

User Guide

© Copyright 2017, 2018 HP Development Company, L.P.

Intel, Thunderbolt, the Thunderbolt logo, and vPro are trademarks of Intel Corporation in the U.S. and/or other countries. NVIDIA is a trademark and/or registered trademark of NVIDIA Corporation in the United States and other countries. Windows is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

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.

Second Edition: September 2018

First Edition: November 2017

Document Part Number: L05326-002

Table of contents

1 Getting started 1

Identifying components 1

Top 1

Audio module (select products only) 2

Front 3

Right 4

Rear 5

Setting up the docking station 6

Step 1: Connecting to AC power 6

Step 2: Connecting to a computer 7

Updating the software 9

Using an external monitor 9

Configuring the monitor 9

Sleep, Hibernation, shutdown, and restart 10

2 Using the docking station 11

Docking station guidelines 11

Setting the security level 12

Connecting to a network 13

Connecting USB devices 14

Connecting a VGA device 14

Connecting a DisplayPort device 15

Connecting a DisplayPort device using a USB Type-C cable 16

Connecting a Thunderbolt device using a USB Type-C Thunderbolt cable 17

Connecting audio 17

Connecting analog audio devices 18

Connecting an optional security cable 18

3 Disconnecting the docking station 19

4 Changing the USB Type-C Thunderbolt cable 20

5 Using the audio module 23

Installing the audio module 24

6 Troubleshooting 25
Solving common problems 25
General use and connection problems 25
Audio problems 26
Video problems 26
Getting more information 28
Contacting support 28

7 Specifications 30
Input power 30
Operating environment 30

Index 31

1 Getting started

Identifying components

This chapter identifies the visible hardware features of the docking station and provides setup instructions.

NOTE: Your computer may not be equipped to take advantage of all the features available on the docking station.

Top



Component	Description
Power button and light	When a computer is connected to the dock, press to turn on the computer. **NOTE:** This button is functional only when the docking station is connected to supported HP computers. • On: The computer connected to the docking station is on. • Blinking: The computer connected to the docking station is in standby, a power-saving state. • Off: The computer connected to the docking station is off or in Hibernation. Hibernation is a power-saving state that uses the least amount of power.

Audio module (select products only)



Component			Description
(1)		Power button and light	When a computer is connected to the dock, press to turn on the computer. **NOTE:** This button is functional only when the docking station is connected to supported HP computers. • On: The computer connected to the docking station is on. • Blinking: The computer connected to the docking station is in standby, a power-saving state. • Off: The computer connected to the docking station is off or in Hibernation. Hibernation is a power-saving state that uses the least amount of power.
(2)		Answer call button	• Answers a call. • Starts a call during a 1-on-1 chat. • Places a call on hold. **NOTE:** This feature requires Skype for Business or Lync 2013 running on Microsoft Exchange or Office 365 servers.
(3)		Mute button	Mutes the microphone.
(4)		Volume down button	Decreases speaker volume incrementally while you hold down the key.
(5)		Volume up button	Increases speaker volume incrementally while you hold down the key.
(6)		End call button	• Ends a call. • Declines incoming calls. • Ends screen sharing. **NOTE:** This feature requires Skype for Business or Lync 2013 running on Microsoft Exchange or Office 365 servers.

Front



Component	Description
USB Type-C SuperSpeed port	Connects a USB device, such as a cell phone, camera, activity tracker, or smartwatch, and provides high-speed data transfer. **NOTE:** Cables and/or adapters (purchased separately) may be required.

Right



Component			Description
(1)		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, refer to the *Regulatory, Safety, and Environmental Notices*. To access this guide: ▲ Select the **Start** button, select **HP Help and Support**, and then select **HP Documentation**. **NOTE:** When a device is connected to the jack, the computer speakers are disabled. If the audio does not automatically switch to the docking station, set the docking station as the default audio device in your computer settings.
(2)		USB SuperSpeed port with HP Sleep and Charge	Connects a USB device, provides high-speed data transfer, and even when the computer is off, charges most products such as a cell phone, camera, activity tracker, or smartwatch.
(3)		Security cable slot	Attaches an optional security cable to the docking station. **NOTE:** The security cable is designed to act as a deterrent, but it may not prevent the docking station from being mishandled or stolen.

Rear



Component			Description
(1)	SS	USB SuperSpeed ports (2)	Connect a USB device, such as a cell phone, camera, activity tracker, or smartwatch, and provide high-speed data transfer.
(2)		External monitor port	Connects an external VGA monitor or projector.
(3)	SS D	USB Type-C SuperSpeed port and DisplayPort	Connects a display device that has a USB Type-C connector, providing DisplayPort output. This port also supports HDMI and VGA output. **NOTE:** Cables and/or adapters (purchased separately) may be required.
(4)		RJ-45 (network) jack	Connects a network cable.
(5)		Power light	• On: The docking station is connected to power.
(6)		Power connector	Connects an AC adapter.
(7)		USB Type-C Thunderbolt™ port	Connects a USB device, such as a cell phone, camera, activity tracker, or smartwatch, and provides high-speed data transfer. – and – Connects a display device that has a USB Type-C connector, providing DisplayPort output. **NOTE:** Cables and/or adapters (purchased separately) may be required.
(8)		DisplayPorts (2)	Connect an optional digital display device, such as a high-performance monitor or projector.

Setting up the docking station

Step 1: Connecting to AC power

WARNING! To reduce the risk of electric shock or damage to the equipment:

Plug the power cord into an AC outlet that is easily accessible at all times.

Disconnect power from the equipment by unplugging the power cord from the AC outlet.

If provided with a 3-pin attachment plug on the power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin, for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature.

To ensure the correct performance of all docking station features, connect the docking station to an AC power source using the docking station power cord.

1. Connect one end of the power cord to the AC adapter **(1)**, and connect the other end of the power cord to an AC outlet **(2)**.
2. Connect the AC adapter to the power connector **(3)** on the docking station.



Step 2: Connecting to a computer

To connect a computer to the docking station:

1. Connect the USB Type-C Thunderbolt cable to the Thunderbolt port and power-in connector or USB Type-C power connector and Thunderbolt port on your computer.

NOTE: Be sure that your computer is either on or off. HP does not recommend connecting to a computer that is in Sleep or Hibernation.

Figure 1-1 Connecting to a Thunderbolt port and power-in connector



Figure 1-2 Connecting to a USB Type-C power connector and Thunderbolt port



Figure 1-3 Connecting to a Thunderbolt port and power-in connector via the combo cable



Figure 1-4 Connecting to a USB Type-C power connector and Thunderbolt port via the combo cable



2. In the dialog box that appears, select **OK**.

NOTE: You must be logged on as an administrator on the computer connected to the docking station.

To enable a non-administrator user to select OK, enter the non-administrator registry key. Contact your HP Technical Consultant for this key.

3. A second dialog box opens. Select one of the following options:

- **Do Not Connect**—Prevents the docking station from connecting to the computer.
- **Connect Only Once**—Allows the docking station to connect to the computer. Each time the docking station is connected and disconnected, you must log on as an administrator to allow access to the docking station.
- **Always Connect**—Allows the docking station to connect to the computer. The docking station can connect to the computer automatically after it is disconnected and reconnected, even if you are not logged on as an administrator.

4. Select **OK**.

While the docking station is connected to the computer, a Thunderbolt icon is displayed in the notification area, at the far right of the taskbar.

TIP: There might be a slight delay before devices connected to the docking station are ready to use.

Updating the software

This section describes how to update the docking station software on a computer running the Windows® 10 operating system.

1. With the computer on, Windows running, and the Internet connected, connect the docking station to the computer.
2. Go to http://www.hp.com/support and follow the on-screen instructions to get software and drivers.

Using an external monitor

Configuring the monitor

Use Windows to configure the display of a monitor attached to the docking station.

1. Select **Start**, select **Settings**, and then select **System**.
2. To view the screen image on the monitor only, select **Show desktop only on 2**.

   – or –

   To view the screen image extended across both the computer and the monitor, select **Extend these displays**.

   – or –

   To view the screen image simultaneously on both the computer and the monitor, select **Duplicate these displays**.

You can also access the following display settings by pressing the Windows key+p:

- To view the screen image on the monitor only, select **Second screen only**.
- To view the screen image extended across both the computer and the monitor, select **Extend**.
- To view the screen image simultaneously on both the computer and the monitor, select **Duplicate**.

For more information about using multiple monitors, see the “Display Capabilities” section of the *HP Thunderbolt Dock G2 Features and Troubleshooting* white paper. Go to http://www8.hp.com/h20195/v2/GetPDF.aspx/4AA7-3384ENW.pdf.

Monitors cannot be simultaneously connected to the VGA port and either the USB Type-C SuperSpeed port and DisplayPort or the USB Type-C Thunderbolt port.

If a monitor is connected to your computer HDMI or USB Type-C port, the number of monitors you can connect to the docking station might be fewer than four.

Depending on your screen resolution, the number of monitors you can connect to the docking station might be fewer than four.

Sleep, Hibernation, shutdown, and restart

If the computer initiates Sleep or Hibernation, the monitor turns off. When the computer exits Sleep or Hibernation, the connected monitor returns to the previous monitor settings.

If you restart or shut down the computer and then turn it back on, the connected monitor returns to the previous monitor settings.

2 Using the docking station

Docking station guidelines

- **Operating systems**—For optimal performance, use the docking station with a computer running the Windows 10 operating system.
- **Power**—To use docking station features, AC power must be connected to the docking station.
- **Connecting and disconnecting**—The docking station can be connected to or disconnected from the computer whether the computer is on or off. (See Step 2: Connecting to a computer on page 7 and Disconnecting the docking station on page 19.)

NOTE: HP does not recommend connecting or disconnecting from a computer that is in either Sleep or Hibernation.

- **External devices**—When the docking station is connected to the computer, external devices can be connected to the ports on the docking station or to the ports on the computer.
- **Advanced speed and features**—To use all docking station features, your computer and monitor must support Thunderbolt, USB SuperSpeed, and DisplayPort 1.3. But even if your devices do not support these technologies, you can still use the four USB SuperSpeed ports with USB 2.0 devices and the four DisplayPort-compatible ports with DisplayPort 1.2 devices.

Setting the security level

The docking station supports Direct Memory Access (DMA), a feature that requires a specific Thunderbolt Security Level.

NOTE: Check with your IT administrator before you attempt the following procedure.

To configure this setting:

1. On computers or tablets with keyboards, turn on or restart the computer, and when the HP logo appears, press f10 to enter Computer Setup.

   – or –

   On tablets without keyboards, turn off the tablet. Press the power button in combination with the volume down button until the Startup menu is displayed, and then tap **F10** to enter Computer Setup.

2. Select **Advanced**, select **Port Options**, and then select **Thunderbolt Security Level**.

3. Select a security level.

   The following security levels are available:

   - **Security level 0: PCIe and DisplayPort – No Security**—Any devices can be connected to the computer or docking station without user permission.
   - **Security level 1: PCIe and DisplayPort – User Authorization**—Any devices can be connected to the computer or docking station with user permission.
   - **Security level 2: PCIe and DisplayPort – Secure Connect**—Any devices can be connected to the computer or docking station with user permission, if the device contains either a security certificate or chip.
   - **Security level 3: DisplayPort and USB**—Devices cannot be connected to the docking station. Only the USB ports and DisplayPorts on the computer function.
   - **Security level 4**

     NOTE: Security level 4 is supported only on select fifth-generation HP mobile workstations. If you set a computer that does not support Security level 4 to this level, the computer defaults to Security level 3.

Connecting to a network

You can connect the computer to a network through the docking station. This requires an Ethernet cable (purchased separately).

WARNING! To reduce the risk of electric shock, fire, or damage to the equipment, do not plug a modem cable or telephone cable into an RJ-45 (network) jack.

The dock supports the following computer functions over the network connection:

NOTE: Before using these functions, verify that your computer has the latest BIOS and network controller driver installed. For instructions on updating these drivers, see your computer documentation.

- PXE boot
- MAC Address Pass Through

TIP: Your computer might support MAC Address Pass Through from the On, Off, Sleep, or Hibernation states, or only when the computer is on or in the Sleep state.

MAC Address Pass Through supports either UEFI PXE boot and Legacy PXE boot or only UEFI PXE boot.

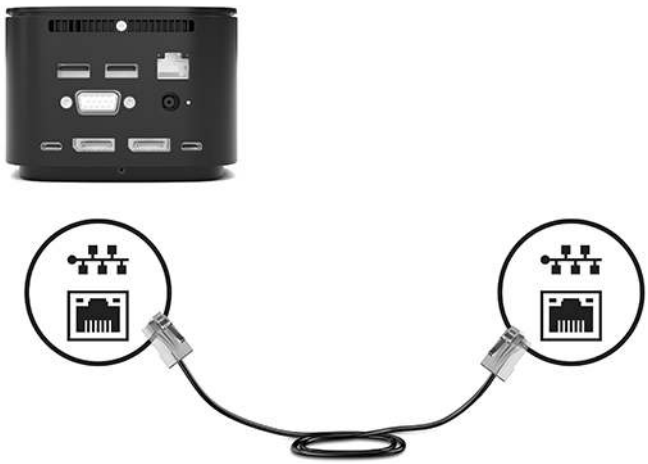
- Wake on LAN (WOL)

TIP: Your computer might support WOL from the Off, Sleep, or Hibernation states, or only when the computer is on or in Sleep.

WLAN-LAN switching is supported only on select computers running the Windows 10 operating system.

1. Connect the docking station to the computer.
2. Connect one end of the Ethernet cable to the RJ-45 (network) jack on the docking station and connect the other end to an RJ-45 wall jack or router.

NOTE: If the network cable contains noise suppression circuitry, which prevents interference from TV and radio reception, orient the circuitry end of the cable toward the computer.



The RJ-45 port on the docking station does not support Intel® vPro™ Technology. To use Intel vPro Technology, connect to a wireless network or use an RJ-45 port on your computer.

Connecting USB devices

The docking station has six USB ports: one USB Type-C SuperSpeed port on the front panel; one USB SuperSpeed port with HP Sleep and Charge on the right panel; and on the rear panel, two USB SuperSpeed ports, one USB Type-C SuperSpeed port and DisplayPort, and one USB Type-C Thunderbolt port. Use the USB ports to connect optional external USB devices, such as a keyboard and mouse.

NOTE: Be sure that the external device is compliant with the docking station power specifications. Using a noncompliant device might disable the port to which the device is attached. To reset the port, see Troubleshooting on page 25.

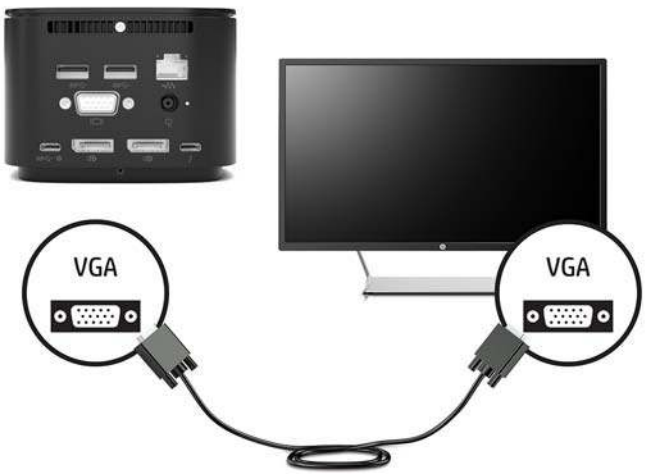


Connecting a VGA device

NOTE: To connect a VGA video device to your docking station, you need an VGA cable, purchased separately.

To see the computer screen image on an external VGA monitor or projected for a presentation, connect a monitor or projector to the docking station's VGA port.

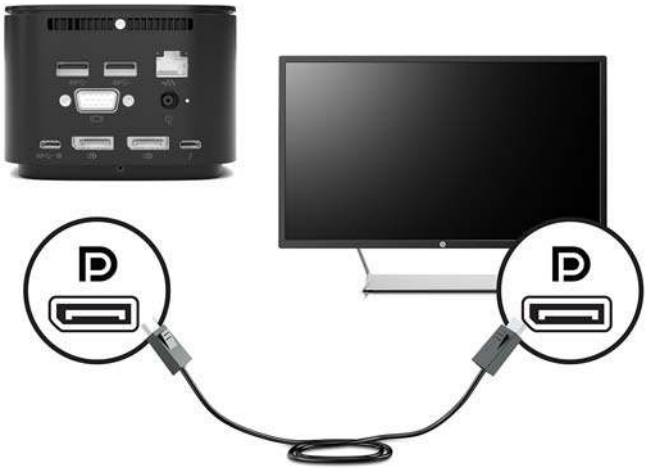
▲ Connect the VGA cable from the monitor or projector to the VGA port on the docking station as shown.



Connecting a DisplayPort device

NOTE: To connect a DisplayPort video device to your docking station, you need a DisplayPort cable or USB Type-C cable, purchased separately.

The docking station can also be connected to an external device, such as a monitor or a projector, through the DisplayPort.



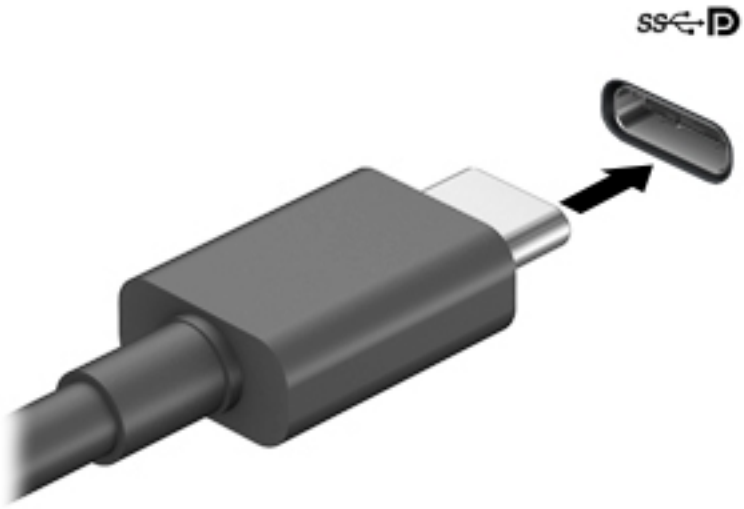
The docking station supports simultaneous video connections to USB Type-C ports that support both video and DisplayPort.

Connecting a DisplayPort device using a USB Type-C cable

NOTE: To connect a USB Type-C DisplayPort device to your docking station, you need a USB Type-C cable, purchased separately.

To see video or high-resolution display output on an external DisplayPort device, connect the DisplayPort device according to the following instructions:

1. Connect one end of the USB Type-C cable to the USB Type-C SuperSpeed port and DisplayPort on the docking station.



2. Connect the other end of the cable to the external DisplayPort device.

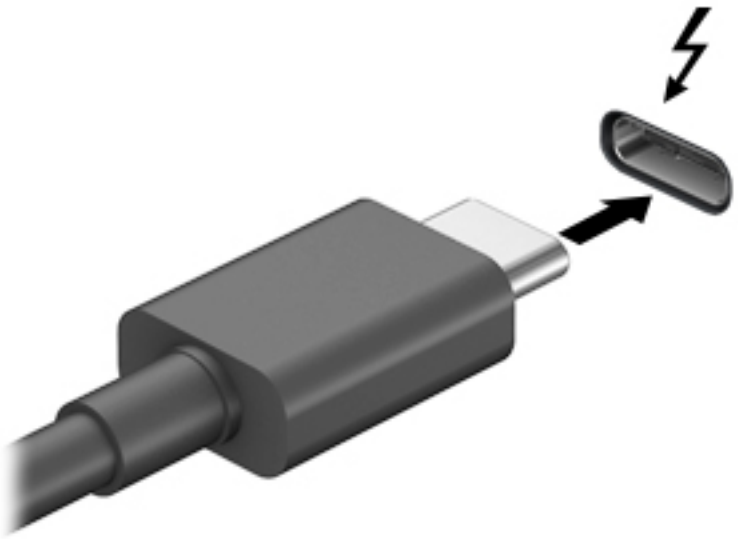
The docking station supports simultaneous video connections to USB Type-C ports that support both video and DisplayPort.

Connecting a Thunderbolt device using a USB Type-C Thunderbolt cable

NOTE: To connect a USB Type-C Thunderbolt device to your docking station, you need a USB Type-C cable, purchased separately.

To see video or high-resolution display output on an external Thunderbolt device or use a high-performance data device, connect the Thunderbolt device according to the following instructions:

1. Connect one end of the USB Type-C cable to the USB Type-C Thunderbolt port on the docking station.



2. Connect the other end of the cable to the external Thunderbolt device.

The docking station supports simultaneous video connections to USB Type-C ports that support both video and DisplayPort.

Connecting audio

WARNING! To reduce the risk of personal injury, lower the volume setting before putting on headphones, earbuds, or a headset. For additional safety information, see the *Regulatory, Safety and Environmental Notices*.

To access this document:

- Select the **Start** button, select **HP Help and Support**, and then select **HP Documentation**.

You can connect headphones or speakers directly into the audio-in (headphone)/audio-out (microphone) combo jack on the docking station. You can also connect analog audio devices.

Headphones combined with a microphone are called headsets. You can connect wired headsets to the audio-out (headphone)/audio-in (microphone) combo jack on your docking station.

Connecting analog audio devices

To connect analog audio:

1. Connect one end of an audio Y-cable (purchased separately) to the headphone jack on the docking station.
2. Connect the other end to the red and white audio-in jacks on your television or stereo equipment. See your television or stereo equipment user guide for the jack names and locations.

Connecting an optional security cable

NOTE: The security cable is designed to act as a deterrent, but it may not prevent the docking station from being mishandled or stolen.

To install a security cable:

1. Loop the security cable around a secured object.
2. Insert the key into the cable lock.
3. Insert the cable lock into the security cable slot on the docking station, and then turn the key.



4. Remove the key.

3 Disconnecting the docking station

To disconnect the docking station from the computer, follow these steps:

▲ Disconnect the cable from the computer.

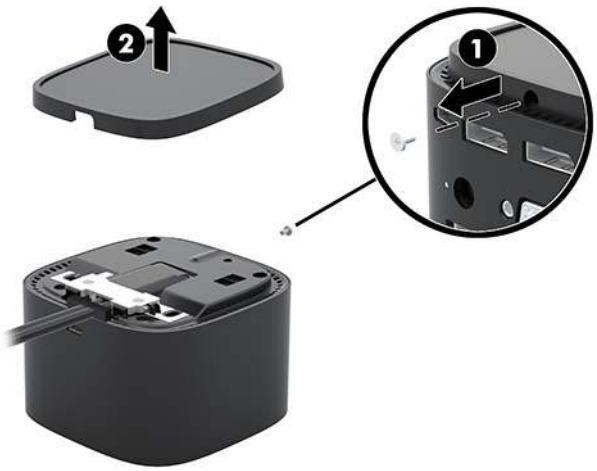
When the docking station has successfully disconnected from the computer, the Thunderbolt icon  no longer appears in the notification area.

NOTE: Do not restart or shut down your computer, or initiate Sleep or Hibernation, until the Thunderbolt icon disappears from the notification area.

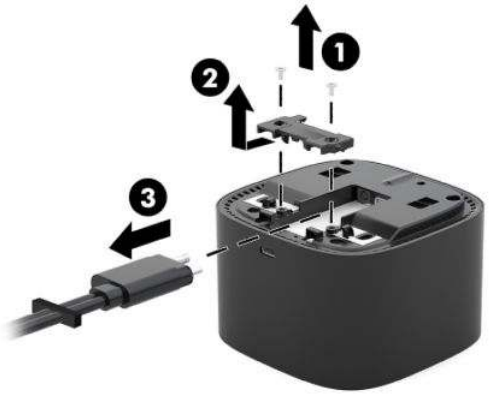
4 Changing the USB Type-C Thunderbolt cable

To change the USB Type-C Thunderbolt cable (purchased separately):

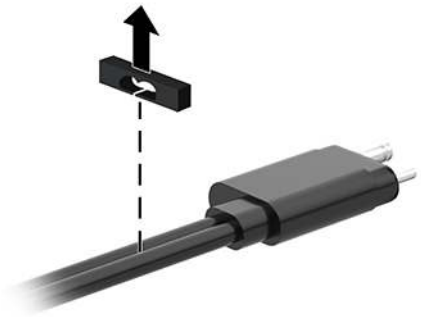
1. Remove the screw from the rear of the bottom panel of the docking station **(1)**, and then remove the bottom panel of the docking station **(2)**.



2. Using the screwdriver (included with the cable), remove the two screws securing the plate to the docking station **(1)**, slide the plate away from the docking station and remove it **(2)**, and then disconnect the cable **(3)**.

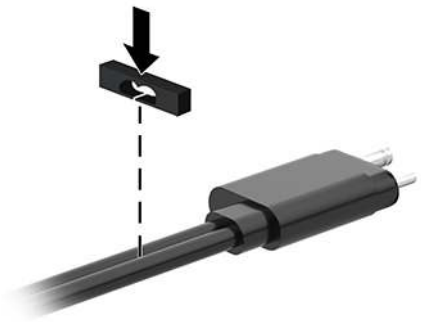


3. Disconnect the rubber grommet from the cable you removed from the docking station.

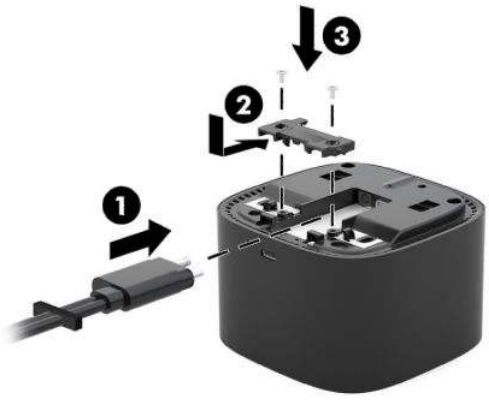


4. Secure the rubber grommet on the new cable.

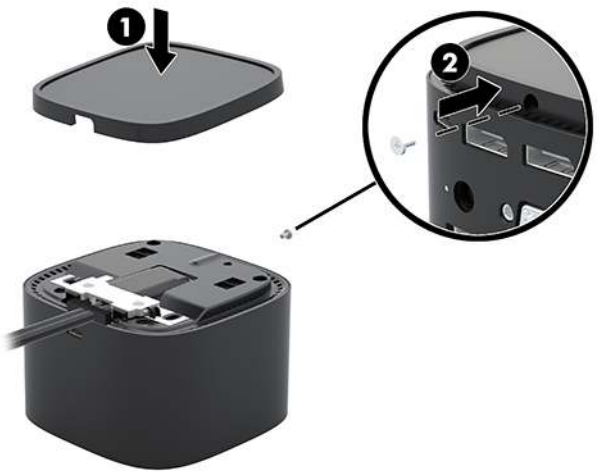
NOTE: Do not change the orientation of the rubber grommet. If the grommet is installed upside down, the bottom panel will not fit over the assembly.



5. Connect the new cable **(1)**, lower the plate to the docking station and slide it under the tabs on the docking station **(2)**, and then use the two screws to secure the cable and plate to the docking station **(3)**.



6. Place the bottom panel on the docking station **(1)**, and then secure it with the screw **(2)**.



5 Using the audio module

An audio module can be preinstalled (select products only) or purchased separately and installed on the docking station.

Installing the audio module

1. Remove the screw from the rear of the top panel of the docking station **(1)**, and then remove the top panel of the docking station **(2)**.



2. Starting with the front edge, insert the audio module into the top of the docking station **(1)**, and then secure it with the screw **(2)**.



6 Troubleshooting

Solving common problems

The following tables list possible problems and the recommended solutions.

General use and connection problems

Problem	Possible cause	Solution
The power light is off.	The docking station is not connected to AC power.	Connect the power cord to the docking station and to an AC outlet. **NOTE:** Be sure that you are using the power cord included with the docking station.
No devices connected to the docking station are working.	The docking station is not connected to AC power.	Connect the power cord to the docking station and to an AC outlet.
	The docking station is not connected to the computer correctly.	Disconnect the docking station cable from the computer, and then reconnect it.
When a device is connected to a USB port on the docking station, the device does not work.	The USB device may not be compliant with the docking station power specifications and is using too much power.	Reset the port: 1. Disconnect the device. 2. Disconnect the power cord from the docking station, and then reconnect it. 3. Disconnect the docking station from the computer, and then reconnect it. 4. Reconnect the device. If the device still does not work, it cannot be used with the port.
A device connected to a USB port on the docking station stops working.	The port might need to be reset.	Reset the port: 1. Disconnect the device that disabled the port. 2. Disconnect the power cord from the docking station, and then reconnect it. 3. Disconnect the docking station from the computer, and then reconnect it. If this procedure does not resolve the problem, restart your computer. If restarting the computer does not resolve the problem, you might need to reset your computer. See your computer documentation for instructions on creating recovery media and performing a factory reset.

When the docking station is connected to the computer, both the WLAN and the LAN are connected.	Switching from the WLAN connection to the LAN connection may not be supported on your computer. **NOTE:** WLAN-LAN switching is supported only on select computers running the Windows 10 operating system.	Disable the WLAN connection: 1. Right-click **Start**, and then select **Network Connections**. 2. Right-click **Wi-Fi**, and then click **Disable**.
A device connected to the docking station is not working on the computer.	The device is not ready to use.	There might be a slight delay before devices connected to the docking station are ready to use.
	The port might need to be reset.	Reset the port: 1. Disconnect the device that disabled the port. 2. Disconnect the power cord from the docking station, and then reconnect it. 3. Disconnect the docking station from the computer, and then reconnect it. If this procedure does not resolve the problem, restart your computer. If restarting the computer does not resolve the problem, you might need to reset your computer. See your computer documentation for instructions on creating recovery media and performing a factory reset.

Audio problems

Problem	Possible cause	Solution
Audio does not play.	The drivers are not installed.	Install the drivers. See Updating the software on page 9.
Headphones or other audio device connected to the docking station do not produce sound.	An audio device is connected to the headphone jack on the docking station, but the docking station is not the default audio device.	Set the docking station as the default audio device in the computer settings, or connect the audio device to the computer.
A microphone connected to the docking station does not work.	A microphone is connected to the docking station, but the docking station is not the default audio device.	Set the docking station as the default audio device in the computer settings, or connect the microphone to the computer.
A connected home entertainment system does not have audio.	Audio is not connected properly.	Be sure that the docking station is properly connected to the home entertainment system.

Video problems

Problem	Possible cause	Solution
A video does not display.	The drivers are not installed.	Install the drivers. See Updating the software on page 9.

Problem	Possible cause	Solution
Fonts and other characters on the external monitor appear large.	The screen resolution is configured higher than the maximum limit of the external monitor.	Set the screen resolution equal to or lower than the maximum limits of the external monitor.
The graphics application does not detect the external monitor.	Some graphics applications do not detect external monitors connected to the docking station.	Configure the external monitor. See Using an external monitor on page 9.
The external monitor cannot be set as the primary monitor when using some Intel graphics applications.	Older Intel graphics applications do not support setting the external monitor as the primary monitor.	Download the latest Intel drivers from http://www.hp.com/support.
The computer monitor does not work.	An external monitor has been disconnected from the docking station before the docking station was disconnected from the computer.	Disconnect the docking station from the computer, and then disconnect the external monitor from the docking station.
An external monitor does not work.	There is a problem with the connection.	1. Disconnect the docking station from the computer, and then disconnect the external monitor from the docking station. 2. Reconnect the docking station to the computer, and then reconnect the external monitor to the docking station. If this procedure does not resolve the problem, restart your computer. If restarting the computer does not resolve the problem and your computer has NVIDIA graphics, see the following item and try the solution. If the external monitor still does not work, you might need to reset your computer. See your computer documentation for instructions on creating recovery media and performing a factory reset.
	If your computer has NVIDIA graphics, you might need to configure the external monitors in NVIDIA Control Panel.	Configure your displays in NVIDIA® Control Panel: 1. Select **Start**, select **Control Panel**, select **Appearance and Personalization**, and then select **NVIDIA Control Panel**. 2. If either **Digital Display** is listed or an external monitor is listed twice, disconnect the docking station from the computer, and then disconnect the external monitor from the docking station. Reconnect the external monitor, and then reconnect the computer. 3. If the external monitor is listed but not selected, select it, and then click **Apply**.
A video is distorted.	The display settings might be incorrect.	Change the display settings: 1. Select **Start**, select **Settings**, and then select **System**.

Problem	Possible cause	Solution
		2. Under **Scale and layout**, select a value of **225%** or lower from the **Change the size of text, apps, and other items** drop-down list.
A video device connected to the external monitor port displays a black screen when playing Blu-ray or other protected content.	The docking station does not support viewing Blu-ray or other protected content on an external monitor connected to the external monitor port on the docking station.	Use the computer's display or connect the external monitor to the computer.
The display state changed after restarting the computer, or deactivating Sleep or Hibernation.	The display state needs to be configured.	Press fn+f4 to alternate the screen image between 4 display states: • **PC screen only:** View the screen image on the computer only. • **Duplicate:** View the screen image simultaneously on both the computer and the external monitor. • **Extend:** View the screen image extended across both the computer and the external monitor. • **Second screen only:** View the screen image on the external monitor only. Each time you press fn+f4, the display state changes. **NOTE:** For best results, especially if you choose the "Extend" option, increase the screen resolution of the external device as follows. Select the **Start** button, select **Settings**, and then select **System**. Under **Display**, select the appropriate resolution, and then select **Keep changes**.

Getting more information

- For comprehensive information about the docking station, as well as governmental agency and safety information about the use of the docking station, access HP Help and Support. Select **Start**, and then select **HP Help and Support**.
- The HP website (http://www.hp.com) provides product news and software updates.

Contacting support

If you cannot solve a problem using the troubleshooting tips in this chapter, you might need to contact support.

For the fastest possible resolution of your problem, have the following information available when you contact support:

NOTE: The serial number and other information for the docking station can be found on the bottom of the docking station.

- Model name and number for the computer and for the docking station
- Serial numbers for the computer and docking station
- Dates the computer and docking station were purchased
- Conditions under which the problem occurred
- Error messages that have been displayed
- Hardware and software you are using
- The manufacturer and model of components connected to the computer and docking station

To contact support using your HP computer, select **Start** and then select **HP Help and Support**. Click **Contact support** to start a chat session with a support specialist.

For U.S. support, go to http://www.hp.com/go/contactHP. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

Choose from the following types of support:

- Chat online with an HP technician.

NOTE: When chat is not available in a particular language, it is available in English.

- Find HP support worldwide telephone numbers.
- Locate an HP service center.

7 Specifications

Input power

The power information in this section may be helpful if you plan to travel internationally with the docking station.

The docking station operates on DC power, which can be supplied by an AC or a DC power source. The AC power source must be rated at 100–240 V, 50–60 Hz. Although the docking station can be powered from a standalone DC power source, it should be powered only with an AC adapter or a DC power source supplied and approved by HP for use with this docking station.

The docking station can operate on DC power within the following specifications.

Input Power	Rating
Operating voltage and current	19.7 V dc @ 6.1 A – 120 W 19.7 V dc @ 11.8 A – 230 W

NOTE: This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 240 V rms.

NOTE: The docking station operating voltage and current can be found on the system regulatory label.

Operating environment

Factor	Metric	U.S.
Temperature		
Operating	**0°C to 35°C**	32°F to 95°F
Nonoperating	**-20°C to 60°C**	-4°F to 140°F
Relative humidity (noncondensing)		
Operating	**10% to 90%**	10% to 90%
Nonoperating	**5% to 95%**	5% to 95%
Maximum altitude (unpressurized)		
Operating	**-15 m to 3,048 m**	-50 ft to 10,000 ft
Nonoperating	**-15 m to 12,192 m**	-50 ft to 40,000 ft

Index

A

analog audio 18
audio
  adjusting volume 2
  connecting 17
audio connection, analog 18
audio module 23
audio-out (headphone) jack 18
audio-out (headphone)/audio-in (microphone) combo jack, identifying 4

B

buttons
  power 2
  speaker volume 2

C

components
  front 3
  rear 5
  right side 4
  top 1
computer, connecting 7
connector, power 5, 6

D

DisplayPort
  connecting 15
  identifying 5

E

external devices 11
external monitor port
  connecting 14
  identifying 5

H

headphone (audio-out) jack 18
hot keys
  microphone mute 2
HP Help and Support 28

I

input power 30

J

jacks
  audio-out (headphone) 18
  audio-out (headphone)/audio-in (microphone) combo 4
  RJ-45 (network) 5, 13

L

light, power 1, 2, 5
lock, security cable 18

M

microphone mute key, identifying 2

N

network (RJ-45) jack
  connecting 13
network jack, identifying 5

O

operating environment 30
operating systems supported 11

P

ports
  DisplayPort 5
  external monitor 5, 14
  USB 14
  USB SuperSpeed 5
  USB SuperSpeed charging (powered) 4
  USB Type-C SuperSpeed 3
  USB Type-C SuperSpeed port and DisplayPort 5, 16
  USB Type-C Thunderbolt 5, 17
  VGA 14
power
  docking station, connecting 6
  guidelines 11
power connector
  connecting 6
  identifying 5
power light 1, 2, 5

R

RJ-45 (network) jack
  connecting 13
  identifying 5

S

security cable slot
  identifying 4
  using 18
security cable, connecting 18
security level 12
slot, security cable 4, 18
support, contacting 28

T

Thunderbolt port
  connecting 17
  identifying 5
troubleshooting
  audio problems 26
  connection problems 25
  general use problems 25
  video problems 26

U

USB devices, connecting 14
USB SuperSpeed charging (powered) port, identifying 4
USB SuperSpeed port, identifying 5
USB Type-C port, connecting 16, 17
USB Type-C SuperSpeed port and DisplayPort
  connecting USB Type-C 16
  identifying 5
USB Type-C SuperSpeed port, identifying 3
USB Type-C Thunderbolt port
  identifying 5

V

VGA port, connecting 14
volume, adjusting 2