Dell Latitude 7400 2-in-1

Setup and specifications guide

Digitally signed by Dimitriu Alina
Date: 2019.11.18 09:39:27 EET
Reason: MoldSign Signature
Location: Moldova

Regulatory Model: P110G
Regulatory Type: P110G001

Notes, cautions, and warnings

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

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

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

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Contents

Set up your computer

1 Connect the power adapter and press the power button.

NOTE: To conserve battery power, the battery might enter power saving mode.

2 Finish the Windows system setup.

3 Follow the on-screen instructions to complete the setup. When setting up, Dell recommends that you:

- Connect to a network for Windows updates.

  NOTE: If connecting to a secured wireless network, enter the password for the wireless network access when prompted.

- If connected to the internet, sign-in with or create a Microsoft account. If not connected to the internet, create an offline account.
- On the **Support and Protection** screen, enter your contact details.

4 Locate and use Dell apps from the Windows Start menu—Recommended

Table 1. Locate Dell apps

Dell apps	Details
	Dell Product Registration Register your computer with Dell.
	Dell Help & Support Access help and support for your computer.

Dell apps	Details
	**SupportAssist** Proactively checks the health of your computer's hardware and software. **NOTE: Renew or upgrade your warranty by clicking the warranty expiry date in SupportAssist.**
	**Dell Update** Updates your computer with critical fixes and important device drivers as they become available.
	**Dell Digital Delivery** Download software applications including software that is purchased but not pre-installed on your computer.

5 Create recovery drive for Windows.

NOTE: It is recommended to create a recovery drive to troubleshoot and fix problems that may occur with Windows.

6 For more information, see Create a USB recovery drive for Windows.

2

Create a USB recovery drive for Windows

Create a recovery drive to troubleshoot and fix problems that may occur with Windows. An empty USB flash drive with a minimum capacity of 16 GB is required to create the recovery drive.

Prerequisites

NOTE: This process may take up to an hour to complete.

NOTE: The following steps may vary depending on the version of Windows installed. Refer to the Microsoft support site for latest instructions.

Steps

1. Connect the USB flash drive to your computer.
2. In Windows search, type `Recovery`.
3. In the search results, click **Create a recovery drive**.

   The **User Account Control** window is displayed.
4. Click **Yes** to continue.

   The **Recovery Drive** window is displayed.
5. Select **Back up system files to the recovery drive** and click **Next**.
6. Select the **USB flash drive** and click **Next**.

   A message appears, indicating that all data in the USB flash drive will be deleted.
7. Click **Create**.
8. Click **Finish**.

   For more information about reinstalling Windows using the USB recovery drive, see the *Troubleshooting* section of your product's *Service Manual* at www.dell.com/support/manuals.

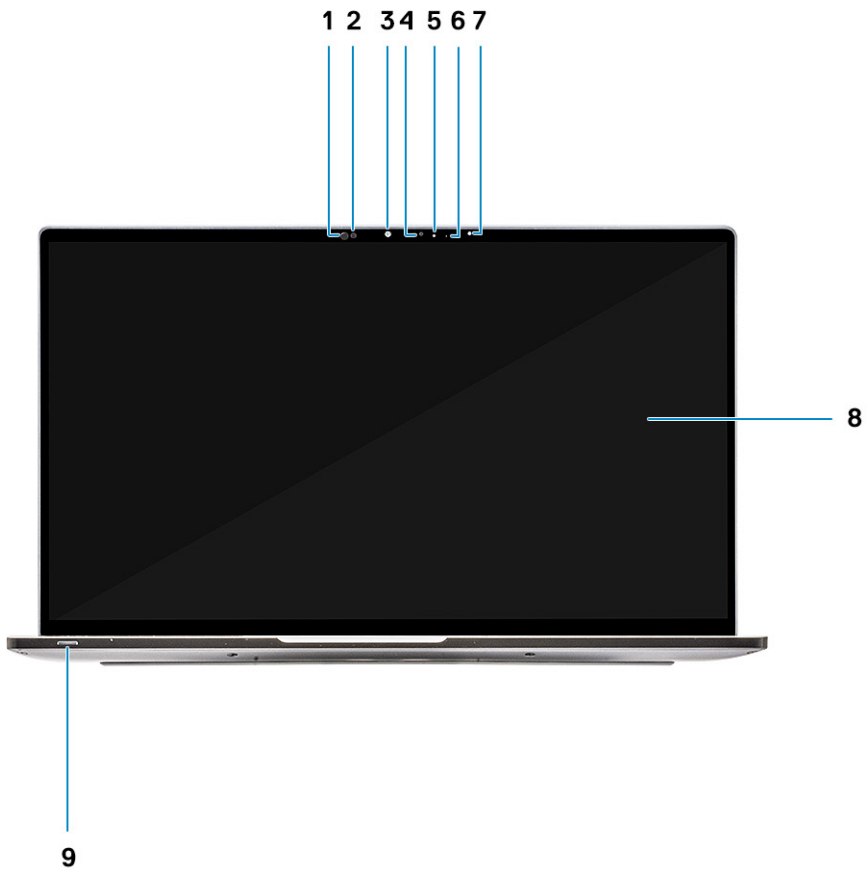
3

Chassis

This chapter illustrates the multiple chassis views along with the ports and connectors and also explains the FN hot key combinations.

Topics:

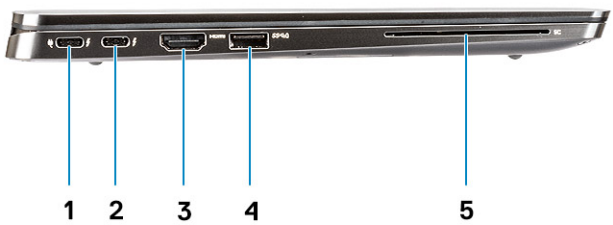
Front view



1 Proximity sensor receiver
2 Proximity sensor emitter
3 IR emitter

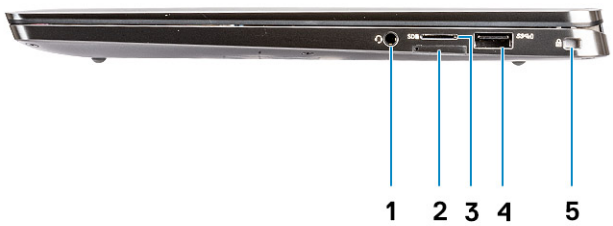
4 Camera (IR/RGB)
5 Camera status LED
6 IR emitter
7 Ambient Light Sensor (ALS)
8 Display panel
9 Battery / Diagnostics status LED

Left view



1 USB 3.1 Gen2 Type-C port with Thunderbolt 3 and Power Delivery (PD)
2 USB 3.1 Gen2 Type-C port with Thunderbolt 3 and Power Delivery (PD)
3 HDMI 1.4 Port
4 USB 3.1 Gen 1 Type-A Port (With PowerShare and Power On /Wake support on WLAN)
5 Smart card reader (optional)

Right view



1 3.5 mm universal audio port
2 micro SIM card slot

3 microSD card reader

4 USB 3.1 Gen 1 Type-A Port (With PowerShare and Power On/Wake support on WLAN)

5 Noble Wedge-shaped lock slot

Top view

1 Power button with fingerprint reader (optional)

2 Keyboard

3 Touchpad with NFC (optional)

Bottom view

1 Service Tag label
2 Speakers

Chassis modes

This section illustrates various supported modes for Latitude 7400 2-in-1: Stand, Notebook, Tablet, and Tent.

4

Keyboard shortcuts

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

Table 2. List of keyboard shortcuts

Keys	Description
Fn + Esc	Num Lock
Fn + F1	Mute audio
Fn + F2	Decrease volume
Fn + F3	Increase volume
Fn + F4	Mic Mute
Fn + F5	Keyboard backlight **NOTE: Not applicable for non-backlight keyboard.**
Fn + F6	Decrease screen brightness
Fn + F7	Increase screen brightness
Fn + F8	Display Toggle (Win + P)
Fn + F10	Print Screen
Fn + F11	Home
Fn + F12	End
Fn + Right Ctrl	Emulates Right Click

5

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:

System information

Table 3. System Information

Feature	Specifications
Chipset	Intel 300 Series Chipset Family
DRAM bus width	64-bit

Feature	Specifications
FLASH EPROM	SP1 32 MB
PCIe bus	Up to 8 GT/s (Gen3)
External bus frequency	OPI x8, up to 4 GT/s
LPC (Low Pin Count)	24 MHz, no DMA

Processor

NOTE: Processor numbers are not a measure of performance. Processor availability is subject to change and may vary by region/country.

Table 4. Processor specifications

Type	UMA Graphics
8th Gen Intel Core Whiskey Lake processors.	Intel UHD Graphics 620

Memory

NOTE: Memory is soldered on the system board and cannot be extended after purchase. Memory configuration should be selected at point of sale.

Table 5. Memory specifications

Feature	Specifications
Minimum memory configuration	8 GB
Maximum memory configuration	16 GB
Number of slots	Part of the system board
Memory options	8GB / 16GB
Type	LPDDR3 RAM
Speed	Up to 16 GB LPDDR3 SDRAM 2133 MHz (on board)

Base

Table 6. Base configurations

Base	
1	Intel Quad-Core i5-8265U Whiskey Lake processor, Intel UHD 620 UMA graphics, 8 GB, nvPro
2	Intel Quad-Core i5-8265U/ i5-8365U/ i7-8665U Whiskey Lake processor, Intel UHD 620 UMA graphics, 8 GB/16 GB, vPro

Intel vPro and Intel Standard Manageability

Intel vPro

Available with Intel Core i5 and i7 processors and offers the most complete set of out-of-band management features including KVM, IPv6 support, graceful shutdown, and all the features from previous versions of vPro. It uses the latest version of Intel's Active Management Technology (AMT).

To learn more about vPro, visit Intel's website at http://www.intel.com/content/www/us/en/architecture-and-technology/vpro/vpro-technology-general.html.

A unique and new Dell Remote Provisioning feature for Intel vPro quickly activates vPro capabilities on a PC, reducing vPro set-up time from months to less than an hour. The Dell Remote Provisioning feature for Intel vPro is available as a part of the module: **Dell Command | Integration Suite for Systems Center**

Intel Standard Manageability (ISM)

ISM offers a limited set of out-of-band features like remote power on/off, Serial-over-LAN redirect, Wake-on-LAN, etc.

To learn more about Intel ISM, visit Intel's website at: https://software.intel.com/en-us/blogs/2009/03/27/what-is-standard-manageability.

Storage

Table 7. Storage specifications

Type	Form factor	Interface	Security option	Capacity
Primary Storage (SSD, FIPS, SED, Opal)	M.2 2230 M.2 2280 (With no WWAN configuration)	PCIe x4 SATA 3	FIPS, SED, Opal	• 128 GB • 256 GB • 512 GB • 1 TB • 256 GB/512 GB FIPS 140-2 compliant SED • 1 TB OPAL SED

System board connectors

Table 8. Internal M.2 System board connectors

Feature	Specifications
M.2 Connectors	Three • 2230 socket 2 Key B, supports PCIe x2 interface • 2230/2280 socket 3 Key M, supports 2230 PCIe x4 interface or supports 2280 if WWAN slot is not used • Socket 1 Key E, supports CNVi/PCIe x1/USB2.0 and is used for WLAN **NOTE: WiGig is not supported.**

Media card reader

Table 9. Media card reader specifications

Feature	Specifications
Type	One micro-SD card slot
Supported cards	• micro SD • micro SDHC • micro SDXC

Audio

Table 10. Audio specifications

Feature	Specifications
Controller	Realtek ALC3254
Type	Four-channel high-definition audio
Speakers	Two (Directional speakers)
Interface	• Universal audio jack • High quality speakers • Noise reducing array microphones • Stereo headset/mic combo
Internal speaker amplifier	2W (RMS) per channel

Graphics Specifications

Table 11. Graphics specifications

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
Intel UHD 620 Graphics	UMA	None	Integrated	Shared system memory	• HDMI 1.4a • USB Type-C display	4096×2304 @24 Hz

NOTE: This system supports a maximum of three displays, including the built-in eDP Panel.

Camera

Table 12. Camera specifications

Feature	Specifications
Resolution	Infrared camera (optional): • Still image: 0.30 megapixels • Video: 340 x 340 at 30 fps **NOTE: Infrared camera is Windows hello compliant.**
Diagonal viewing angle	• Camera - 77.7 degrees • Infrared camera - 70 degrees

Communication Specifications

Table 13. WLAN (Wi-Fi) specifications

Intel Dual Band Wireless-AC 9560 802.11ac 160 MHz (2x2) Wi-Fi + Bluetooth v5 M.2 Wireless Card
Qualcomm QCA61x4A 802.11ac MU-MIMO Dual Band (2x2) Wi-Fi + Bluetooth v4.2 LE M.2 Wireless Card
Intel® Wi-Fi 6 AX200 (2x2) Wi-Fi + BT 5 LE Wireless Card (Summer 2019)

Table 14. WWAN (Mobile Broadband) specifications

Dell Wireless 5821E Qualcomm Snapdragon X20 LTE M.2 Mobile Broadband Card

External Ports and connectors

Table 15. External Ports and connectors

Feature	Specifications
Memory card reader	microSD 4.0
Smart card reader	Optional
USB	• Two USB 3.1 Gen 1 Type-A port with Power on/Wake-up/Power share support • Two USB 3.2 Gen 1 Thunderbolt 3 capable Type-C port with Power delivery
Security	Noble wedge slot
Docking port	Thunderbolt 3 over USB Type-C
Audio	• Universal audio jack

Feature	Specifications
	• Noise reduction array microphones
Video	HDMI 1.4
SIM card reader	One micro SIM card reader (WWAN version only)

Smart card reader

Table 16. Contactless smart card reader

Type	FIPS 201 Contacted / Contactless Smart Card reader
ISO certification	ISO14443A

Display specifications

Table 17. Display specifications

Feature	Specifications
Type	14 inch FHD (1920 x 1080), AR + AS (16:9) WVA SLP narrow border touch screen (10 finger and Active Stylus capable)
Height (Active area)	6.85 inch (173.99 mm)
Width (Active area)	12.18 inch (309.31 mm)
Diagonal	14 inch (354.89 mm)
Borders (AA to Glass)	• Top: 6.02 mm • Bottom: 8.8 mm • Sides: 3.73 mm
Luminance/Brightness (typical)	• 300 nits at 1.63 W (in mosaic pattern) • 150 nits at 1.17 W
Refresh rate	60 Hz
Horizontal viewing angle (min)	+/- 89 degrees
Vertical viewing angle (min)	+/- 89 degrees
Megapixels	2.07
Pixels Per Inch (PPI)	157
Pixel pitch	0.161 mm
Color depth	16.2 M
Contrast ratio (typical)	1500:1

Feature	Specifications
Response time (max)	35 ms
Stylus support	Yes, Active

Keyboard

Table 18. Keyboard specifications

Feature	Specifications
Number of keys	• 83 keys: US English, Thai, French-Canadian, Korean, Russian, Hebrew, English-International • 84 keys: UK English, French Canadian Quebec, German, French, Spanish (Latin America), Nordic, Arabic, Canada Bilingual • 85 keys: Brazilian Portuguese • 87 keys: Japanese
Size	• X = 19.05 mm key pitch • Y = 18.05 mm key pitch • Z = 4.15 mm
Backlit keyboard	Yes
Layout	QWERTY/AZERTY/Kanji

Touchpad

Table 19. Touchpad Specifications

Feature	Specifications
Resolution	• Horizontal: 1235 • Vertical: 695
Dimensions	• Width: 4.13 inch (105 mm) • Height: 2.36 inch (60 mm)
Multi-touch	Supports five fingers multi-touch

NOTE: Touchpad has the optional NFC sensor.

Operating system

Table 20. Operating system

Feature	Specifications
Operating systems supported	• Microsoft Windows 10 Professional (64 bit) • Microsoft Windows 10 Home (64 bit)

Battery

Table 21. Battery Specifications

Feature	Specifications
Type	• 52 WHr lithium-polymer 4 cell battery • 78 WHr lithium-polymer 6 cell battery
Dimension	1 52 WHr • Length: 250 mm (9.84 inch) • Width: 85.80 mm (3.38 inch) • Height: 4.99 mm (0.20 inch) • Weight: 236.00 g (0.52 lb) 2 78 WHr • Length: 301.67 mm (11.88 inch) • Width: 111.36 mm (4.38 inch) • Height: 9.09 mm (0.36 inch) • Weight: 340 g (0.75 lb)
Weight (maximum)	1 52 WHr - 236 g (0.52 lb) 2 78 WHr - 340 g (0.75 lb)
Voltage	• 52 WHr - 7.6 V • 78 WHr - 11.4 V
Life span	52 WHr - 300 discharge/recharge cycles
Charging time when the computer is off (approximate)	• 0~15°C: 4 Hours • 16~45°C: 2 Hours • 46~60°C: 3 Hours
Operating time	1 52 WHr - >= 14 Hours 2 78 WHr - >= 24 Hours **NOTE: Operating time varies depending on operating conditions and can significantly reduce under certain power-intensive conditions,**
Temperature range: Operating	• Charge: 0°C to 45°C (32°F to 113°F) • Discharge: 0°C to 70°C (32°F to 158°F)
Temperature range: Storage	-20°C to 65°C (-4°F to 149°F)
Coin-cell battery	ML1220
Dell Power Manager Capable	Yes, DPM 3.0

Power adapter

Table 22. Power adapter specifications

Feature	Specifications
Type	• 65 W (4-cell 52Whr) USB Type-C • 90 W (6-cell 78 Whr) USB Type-C • Via Dock supporting a NVDC charger architecture
Input Voltage	100 V ca to 240 V ca
Input current (maximum)	1.7 A
Adapter size	• 65 W: 22 mm x 66 mm x 99 mm (0.87 inch x 2.6 inch x 3.9 inch) • 90 W: 22 mm x 66 mm x 130 mm (0.87 inch x 2.6 inch x 5.12 inch)
Input frequency	50 Hz to 60 Hz
Output current	• 65 W - 3.25 A (continuous) • 90 W - 4.5 A (continuous)
Rated output voltage	20 VDC
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)
Weight (lbs)	0.476
Weight (kg)	0.216

Physical system dimensions

Table 23. Dimensions and weight

Feature	Specifications
Height	Front height - 0.34 inch (8.53 mm) Back height - 0.59 inch (14.89 mm)
Width	12.59 inch (319.77 mm)
Depth	7.89 inch (199.90 mm)
Weight	Starting 2.99 lb (1.36 kg)

Computer environment

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

Table 24. Computer environment

	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 80% (non-condensing) **NOTE: Maximum dew point temperature = 26°C**	10% to 95% (non-condensing) **NOTE: Maximum dew point temperature = 33°C**
Vibration (maximum)	0.26 GRMS	1.37 GRMS
Shock (maximum)	105 G†	40 G‡
Altitude (maximum)	-15.2 m to 3048 m (-50 ft to 10,000 ft)	-15.2 m to 10,668 m (-50 ft to 35,000 ft)

* Measured using a random vibration spectrum that simulates user environment.

NFC

Table 25. NFC Specifications

NFC: Near Field Communications	
NFC Standard	ISO/IEC 18092 and ISO/IEC 21481
Cards Supported	Type1 / Type 2 / Type 3 / Type 4; ISO/IEC 14443-4 stands-based PICC; ISO/IEC 15693 stands-based VICC ; ISO/IEC 18000-3 ; Kovio
Operating temperature	-30°C to +85° C
Humidity	Up to 90% RH non-condensing (at temperatures of 25°C to 35°C)

Fingerprint reader

This is an optional feature with the Latitude 7400 2-in-1, located on the power button.

Table 26. Fingerprint reader specifications

Description	Values
Sensor technology	Touch
Sensor resolution	363 dpi
Sensor area	7.4 mm x 6 mm

Security

Table 27. Security options

Trusted Platform Module (TPM) 2.0	Discreet TPM 2.0 IC FIPS-140-2 Certified / TCG Certified
Firmware TPM	Optional

Chassis lock slot and loop support	Yes, Noble wedge lock slot
Finger print Reader	Optional, on Power button (Windows Hello compliant)
Contacted / Contactless Smartcard	Optional
Optional Security Hardware Authentication Bundles	• Touch Fingerprint Reader (in Power Button) with Control Vault 3.0 Advanced Authentication with FIPS 140-2 Level 3 Certification • Contacted Smart Card and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification • Touch Fingerprint Reader (in Power Button), Contacted Smart Card, and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification • Touch Fingerprint Reader in Power Button, Contacted Smart Card, Contactless Smart Card, NFC, and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification • Optional Face IR camera (Windows Hello compliant) with Proximity Sensor

Regulatory and Environmental Compliance

Table 28. Regulatory and Environmental Compliance specifications

- Energy Star Version 7
- EPEAT Bronze Registered*
- TAA configurations available
- Halogen-Free/Arsenic-Free
- BFR/PVC free (not including PSU)

* : For specific country participation and rating, please see https://ww2.epeat.net/

6

System setup

CAUTION: Unless you are an expert computer user, do not change the settings in the BIOS Setup program. Certain changes can make your computer work incorrectly.

NOTE: Before you change BIOS Setup program, it is recommended that you write down the BIOS Setup program screen information for future reference.

Use the BIOS Setup program for the following purposes:

- Get information about the hardware installed in your computer, such as the amount of RAM and the size of the hard drive.
- Change the system configuration information.
- Set or change a user-selectable option, such as the user password, type of hard drive installed, and enabling or disabling base devices.

Topics:

Boot menu

Press <F12> when the Dell logo appears to initiate a one-time boot menu with a list of the valid boot devices for the system. Diagnostics and BIOS Setup options are also included in this menu. The devices listed on the boot menu depend on the bootable devices in the system. This menu is useful when you are attempting to boot to a particular device or to bring up the diagnostics for the system. Using the boot menu does not make any changes to the boot order stored in the BIOS.

The options are:

- UEFI Boot:
  - Windows Boot Manager
-
- Other Options:
  - BIOS Setup
  - BIOS Flash Update
  - Diagnostics
  - Change Boot Mode Settings

Navigation keys

NOTE: For most of the System Setup options, changes that you make are recorded but do not take effect until you restart the system.

Keys	Navigation
Up arrow	Moves to the previous field.
Down arrow	Moves to the next field.
Enter	Selects a value in the selected field (if applicable) or follow the link in the field.
Spacebar	Expands or collapses a drop-down list, if applicable.
Tab	Moves to the next focus area.
Esc	Moves to the previous page until you view the main screen. Pressing Esc in the main screen displays a message that prompts you to save any unsaved changes and restarts the system.

Boot Sequence

Boot Sequence allows you to bypass the System Setup–defined boot device order and boot directly to a specific device (for example: optical drive or hard drive). During the Power-on Self Test (POST), when the Dell logo appears, you can:

- Access System Setup by pressing F2 key
- Bring up the one-time boot menu by pressing F12 key

The one-time boot menu displays the devices that you can boot from including the diagnostic option. The boot menu options are:

- Removable Drive (if available)
- STXXXX Drive

  NOTE: XXX denotes the SATA drive number.
- Optical Drive (if available)
- SATA Hard Drive (if available)
- Diagnostics

  NOTE: Choosing Diagnostics, will display the ePSA diagnostics screen.

The boot sequence screen also displays the option to access the System Setup screen.

System setup options

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

General options

Table 29. General

Option	Description
System Information	This section lists the primary hardware features of your computer. The options are: • **System Information** • **Memory Configuration** • **Processor Information** • **Device Information**
Battery Information	Displays the battery status and the type of AC adapter connected to the computer.

Option	Description
Boot Sequence	Allows you to change the order in which the computer attempts to find an operating system. The options are: · **Windows Boot Manager** · **Boot List Option:** Allows you to change the boot list options. Click one of the following options: – **Legacy External Devices** – **UEFI**—Default
Advanced Boot Options	Allows you to Enable Legacy Option ROMs. The options are: · **Enable Legacy Option ROMs**—Default · **Enable Attempt Legacy Boot**
UEFI Boot Path Security	Allows you to control whether the system prompts the user to enter the Admin password when booting to a UEFI boot path. Click one of the following options: · **Always, Except Internal HDD**—Default · **Always** · **Never**
Date/Time	Allows you to set the date and time. The change to the system date and time takes effect immediately.

System configuration

Table 30. System Configuration

Option	Description
SATA Operation	Allows you to configure the operating mode of the integrated SATA hard-drive controller. Click one of the following options: · **Disabled** · **AHCI**—Default
Drives	These fields let you enable or disable various drives on board. The options are: · **SATA-2** · **M.2 PCIe SSD-0**
SMART Reporting	This field controls whether hard drive errors for integrated drives are reported during startup. The option is disabled by default.

Option	Description
USB Configuration	Allows you to enable or disable the internal/integrated USB configuration. The options are: · **Enable USB Boot Support** · **Enable External USB Ports** All the options are set by default. **NOTE: USB keyboard and mouse always work in the BIOS setup irrespective of these settings.**
Dell Type-C Dock Configuration	Allows you to connect to Dell WD and TB family of docks(Type-C Docks) independent of USB and thunderbolt adapter configuration. This option is enabled by default.
Thunderbolt™ Adapter Configuration	Allows you to enable or disable Thunderbolt options: · **Thunderbolt (Enabled by Defualt)** · **Enable Thunderbolt Boot Support** · **Enable Thunderbolt (and PCIe behind TBT) Pre-boot** With following security levels : · **No Security** · **User Authentication (Enabled by Defualt)** · **Secure Connect** · **Display Port and USB Only**
Thunderbolt™ Auto Switch	This option configures the method used by the Thunderbolt controller to perform PCIe device enumeration. · **Auto Switch** : The BIOS will automatically switch between BIOS Assist and Native Thunderbolt PC device enumeration modes to get all benefits of the installed OS · **Native Enumeration**: The BIOS will program the Thunderbolt controller to Native mode (Auto Switching is disabled) · **BIOS Assist Enumeration**: The BIOS will program the Thunderbolt controller to BIOS Assist mode (Auto Switching is disabled) **NOTE: A reboot is required for these changes to take effect.**
USB PowerShare	This option enable/disable the USB PowerShare feature behavior. This option is disabled by default.
Audio	Allows you to enable or disable the integrated audio controller. By default, the **Enable Audio** option is selected. The options are: · **Enable Microphone** · **Enable Internal Speaker** This option is set by default.

Option	Description
Keyboard Illumination	This field lets you choose the operating mode of the keyboard illumination feature. • **Disabled**: The Keyboard illumination will always be off or 0%. • **Dim**: Enable the keyboard illumination feature at 50% brightness. • **Bright**: Enable the keyboard illumination feature at 100% brightness level.
Keyboard Backlight Timeout on AC	This feature defines the timeout value for the keyboard backlight when an AC adapter is plugged into the system. Options are: • **5 seconds** • **10 seconds**(Default) • **15 seconds** • **30 seconds** • **1 minute** • **5 minute** • **15 minute** • **Never**
Keyboard Backlight Timeout on Battery	This feature defines the timeout value for the keyboard backlight when the system is running only on battery power. Options are: • **5 seconds** • **10 seconds**(Default) • **15 seconds** • **30 seconds** • **1 minute** • **5 minute** • **15 minute** • **Never**
Touchscreen	This option controls whether the touchscreen is enabled or disabled This option is enabled by default.
Unobtrusive Mode	When enabled, pressing Fn+F7 will turn off all light and sound emission in the system. Press Fn+F7 to resume normal operation. Default is Disabled.
Fingerprint Reader	Enable or disable the Fingerprint Reader or the Fingerprint Reader Device's Single Sign On capability. • **Enable Fingerprint Reader Device**: Enabled by Default • **ENable Fingerprint Reader Single Sign On**: Enabled by Default
Miscellaneous devices	Allows you to enable or disable various on board devices. • **Enable Camera**—Default • **Enable Secure Digital (SD) Card** • **Secure Digital (SD) Card Boot** - Disabled • **Secure Digital Card (SD) Read-Only Mode** - Disabled

Video screen options

Table 31. Video

Option	Description
LCD Brightness	Allows you to set the display brightness depending upon the power source. On Battery(50% is default) and On AC (100 % default).
Dynamic Backlight Control	This option Enables or Disables the Dynamic Backlight Control if the Panel supports this feature.

Security

Table 32. Security

Option	Description
Admin Password	Allows you to set, change, or delete the administrator(admin) password. The entries to set password are: · **Enter the old password:** · **Enter the new password:** · **Confirm new password:** Click **OK** once you set the password. **NOTE: For the first time login, "Enter the old password:" field is marked to "Not set". Hence, password has to be set for the first time you login and then you can change or delete the password.**
System Password	Allows you to set, change, or delete the System password. The entries to set password are: · **Enter the old password:** · **Enter the new password:** · **Confirm new password:** Click **OK** once you set the password. **NOTE: For the first time login, "Enter the old password:" field is marked to "Not set". Hence, password has to be set for the first time you login and then you can change or delete the password.**
Strong Password	Allows you to enforce the option to always set strong password. · **Enable Strong Password** This option is not set by default.
Password Configuration	You can define the length of your password. Min = 4, Max = 32
Password Bypass	Allows you to bypass the System password and the Internal HDD password, when it is set, during a system restart.

Option	Description
	Click one of the options: • **Disabled**—Default • **Reboot bypass**
Password Change	Allows you to change the System password when the administrator password is set. • **Allow Non-Admin Password Changes** This option is set 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. • **Allow Wireless Switch Changes** This option is not set by default.
UEFI Capsule Firmware Updates	Allows you to update the system BIOS via UEFI capsule update packages. • **Enable UEFI Capsule Firmware Updates** This option is set by default.
TPM 2.0 Security	Allows you to enable or disable the Trusted Platform Module (TPM) during POST. The options are: • **TPM On**—Default • **Clear** • **PPI Bypass for Enable Command**—Default • **PPI Bypass for Disbale Command** • **PPI Bypass for Clear Command** • **Attestation Enable**—Default • **Key Storage Enable**—Default • **SHA-256**—Default
Absolute®	This field lets you Enable, Disable, or Permanently Disable the BIOS module interface of the optional Absolute Persistence Module service from Absolute® Software.
OROM Keyboard Access	This option determines whether users are able to enter Option ROM Configuration screens via hotkey during boot. Specifically this settings is capable of preventing access to Intel® RAID(Ctrl+I) or Intel® Management Engine BIOS Extension (Ctrl+P/F12). Options are: • **Enable** • **One Time Enable** • **Disable**
Admin Setup Lockout	Allows you to prevent users from entering Setup when an administrator password is set. • **Enable Admin Setup Lockout** This option is not set by default.
Master Password Lockout	Allows you to disable master password support. • **Enable Master Password Lockout** This option is not set by default.

Option	Description
	NOTE: **Hard Disk password should be cleared before the settings can be changed.**
SMM Security Mitigation	Allows you to enable or disable additional UEFI SMM Security Mitigation protection. · **SMM Security Mitigation** This option is not set by default.

Secure boot

Table 33. Secure Boot

Option	Description
Secure Boot Enable	Allows you to enable or disable the Secure Boot Feature. · **Secure Boot Enable**—Default
Secure Boot Mode	Changes to the Secure Boot operation mode modifies the behaviour of Secure Boot to allow evaluation of UEFI driver signatures. Choose one of the option: · **Deployed Mode**—Default · **Audit Mode**
Expert Key Management	Allows you to enable or disable Expert Key Management. · **Enable Custom Mode** This option is not set by default. The Custom Mode Key Management options are: · **PK**—Default · **KEK** · **db** · **dbx**

Intel Software Guard Extensions options

Table 34. Intel Software Guard Extensions

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. Click one of the following options: · **Disabled** · **Enabled**

Option	Description
	• **Software controlled**—Default
Enclave Memory Size	This option sets **SGX Enclave Reserve Memory Size** Click one of the following options: • **32 MB** • **64 MB** • **128 MB**—Default

Performance

Table 35. Performance

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. • **All**—Default • **1** • **2** • **3**
Intel SpeedStep	Allows you to enable or disable the Intel SpeedStep mode of processor. • **Enable Intel SpeedStep** This option is set by default.
C-States Control	Allows you to enable or disable the additional processor sleep states. • **C states** This option is set by default.
Intel® TurboBoost™	This option enables or disables the Intel® TurboBoost™ mode of the processor
Hyper-Thread Control	Allows you to enable or disable the HyperThreading in the processor. • **Disabled** • **Enabled**—Default

Power management

Table 36. Power Management

Option	Description
AC Behavior	Allows you to enable or disable the computer from turning on automatically when an AC adapter is connected. · **Wake on AC** This option is not set by default.
Enable Intel Speed Shift technology	This option is used to enable/disable Intel Speed Shift Technology. This option is not set by default.
Auto On Time	Allows you to set the time at which the computer must turn on automatically. The options are: · **Disabled**—Default · **Every Day** · **Weekdays** · **Select Days** This option is not set by default.
USB Wake Support	Allows you to enable USB devices to wake the system from standby. · **Enable USB Wake Support** · **Wake on Dell USB-C Dock** This option is not set by default.
Wireless Radio Control	This option if enabled, will sense the connection of the system to a wired network and subsequently disable the selected wireless radios (WLAN and/or WWAN). Upon disconnection from the wired network the selected wireless radio will ne enabled. · **Control WLAN radio** This option is not set by default.
Block Sleep	This option lets you to block entering to sleep in OS environment. This option is not set by default.
Peak Shift	Allows you enable of disable the Peak shift feature. This feature when enabled minimizes the AC power usage at times of peak demand. Battery doesnot charge between the Peak Shift start and end time Peak Shift Start and End Time can be configured for all weekdays This option set the battery threshold value (15 % to 100 %)
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. Advanced Battery Charge Mode can be configured for all weekdays

Option	Description
Primary Battery Charge Configuration	Allows you to select the charging mode for the battery. The options are: • **Adaptive**—Default • **Standard** - Fully charges your battery at a standard rate. • **ExpressCharge**- The battery charges over a shorter period of time using Dell's fast charging technology. • **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.**

Post behavior

Table 37. POST Behavior

Option	Description
Adapter Warnings	Allows you to enable or disable the system setup (BIOS) warning messages when you use certain power adapters. • **Enable Adapter Warnings**—Default
Numlock Enable	Allows you to enable or disable the Numlock function when the system boots. • **Enable Numlock**—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. • **Fn Lock**—Default Click one of the following options: • **Lock Mode Disable/Standard** • **Lock Mode Enable/Secondary**—Default
Fastboot	Allows you to speed up the boot process by bypassing some of the compatibility steps. Click one of the following options: • **Minimal**—Default • **Thorough** • **Auto**
Extended BIOS POST Time	Allows you to create an additional preboot delay. Click one of the following options: • **0 seconds**—Default • **5 seconds** • **10 seconds**

Option	Description
Full Screen Logo	Allows you to display full screen logo, if your image matches screen resolution. · **Enable Full Screen Logo** This option is not set by default.
Warnings and Errors	Allows you to select different options to either stop, prompt and wait for user input, continue when warnings are detected but pause on errors, or continue when either warnings or errors are detected during the POST process. Click one of the following options: · **Prompt on Warnings and Errors**—Default · **Continue on Warnings** · **Continue on Warnings and Errors**
Sign of Life Indicator	This option allows system to indicate during the POST that the power button has been acknowledged in a manner the user can either hear or feel. · **Enable Sign of Life Audio Indication** · **Enable Sign of Life Display Indication** · **Enable Sign of Life Keyboard Backlight Indication**

Manageability

Table 38. Manageability

Option	Description
USB Provision	When enabled Intel AMT can be provisioned using the local provisioning file via a USB storage device
MEBx Hotkey	This option specifies whether the MEBx Hotkey function should bee enabled when the system boots.

Virtualization support

Table 39. Virtualization Support

Option	Description
Virtualization	This option specifies whether a Virtual Machine Monitor (VMM) can utilize the additional hardware capabilities provided by the Intel Virtualization technology. · **Enable Intel Virtualization Technology** This option is set by default.
VT for Direct I/O	Enables or disables the Virtual Machine Monitor (VMM) from utilizing the additional hardware capabilities provided by the Intel Virtualization technology for direct I/O. · **Enable VT for Direct I/O** This option is set by default.

Option	Description
Trusted Execution	This option specifies whether a Measured Virtual Machine Monitor (MVMM) can utilize the additional hardware capabilities provided by Intel® Trusted Execution Technology. **NOTE: The TPM has to be enabled and activated and Virtualization Technology and VT for Direct I/O must be enabled to use this feature.**

Wireless options

Table 40. Wireless

Option	Description
Wireless Switch	Allows to set the wireless devices that can be controlled by the wireless switch. The options are: · **WWAN** · **GPS (on WWAN Module)** · **WLAN** · **Bluetooth®** All the options are enabled by default.
Wireless Device Enable	Allows you to enable or disable the internal wireless devices. The options are: · **WWAN/GPS** · **WLAN** · **Bluetooth®** · **Contactless Smartcard/ NFC** All the options are enabled by default.

Maintenance

Table 41. Maintenance

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	Allows you to flash previous revisions of the system firmware. · **Allow BIOS Downgrade** This option is set by default.

Option	Description
Data Wipe	Allows you to securely erase data from all internal storage devices. · **Wipe on Next Boot** This option is not set by default.
Bios Recovery	**BIOS Recovery from Hard Drive**—This option is set by default. Allows you to recover the corrupted BIOS from a recovery file on the HDD or an external USB key. **BIOS Auto-Recovery**— Allows you to recover the BIOS automatically. **NOTE: BIOS Recovery from Hard Drive field should be enabled.** **Always Perform Integrity Check**—Performs integrity check on every boot.

System logs

Table 42. System Logs

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 in Windows

Prerequisite

It is recommended to update your BIOS (System Setup), when you replace the system board or if an update is available. For laptops, ensure that your computer battery is fully charged and connected to a power outlet.

About this task

NOTE: If BitLocker is enabled, it must be suspended prior to updating the system BIOS, and then re-enabled after the BIOS update is completed.

Steps

1 Restart the computer.
2 Go to **Dell.com/support**.
   - Enter the **Service Tag** or **Express Service Code** and click **Submit**.
   - Click **Detect Product** and follow the instructions on screen.
3 If you are unable to detect or find the Service Tag, click **Choose from all products**.
4 Choose the **Products** category from the list.

   NOTE: Choose the appropriate category to reach the product page

5 Select your computer model and the **Product Support** page of your computer appears.
6 Click **Get drivers** and click **Drivers and Downloads**.
   The Drivers and Downloads section opens.
7 Click **Find it myself**.
8 Click **BIOS** to view the BIOS versions.
9 Identify the latest BIOS file and click **Download**.
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 computer.

12 Click **Run** to install the updated BIOS settings on your computer.
Follow the instructions on the screen.

Updating BIOS on systems with BitLocker enabled

CAUTION: If BitLocker is not suspended before updating the BIOS, the next time you reboot the system it will not recognize the BitLocker key. You will then be prompted to enter the recovery key to progress and the system will ask for this on each reboot. If the recovery key is not known this can result in data loss or an unnecessary operating system re-install. For more information on this subject, see Knowledge Article: https://www.dell.com/support/article/sln153694

Updating your system BIOS using a USB flash drive

About this task

If the system cannot load into Windows but there is still a need to update the BIOS, download the BIOS file using another system and save it to a bootable USB Flash Drive.

NOTE: You will need to use a bootable USB Flash drive. Please refer to the following article for further details: https://www.dell.com/support/article/us/en/19/sln143196/

Steps

1 Download the BIOS update .EXE file to another system.

2 Copy the file e.g. O9010A12.EXE onto the bootable USB Flash drive.

3 Insert the USB Flash drive into the system that requires the BIOS update.

4 Restart the system and press F12 when the Dell Splash logo appears to display the One Time Boot Menu.

5 Using arrow keys, select **USB Storage Device** and click Return.

6 The system will boot to a Diag C:\> prompt.

7 Run the file by typing the full filename e.g. O9010A12.exe and press Return.

8 The BIOS Update Utility will load, follow the instructions on screen.

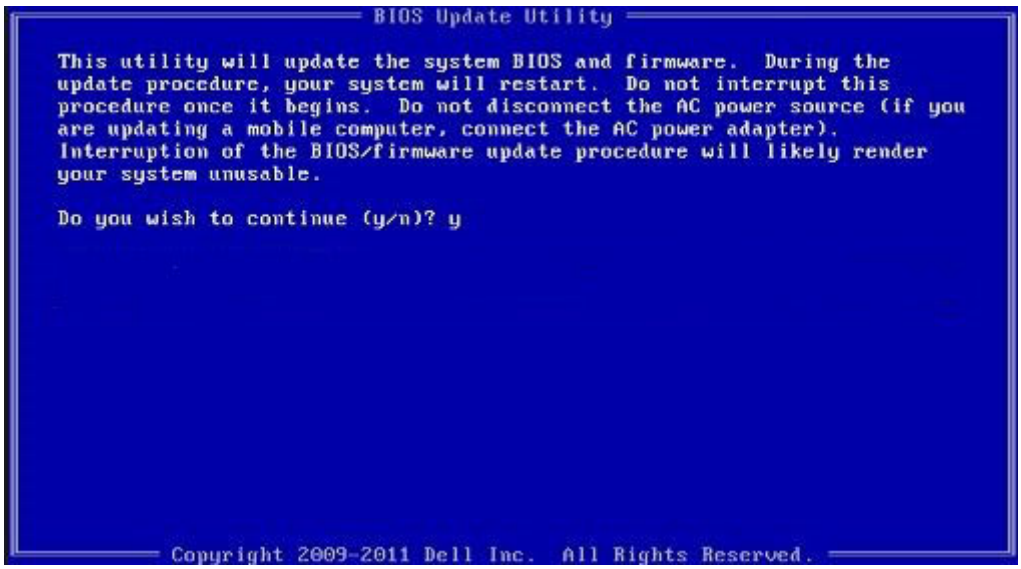


Figure 1. DOS BIOS Update Screen

System and setup password

Table 43. System and setup password

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.

You can create a system password and a setup password to secure 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: System and setup password feature is disabled.

Assigning a system setup password

Prerequisite

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

About this task

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

Steps

1. In the **System BIOS** or **System Setup** screen, select **Security** and press Enter.
   The **Security** screen is displayed.
2. Select **System/Admin 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 setup password

Prerequisite

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.

About this task

To enter the System Setup, press F2 immediately after a power-on or reboot.

Steps

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 prompted. If you delete the System and/or Setup password, confirm the deletion when prompted.**

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 reboot.

ExpressSign-in

On Dell Latitude systems, the proximity sensor is accessed when the system is ON or in the sleep mode. The valid state of the proximity sensor is **Near**, and **Enable with external monitor**. The proximity feature is automatically disabled while the laptop is in the On state, and the remaining battery of the laptop is less than 30 minutes.

ExpressSign-in behavior in Near state

The following table explains the **Near** state behavior:

> **NOTE: The Dell ExpressSign-in user interface is the proximity sensor feature in Dell Latitude 7400 2-in-1 laptop.**

> **NOTE: In the ExpressSign-in window, click Go next to the Setup facial recognition field to start and setup the Windows Hello facial sign-in option.**

Table 44. Near state behavior

System state	Description
ON/Standby	Wakes up the system when the user is within the sensor Field of View (FoV) of the system during the ON state and the LED illuminates solid white light or in the standby state. **NOTE: Sensor does not wake the system from the low power states which is battery life less than 30 minutes.** **NOTE: Sensor does not support wake the system from hibernation and power off state.**
Off	Does not wake the system from any of the power states even when the user is within the sensor Field of View (FoV).

ExpressSign-in with the external monitor usage state

You can select **ExpressSign-in enabled while connected to external monitor(s)** to **Yes** to keep the ExpressSign-in function still working even when the external monitor is connected. Select **No** to temporarily disable the ExpressSign-in functionality with the external monitor connected. The following table explains the **External monitor usage state behavior**:

Table 45. External monitor usage state behavior

System state	Description
Yes	If the system is connected to an external monitor, the proximity sensor checks whether the user is within the sensor FoV.
No	This is the default state and the system state remains unchanged even when the user is outside of sensor FoV.

ExpressSign-in user interface in external monitor usage state

When one or more external monitor(s) are connected to the system and **Near** or **Away** state is enabled, the **Dell ExpressSign-in**window is displayed on the primary monitor, and you can select **Yes** or **No** to enable or disable the proximity sensor.

If you select **Yes**, the proximity sensor is enabled. If you select **No**, the proximity sensor is not enabled. if you select the **Do not show again** checkbox, a message that the user must be within the sensor FoV for the features to function properly is not displayed until the option is again enabled manually.

NOTE: If multiple monitors are connected, the Dell ExpressSign-in window is displayed only for the first external monitor that is connected to the system and not for the subsequent monitors.

Launch Dell ExpressSign-in/Systray icon

The Dell ExpressSign-in application supports the auto-run feature only when the application stays in the system tray. Once you exit the Dell Proximity Sensor application, you have to re-launch the application and enable the feature manually. You can enable the **Systray** icon to start the **Dell ExpressSign-in** window from the system desktop after Dell Proximity Sensor has been launched.

To start the **Dell ExpressSign-in** , do the following:

1 Click **Windows Settings > System > Power & Sleep > Dell Proximity Sensor > Change PC behavior based on your proximity to the PC** to start the **Dell ExpressSign-in** window.

NOTE: You can start the Dell Proximity Sensor window when the system is ON or in the sleep mode.

2 Click **Change PC Behavior based on your proximity to the PC** that is displayed at the bottom of the **Settings** screen.

3 You can also double-click **Systray** to start the **Dell ExpressSign-in** window.

4 Right-click **Systray** to view the context menu.

The options in the context menu are:

Table 46. Context menu options

System state	Options
Near and **Away**	• Select **Away** to enable the system lock and turn off the display when you move away from the system. • Deselect **Near** to disable the system lock when you move away from the system.
Enable with external monitor(s)	• Select **Enable with external monitor(s)** to enable the ExpressSign-in. • Deselect **Enable with external monitor(s)** to disable the ExpressSign-in.
Open application	Select to start the ExpressSign-in desktop application.
Quit	Closes the ExpressSign-in desktop application and deletes the **Systray** icon from the system. Restart the ExpressSign-in from

System state	Options
	the operating system settings page or use the **Search** option to view and start the ExpressSign-in.

Dell ExpressSign-in Field of View (FoV) states

The Field of View (FoV) defines the distance and the angle that the proximity sensor can detect while the proximity feature is enabled. The FoV includes range angle and range distance. Dell recommends the distance between you and the laptop display should be 70cm for optimum performance of the proximity sensor.

Field name	Description
Range angle	The proximity sensor should function satisfactorily in detecting user presence / absence within a**27°** conical range as defined by the center of the target.
Range distance	The proximity sensor should function satisfactorily in detecting user presence / absence **<100cm** away

Lock timer

The lock timer is the approximate time for **Dell Express Sign-in** to identify that the user is no longer in front of the system or within the FoV. This feature will recognize your physical absence and lock the system.

The lock timer values are 60 seconds (default), 90 seconds, and 120 seconds. If **Away** is set to **OFF**, the Lock timer option is grayed out.

Supported hinge angles

The ExpressSign-in works as configured in a supported four hinge angles for a particular mode. The ExpressSign-in does not change the existing state if you are within the sensor FoV for an unsupported hinge angle. Once the system is in the supported hinge angle, the ExpressSign-in will start to change the state. The supported hinge angles are:

Table 47. Supported hinge angles

System with status	Supported hinge angle	Illustration
Clamshell	60° to 150°	
Stand	210° to 300°	
Tablet	Not supported	
Tent	Not supported	

7

Software

This chapter details the supported operating systems along with instructions on how to install the drivers.

Downloading drivers

1 Turn on the notebook.
2 Go to **Dell.com/support**.
3 Click **Product Support**, enter the Service Tag of your notebook, and then click **Submit**.

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

4 Click **Drivers and Downloads**.
5 Select the operating system installed on your notebook.
6 Scroll down the page and select the driver to install.
7 Click **Download File** to download the driver for your notebook.
8 After the download is complete, navigate to the folder where you saved the driver file.
9 Double-click the driver file icon and follow the instructions on the screen.

8

Getting help

Contacting Dell

Prerequisite

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.

About this task

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:

Steps

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.