **Password Status** is Unlocked (in the System Setup) before attempting to delete or change the existing System and/or Setup password. You cannot delete or change an existing System or Setup password, if the **Password Status** is Locked.
To enter the System Setup, press F2 immediately after a power-on or reboot.

1 In the **System BIOS** or **System Setup** screen, select **System Security** and press Enter.
The **System Security** screen is displayed.
2 In the **System Security** screen, verify that **Password Status** is **Unlocked**.
3 Select **System Password**, alter or delete the existing system password and press Enter or Tab.
4 Select **Setup Password**, alter or delete the existing setup password and press Enter or Tab.

> **NOTE: If you change the System and/or Setup password, re-enter the new password when promoted. If you delete the System and/or Setup password, confirm the deletion when promoted.**

5 Press Esc and a message prompts you to save the changes.
6 Press Y to save the changes and exit from System Setup.
The computer reboots.

6

Troubleshooting

Enhanced Pre-boot System Assessment (ePSA)

The ePSA is a diagnostic utility available on the tablet. This utility includes a series of tests for a tablet's hardware. Customers can run these tests even if the computer lacks any media (hard drive, CD drive, etc.). If an ePSA-tested component fails, the system displays an error code and generates a beep code.

Features:

- Graphical User Interface.
- Automatic Default Operation- runs test on all devices, allowing a user to interrupt and select any device.
- Checks the Master Boot Record for readiness to boot into a full OS environment.
- Tablet panel test.
- Video card.
- Battery test.
- Charger test.
- Primary battery.
- Multiprocessor cache test.

Running the ePSA Diagnostic Utility

NOTE: The following steps can be used to run the ePSA diagnostic utility in DOS mode without using an external keyboard.

1 Power on the system.
2 Before the Dell Logo is displayed, immediately press the **Volume Up** button to get the **Boot Menu**.
3 Scroll down the **Diagnostics** and then press the **Volume Down** button to select.
4 The tablet will begin running the ePSA utility.

Dell wireless charging mat

- Ensure that the correct AC adapter is plugged into the charging mat and AC input is connected and supplied to the adapter.
- Ensure that the charging mat is not placed directly on metal table or if using a metal table ensure there is at least a 5-cm gap between the metal table and the charging mat.
- Place a known working wireless charging keyboard on the charging mat and check to see if the LED lights up. The keyboard must be placed within the charging area and no object should be inserted between the keyboard/Mat and/or Mat/table.
- Or if using a tablet connected to the wireless charging keyboard, then check that the battery indicator displays charging.
- If all the above troubleshooting steps fail, then the charging mat may have malfunctioned. Please contact **Dell Support** for assistance.

Tablet LED

This section details the diagnostic features of the battery LED in a tablet.

Diagnostic LED

Tablets rely on the Battery LED light blinking amber/white pattern to determine failures listed in the following table:

NOTE:

- The blinking patterns will consist of 2 sets of numbers being represented by (First Group: Amber blinks, Second Group: White blinks)
- First Group: The LED blinks 1 to 9 times followed by a brief pause with LED off at the interval of 1.5 seconds. (This is in Amber color)
- Second Group: The LED blinks 1 to 9 times, followed by a longer pause before the next cycle starts again at the interval of 1.5 seconds. (This is in White color)
- **Example**: No Memory detected (2,3), Battery LED blinks two times of amber color followed by a pause, and then blinks three times of white color. The Battery LED will pause for 3 seconds before the next cycle repeat itself again

The following table depicts the amber and white blinking patterns with possible troubleshooting resolution:

Table 1. LED pattern

Blinking pattern	Problem Description	Suggested Resolution
2,1	processor	processor failure
2,2	system board, BIOS ROM	system board, covers BIOS corruption or ROM error
2,3	memory	no memory/no RAM detected
2,4	memory	memory failure/RAM failure
2,5	memory	invalid memory installed
2,6	system board; chipset	system board/ chipset error
2,7	display	display failure
3,1	RTC power failure	coin-cell battery failure
3,2	PCI/Video	PCI/Video card/chip failure
3,3	BIOS recovery 1	recovery image not found
3,4	BIOS recovery 2	recovery image found but invalid

Real Time Clock (RTC) reset

The Real Time Clock (RTC) reset function allows you or the service technician to recover the recently launched model Dell Latitude and Precision systems from select **No POST/No Boot/No Power** situations. You can initiate the RTC reset on the system from a power off state only if it is connected to AC power. Press and hold the power button for 25 seconds. The system RTC reset occurs after you release the power button.

NOTE: If AC power is disconnected from the system during the process or the power button is held longer than 40 seconds, the RTC reset process is aborted.

The RTC reset will reset the BIOS to Defaults, un-provision Intel vPro and reset the system date and time. The following items are unaffected by the RTC reset:

- Service Tag
- Asset Tag
- Ownership Tag
- Admin Password
- System Password
- HDD Password
- Key Databases
- System Logs

The following items may or may not reset based on your custom BIOS setting selections:

- The Boot List
- Enable Legacy OROMs
- Secure Boot Enable
- Allow BIOS Downgrade

Identifying the AC adapter shipped with your notebooktablet

AC adapters are shipped based on customer requirements or based on regions. To identify the AC adapter shipped with your tabletnotebook, you can verify it from the service tag.

1 Go to **Dell.com/support**
2 Type the service tag of your tabletnotebook.
3 Click **System configuration**. System configuration details are displayed.
4 Click **Original configuration** to view the AC adapter shipped with your tabletnotebook.

7

Contacting Dell

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

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

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