



User Guide

SUMMARY

This guide provides information about components, network connection, power management, security, backing up, and more.

© Copyright 2021 HP Development Company,
L.P.

Bluetooth is a trademark owned by its proprietor and used by HP Inc. under license. Intel, Celeron, Pentium, and Thunderbolt are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries. Windows is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries. USB Type-C® and USB-C® are registered trademarks of USB Implementers Forum. DisplayPort™ and the DisplayPort™ logo are trademarks owned by the Video Electronics Standards Association (VESA) in the United States and other countries. Miracast® is a registered trademark of Wi-Fi Alliance.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

First Edition: January 2021

Document Part Number: M38058-001

Product notice

This guide describes features that are common to most products. Some features might not be available on your computer.

Not all features are available in all editions or versions of Windows. Systems might require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees might apply and additional requirements might apply over time for updates. Go to <http://www.microsoft.com> for details.

To access the latest user guides, go to <http://www.hp.com/support>, and follow the instructions to find your product. Then select **Manuals**.

Software terms

By installing, copying, downloading, or otherwise using any software product preinstalled on this computer, you agree to be bound by the terms of the HP End User License Agreement (EULA). If you do not accept these license terms, your sole remedy is to return the entire unused product (hardware and software) within 14 days for a full refund subject to the refund policy of your seller.

For any further information or to request a full refund of the price of the computer, please contact your seller.

Safety warning notice

Reduce the possibility of heat-related injuries or of overheating the computer by following the practices described.

 **WARNING!** To reduce the possibility of heat-related injuries or of overheating the computer, do not place the computer directly on your lap or obstruct the computer air vents. Use the computer only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to come into contact with the skin or a soft surface, such as pillows or rugs or clothing, during operation. The computer and the AC adapter comply with the user-accessible surface temperature limits defined by applicable safety standards.

Processor configuration setting (select products only)

Important information about processor configurations.

 **IMPORTANT:** Select products are configured with an Intel® Pentium® N35xx/N37xx series or a Celeron® N28xx/N29xx/N30xx/N31xx series processor and a Windows® operating system. **If your computer is configured as described, do not change the processor configuration setting in msconfig.exe from 4 or 2 processors to 1 processor.** If you do so, your computer will not restart. You will have to perform a factory reset to restore the original settings.

Table of contents

1 Getting started	1
Best practices	1
More HP resources	1
2 Getting to know your computer	3
Locating hardware	3
Locating software	3
Right side	3
Left side	4
Display	6
Low blue light mode (select products only)	6
Keyboard area	7
Touchpad settings and components	7
Touchpad settings	8
Adjusting touchpad settings	8
Turning on the touchpad	8
Touchpad components	8
Lights	9
Button, vents, and fingerprint reader	10
Special keys	11
Action keys	12
Rear	13
Bottom	14
Labels	14
3 Connecting to a network	16
Connecting to a wireless network	16
Using the wireless controls	16
Airplane mode key	16
Operating system controls	16
Connecting to a WLAN	17
Using HP Mobile Broadband (select products only)	17
Using eSIM (select products only)	18
Using GPS (select products only)	18
Using Bluetooth wireless devices (select products only)	18
Connecting Bluetooth devices	18

Connecting to a wired network—LAN (select products only)	19
4 Enjoying entertainment features	20
Using the camera	20
Using audio	20
Connecting speakers	20
Connecting headphones	20
Connecting headsets	21
Using sound settings	21
Sound settings	21
Audio settings	21
Using video	21
Connecting a Thunderbolt device using a USB Type-C cable (select products only)	21
Connecting video devices using an HDMI cable (select products only)	22
Connecting a high-definition TV or monitor using HDMI	22
Setting up HDMI audio	23
Turn on HDMI audio	23
Return audio to computer speakers	23
Discovering and connecting to Miracast-compatible wireless displays (select products only)	24
Using data transfer	24
Connecting devices to a USB Type-C port (select products only)	24
5 Navigating the screen	25
Using touchpad and touch screen gestures	25
Tap	25
Two-finger pinch zoom	25
Two-finger slide (touchpad and precision touchpad)	26
Two-finger tap (touchpad and precision touchpad)	26
Three-finger tap (touchpad and precision touchpad)	26
Four-finger tap (touchpad and precision touchpad)	27
Three-finger swipe (touchpad and precision touchpad)	27
Four-finger swipe (precision touchpad)	27
One-finger slide (touch screen)	28
Using an optional keyboard or mouse	28
Using an on-screen keyboard (select products only)	28
6 Managing power	29
Using Sleep and Hibernation	29
Initiating and exiting Sleep	29
Initiating and exiting Hibernation (select products only)	30

Shutting down (turning off) the computer	30
Using the Power icon and Power Options	31
Running on battery power	31
Using HP Fast Charge (select products only)	31
Displaying battery charge	31
Finding battery information in HP Support Assistant (select products only)	31
Conserving battery power	32
Identifying low battery levels	32
Resolving a low battery level	32
Resolving a low battery level when external power is available	32
Resolving a low battery level when no power source is available	33
Resolving a low battery level when the computer cannot exit Hibernation	33
Factory-sealed battery	33
Running on external power	33
7 Maintaining your computer	35
Improving performance	35
Using Disk Defragmenter	35
Using Disk Cleanup	35
Using HP 3D DriveGuard (select products only)	35
Identifying HP 3D DriveGuard status	36
Updating programs and drivers	36
Updating programs and drivers using Windows 10	36
Updating programs using Windows 10 S	36
Updating drivers using Windows 10 S	36
Cleaning your computer	37
Enabling HP Easy Clean (select products only)	37
Removing dirt and debris from your computer	37
Cleaning your computer with a disinfectant	38
Caring for wood veneer (select products only)	38
Traveling with or shipping your computer	39
8 Securing your computer and information	40
Using passwords	40
Setting Windows passwords	40
Setting Setup Utility (BIOS) passwords	41
Using Windows Hello (select products only)	41
Using internet security software	42
Using antivirus software	42
Using firewall software	42
Installing software updates	42

Using HP Device as a Service (select products only)	43
Securing your wireless network	43
Backing up your software applications and information	43
Using an optional security cable (select products only)	43
9 Using Setup Utility (BIOS)	44
Starting Setup Utility (BIOS)	44
Updating Setup Utility (BIOS)	44
Determining the BIOS version	44
Preparing for a BIOS update	45
Downloading a BIOS update	45
Installing a BIOS update	45
10 Using HP PC Hardware Diagnostics	47
Using HP PC Hardware Diagnostics Windows (select products only)	47
Using an HP PC Hardware Diagnostics Windows hardware failure ID code	47
Accessing HP PC Hardware Diagnostics Windows	47
Accessing HP PC Hardware Diagnostics Windows from HP Help and Support (select products only)	47
Accessing HP PC Hardware Diagnostics Windows from Support Assistant	47
Accessing HP PC Hardware Diagnostics Windows from the Start menu (select products only)	48
Downloading HP PC Hardware Diagnostics Windows	48
Downloading the latest HP PC Hardware Diagnostics Windows version from HP	48
Downloading the HP PC Hardware Diagnostics Windows from the Microsoft Store	48
Downloading HP Hardware Diagnostics Windows by product name or number (select products only)	48
Installing HP PC Hardware Diagnostics Windows	49
Using HP PC Hardware Diagnostics UEFI	49
Using an HP PC Hardware Diagnostics UEFI hardware failure ID code	49
Starting HP PC Hardware Diagnostics UEFI	49
Downloading HP PC Hardware Diagnostics UEFI to a USB flash drive	50
Downloading the latest HP PC Hardware Diagnostics UEFI version	50
Downloading HP PC Hardware Diagnostics UEFI by product name or number (select products only)	50
Using Remote HP PC Hardware Diagnostics UEFI settings (select products only)	51
Downloading Remote HP PC Hardware Diagnostics UEFI	51
Downloading the latest Remote HP PC Hardware Diagnostics UEFI version	51
Downloading Remote HP PC Hardware Diagnostics UEFI by product name or number	51
Customizing Remote HP PC Hardware Diagnostics UEFI settings	51

11 Backing up, restoring, and recovering	53
Backing up information and creating recovery media	53
Using Windows tools for backing up	53
Using the HP Cloud Recovery Download Tool to create recovery media (select products only)	53
Restoring and recovering your system	53
Creating a system restore	54
Restoring and recovery methods	54
Recovering using HP Recovery media	54
Changing the computer boot order	54
Using HP Sure Recover (select products only)	55
12 Electrostatic discharge	56
13 Specifications	57
Input power	57
Operating environment	58
14 Accessibility	59
HP and accessibility	59
Finding the technology tools you need	59
The HP commitment	59
International Association of Accessibility Professionals (IAAP)	60
Finding the best assistive technology	60
Assessing your needs	60
Accessibility for HP products	60
Standards and legislation	61
Standards	61
Mandate 376 – EN 301 549	61
Web Content Accessibility Guidelines (WCAG)	61
Legislation and regulations	61
Useful accessibility resources and links	62
Organizations	62
Educational institutions	62
Other disability resources	62
HP links	63
Contacting support	63
Index	64

1 Getting started

The content in this chapter contains cross-platform information and cannot be modified unless there is a technical error or could cause bodily harm to a user.

This computer is a powerful tool designed to enhance your work and entertainment.

Read this chapter to learn about best practices after you set up your computer, fun things to do with your computer, and where to find additional HP resources.

Best practices

After you set up and register the computer, we recommend the following steps to get the most out of your smart investment:

- Back up your hard drive by creating recovery media. See [Backing up, restoring, and recovering on page 53](#).
- If you haven't already done so, connect to a wired or wireless network. See details in [Connecting to a network on page 16](#).
- Become familiar with the computer hardware and software. For more information, see [Getting to know your computer on page 3](#) and [Enjoying entertainment features on page 20](#).
- Update or purchase antivirus software. See [Using antivirus software on page 42](#).
- **Access HP Support Assistant app**—For quick online support, open the HP Support Assistant app (select products only). HP Support Assistant optimizes computer performance and resolves problems using the latest software updates, diagnostic tools, and guided assistance. Type `support` in the taskbar search box, and then select **HP Support Assistant**. Then select **Support**.

More HP resources

To locate resources that provide product details, how-to information, and more, use this table.

Table 1-1 Additional information

Resource	Contents
<i>Setup Instructions</i>	<ul style="list-style-type: none">● Overview of computer setup and features
HP support	<ul style="list-style-type: none">● Online chat with an HP technician● Support telephone numbers● Replacement parts videos (select products only)● Maintenance and service guides● HP service center locations
For HP support, go to http://www.hp.com/support , and follow the instructions to find your product. – or – Type <code>support</code> in the taskbar search box, and then select HP Support Assistant . Then select Support . – or – Select the question mark icon in the taskbar search box. Then select Support .	<ul style="list-style-type: none">● Overview of computer setup and features● Online chat with an HP technician● Support telephone numbers● Replacement parts videos (select products only)● Maintenance and service guides● HP service center locations
<i>Safety & Comfort Guide</i> To access this guide:	<ul style="list-style-type: none">● Proper workstation setup● Guidelines for posture and work habits that increase your comfort and decrease your risk of injury

Table 1-1 Additional information (continued)

Resource	Contents
<ul style="list-style-type: none">▲ Type HP Documentation in the taskbar search box, and then select HP Documentation.– or –▲ Go to http://www.hp.com/ergo.	<ul style="list-style-type: none">● Electrical and mechanical safety information
<p>Regulatory, Safety, and Environmental Notices</p> <p>To access this document:</p> <ul style="list-style-type: none">▲ Type HP Documentation in the taskbar search box, and then select HP Documentation.	<ul style="list-style-type: none">● Important regulatory notices, including information about proper battery disposal, if needed.
<p>Limited Warranty*</p> <p>To access this document:</p> <ul style="list-style-type: none">▲ Type HP Documentation in the taskbar search box, and then select HP Documentation.– or –▲ Go to http://www.hp.com/go/orderdocuments. <p>IMPORTANT: You must be connected to the internet to access the latest version of the user guide.</p>	<ul style="list-style-type: none">● Specific warranty information about this computer
<p>*You can find your HP Limited Warranty located with the user guides on your product and/or on the CD or DVD provided in the box. In some countries or regions, HP might provide a printed warranty in the box. For countries or regions where the warranty is not provided in printed format, you can request a copy from http://www.hp.com/go/orderdocuments. For products purchased in Asia Pacific, you can write to HP at POD, PO Box 161, Kitchener Road Post Office, Singapore 912006. Include your product name, and your name, phone number, and postal address.</p>	

2 Getting to know your computer

Your computer features top-rated components. This chapter provides details about your components, where they are located, and how they work.

Locating hardware

To find out what hardware is installed on your computer, type `device manager` in the taskbar search box, and then select the **Device Manager** app.

For information about system hardware components and the system BIOS version number, press **fn+esc** (select products only).

Locating software

To find out what software is installed on your computer, right-click the **Start** button, and then select **Apps and Features**.

Right side

Identify the components on the right side of the computer.

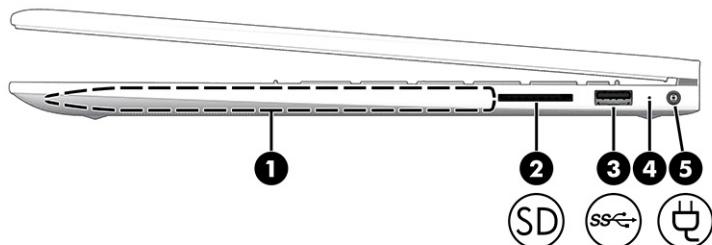


Table 2-1 Right-side components and their descriptions

Component	Description
(1) Magnetic pen attachment area	Holds an optional pen.
(2) SD Memory card reader	Reads optional memory cards that enable you to store, manage, share, or access information. To insert a card: <ol style="list-style-type: none">1. Hold the card label-side up, with connectors facing the computer.2. Insert the card into the memory card reader, and then press in on the card until it is firmly seated. To remove a card: ▲ Press in on the card, and then remove it from the memory card reader.

Table 2-1 Right-side components and their descriptions (continued)

Component	Description
(3)  USB SuperSpeed port	Connects a USB device, provides high-speed data transfer, and (for select products) charges small devices (such as a smartphone) when the computer is on or in Sleep mode. NOTE: Use a standard USB Type-A charging cable or cable adapter (purchased separately) when charging a small external device.
(4) AC adapter and battery light	<ul style="list-style-type: none"> White: The AC adapter is connected and the battery is fully charged. Blinking amber: The AC adapter is disconnected and the battery has reached a low battery level. Amber: The AC adapter is connected and the battery is charging. Off: The battery is not charging. NOTE: If you connect both the USB Type-C and the barrel AC adapters to your computer at the same time, only one AC adapter and battery light turns on. The light next to the USB Type-C power connector turns on when the Type-C adapter power rating is less than the barrel adapter rating. The light next to the barrel power connector turns on when the barrel AC adapter power rating is the same or greater than the Type-C adapter rating.
(5)  Power connector	Connects an AC adapter. NOTE: Some computers might ship with two separate AC adapters and power cords. Be sure to match the connector end of the power cord to the corresponding USB Type-C or barrel power connector of your computer.

Left side

Identify the components on the left side of the computer.



NOTE: Refer to the illustration that most closely matches your computer.

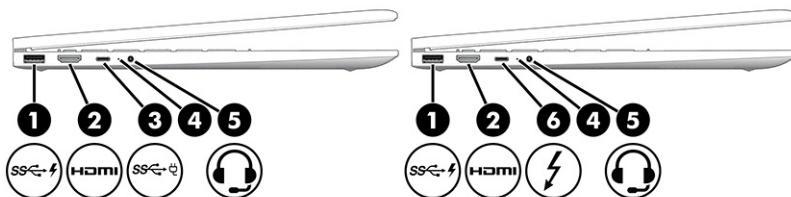


Table 2-2 Left-side components and their descriptions

Component	Description
(1)  USB SuperSpeed port with HP Sleep and Charge	Connects a USB device, provides high-speed data transfer, and charges small devices (such as a smartphone), even when the computer is off. NOTE: Use a standard USB Type-A charging cable or cable adapter (purchased separately) when charging a small external device.

Table 2-2 Left-side components and their descriptions (continued)

Component	Description
(2)  HDMI port	Connects an optional video or audio device, such as a high-definition television, any compatible digital or audio component, or a high-speed High-Definition Multimedia Interface (HDMI) device.
(3)  USB Type-C® power connector and SuperSpeed port with HP Sleep and Charge	Connects an AC adapter that has a USB Type-C connector, supplying power to the computer and, if needed, charging the computer battery. – and –
	Connects a USB device, provides high-speed data transfer, and charges small devices (such as a smartphone), even when the computer is off. NOTE: Use a standard USB Type-C charging cable or cable adapter (purchased separately) when charging a small external device.
	– and – Connects a display device that has a USB Type-C connector, providing DisplayPort™ output.
	NOTE: Some computers might ship with two separate AC adapters and power cords. Be sure to match the connector end of the power cord to the corresponding USB Type-C or barrel power connector of your computer.
(4)	AC adapter and battery light <ul style="list-style-type: none">• White: The AC adapter is connected and the battery is fully charged.• Blinking amber: The AC adapter is disconnected and the battery has reached a low battery level.• Amber: The AC adapter is connected and the battery is charging.• Off: The battery is not charging. NOTE: If you connect both the USB Type-C and the barrel AC adapters to your computer at the same time, only one AC adapter and battery light turns on. The light next to the USB Type-C power connector turns on when the Type-C adapter power rating is less than the barrel adapter rating. The light next to the barrel power connector turns on when the barrel AC adapter power rating is the same or greater than the Type-C adapter rating.
(5) 	Audio-out (headphone)/Audio-in (microphone) combo jack Connects optional powered stereo speakers, headphones, earbuds, a headset, or a television audio cable. Also connects an optional headset microphone. This jack does not support optional standalone microphones.
	WARNING! To reduce the risk of personal injury, adjust the volume before putting on headphones, earbuds, or a headset. For additional safety information, see the <i>Regulatory, Safety, and Environmental Notices</i> .
	To access this guide: ▲ Type HP Documentation in the taskbar search box, and then select HP Documentation .

Table 2-2 Left-side components and their descriptions (continued)

Component	Description									
(6) 	<p>USB Type-C power connector and Thunderbolt™ port with HP Sleep and Charge</p>	<p>NOTE: When a device is connected to the jack, the computer speakers are disabled.</p>	<p>Connects an AC adapter that has a USB Type-C connector, supplying power to the computer and, if needed, charging the computer battery.</p>	<p>– and –</p>	<p>Connects a USB device, provides high-speed data transfer, and charges small devices (such as a smartphone), even when the computer is off.</p>	<p>NOTE: Use a standard USB Type-C charging cable or cable adapter (purchased separately) when charging a small external device.</p>	<p>– and –</p>	<p>Connects a display device that has a USB Type-C connector, providing DisplayPort output.</p>	<p>NOTE: Your computer might also support a Thunderbolt docking station.</p>	<p>NOTE: Some computers might ship with two separate AC adapters and power cords. Be sure to match the connector end of the power cord to the corresponding USB Type-C or barrel power connector of your computer.</p>

Display

The computer display can include essential components such as speakers, antennas, cameras, and microphones.

Low blue light mode (select products only)

Your computer display is shipped from the factory in low blue light mode for improved eye comfort and safety. Also, blue light mode automatically adjusts blue light emissions when you are using the computer at night or for reading.



WARNING! To reduce the risk of serious injury, read the *Safety & Comfort Guide*. It describes proper workstation setup and proper posture, health, and work habits for computer users. The *Safety & Comfort Guide* also provides important electrical and mechanical safety information. The *Safety & Comfort Guide* is available on the web at <http://www.hp.com/ergo>.

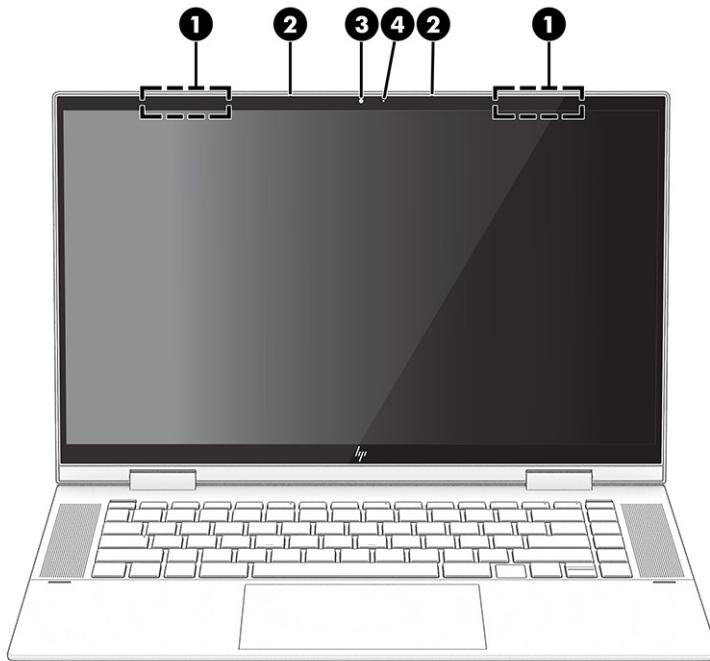


Table 2-3 Display components and their descriptions

Component	Description
(1) WLAN antennas*	Send and receive wireless signals to communicate with wireless local area networks (WLANS).
(2) Internal microphones (2)	Record sound.
(3) Camera	Allows you to video chat, record video, and record still images. To use your camera, see Using the camera on page 20 . Some cameras also allow a facial recognition logon to Windows, instead of a password logon. For more information, see Using Windows Hello (select products only) on page 41 .
(4) Camera light	NOTE: Camera functions vary depending on the camera hardware and software installed on your product.

*The antennas are not visible from the outside of the computer. For optimal transmission, keep the areas immediately around the antennas free from obstructions.

For wireless regulatory notices, see the section of the *Regulatory, Safety, and Environmental Notices* that applies to your country or region.

To access this guide:

- ▲ Type **HP Documentation** in the taskbar search box, and then select **HP Documentation**.

Keyboard area

Keyboards can vary by language.

Touchpad settings and components

Learn the touchpad settings and components

Touchpad settings

Learn how to adjust touchpad settings.

Adjusting touchpad settings

Use these steps to adjust touchpad settings and gestures.

1. Type touchpad settings in the taskbar search box, and then press **enter**.
2. Choose a setting.

Turning on the touchpad

Follow these steps to turn on the touchpad.

1. Type touchpad settings in the taskbar search box, and then press **enter**.
2. Using an external mouse, click the **touchpad** button.

If you are not using an external mouse, press the **Tab** key repeatedly until the pointer rests on the **touchpad** button. Then press the **spacebar** to select the button.

Touchpad components

Identify the touchpad components.

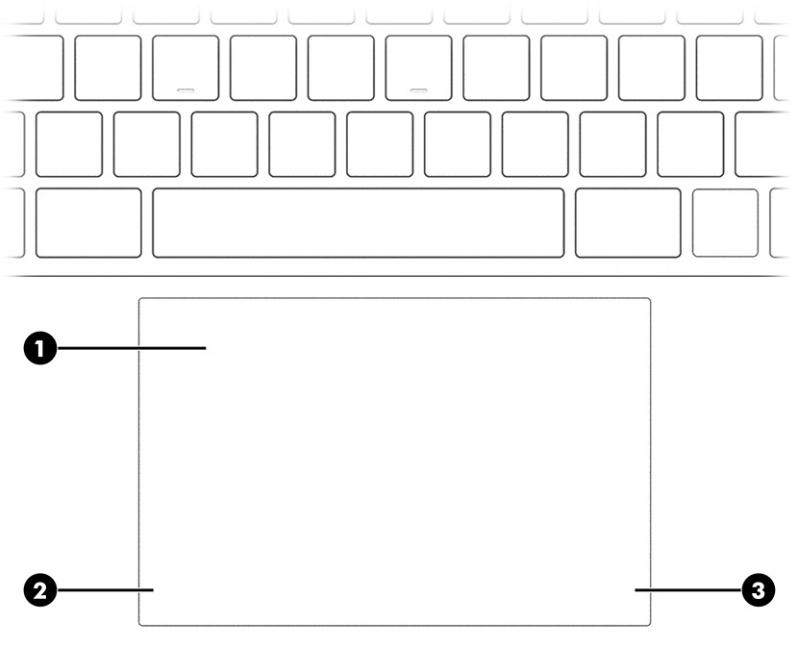


Table 2-4 Touchpad components and their descriptions

Component	Description
(1) Touchpad zone	Reads your finger gestures to move the pointer or activate items on the screen. NOTE: For more information, see Using touchpad and touch screen gestures on page 25 .