



User Guide

SUMMARY

Learn how to install, configure, and use your device.

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To access the latest user guide, go to <http://www.hp.com/support>, and follow the

instructions to find your product. Then select **Manuals**.

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1 Getting started

After identifying the components of the docking station, you can connect a computer, monitor, and other devices.

Identifying components

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

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

Top

This illustration and table describe the components on the top of the docking station.



Table 1-1 Component descriptions


Component	Description
(1) Power button and light	<p>When a computer is connected to the dock, press to turn on the computer.</p> <p>NOTE: This button is functional only when the docking station is connected to supported HP computers.</p> <ul style="list-style-type: none">• 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.

Front

This illustration and table describe the components on the front of the docking station.



Table 1-2 Component descriptions



Component	Description
(1) 	USB Type-C® port with data and power out Connects a USB device. NOTE: Use a standard USB Type-C charging cable or cable adapter (purchased separately) when charging a small external device.

Right

This illustration and table describe the components on the right side of the docking station.



Table 1-3 Component descriptions










Component	Description
(1) 	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.
(2) 	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

This illustration and table describe the components on the rear of the docking station.



Table 1-4 Component descriptions

Component	Description
(1) 	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) 	Dual-mode DisplayPort™ connector v1.4 Connects an optional digital display device, such as a high-performance monitor or projector.
(3) 	USB Type-C SuperSpeed port with DisplayPort output Connects a display device that has a USB Type-C connector, providing DisplayPort output. This port also supports HDMI and VGA output. NOTE: Use a standard USB Type-C charging cable or cable adapter (purchased separately) when charging a small external device.
(4) 	Dual-mode DisplayPort connector Connects an optional digital display device, such as a high-performance monitor or projector.
(5) 	HDMI port Connects an external HDMI monitor.
(6) 	USB Type-C Thunderbolt™ port with HP Sleep and Charge and DisplayPort output, 40 Gbps Connects a display device that has a USB Type-C connector, providing DisplayPort output. NOTE: Use a standard USB Type-C charging cable or cable adapter (purchased separately) when charging a small external device.
(7) 	Power connector Connects a 7.4 mm AC adapter.
(8) 	Power light <ul style="list-style-type: none"> On: The docking station is connected to power. Off: The docking station is not connected to power.
(9) 	RJ-45 (network) jack Connects a network cable for up to 2.5 GB, with Intel® vPro™ enabled.

Setting up the docking station

Connect the docking station to the computer using AC power. After connecting the computer, prevent the Sleep and Hibernation states to be sure that your work is uninterrupted.

Connecting to AC power

Connect the docking station to an AC power source. When connected to power, the docking station provides up to 100W of power through the USB Type-C connector to the computer. If using the 280W power supply with the combination cable, the docking station provides up to 230W of power through the power connector.

⚠ 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.




Connecting to a computer

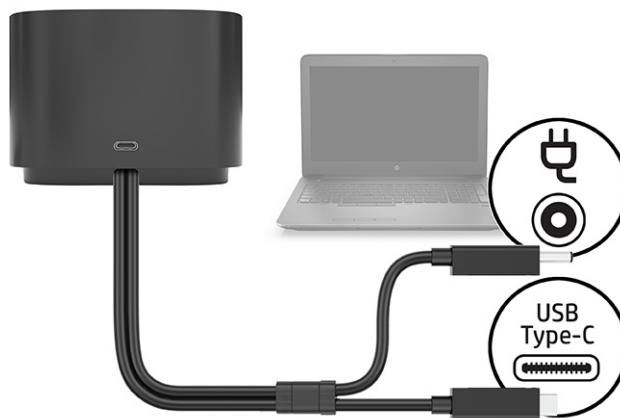
Connect a computer to the docking station using a USB Type-C Thunderbolt cable or the combination cable included with the docking station.

1. Connect one end of the USB Type-C Thunderbolt cable to the Thunderbolt port on the docking station and the other end to the Thunderbolt port on your computer. The Thunderbolt port is located on the rear of the docking station. See [Front on page 1](#) and [Rear on page 2](#) for connector locations.




 **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.

- If your computer does not have a USB Type-C Thunderbolt port, you can connect the docking station to your computer using the combination cable that is included with the docking station. Connect the USB Type-C part of the combination cable to a USB Type-C connector on your computer. Then connect the power cord part of the combination cable to your computer.



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 nonadministrator user to select OK, enter the nonadministrator registry key. Contact your HP Technical Consultant for this key.

3. When 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

To update the software on the docking station, follow the instructions in this section.


You can update the docking station while connected to your computer or, for better performance, schedule the docking station to update when you disconnect your computer from the docking station.

1. Download HP Firmware Installer from <http://www.hp.com/support>.
2. Open **Windows Explorer** and navigate to where you saved HP Firmware Installer.
3. Double-click **HPFirmwareInstaller.exe**.
4.  **NOTE:** You must be connected to the internet for new updates to download to HP Firmware Installer.


Verify that updates are available, and then select which updates to install.

5. Select one of the following options:

- **Update now:** Installs the update immediately.

 **NOTE:** You cannot disconnect your computer from the docking station during an update. You might see your monitor flicker and hear some audio clicks. Your Internet connection might be intermittent, and your mouse and keyboard could become unresponsive until installation is complete.

- **Update on dock disconnect:** Installs the update after you disconnect your computer from the docking station.

 **NOTE:** You cannot connect your computer to the docking station during an update. The dock power light might blink while the update is being installed.

6. Select **Install**.

Using an external monitor

You can connect an external monitor to the docking station.

Configuring the monitor

After connecting a monitor to the docking station, configure the monitor settings to customize the screen image.

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 G4 Features and Troubleshooting* white paper. Go to <http://www8.hp.com/h20195/v2/GetPDF.aspx/4AA7-3384ENW.pdf>.

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

You can use the docking station to connect external devices to your system.

Docking station guidelines

Follow the guidelines in this section when using the docking station.

- **Operating systems**—For optimal performance, use the docking station with a computer running the Windows 11 or latest 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 [Connecting to a computer on page 4](#) and [Disconnecting the docking station on page 14](#)).



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

You can choose from several preset security levels when using the docking station.

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: Thunderbolt alt mode**—Devices cannot be connected to the docking station.


 **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 uses Security level 3 by default.

Connecting to a network


You can connect the computer to a network through the docking station. This action requires a network 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)

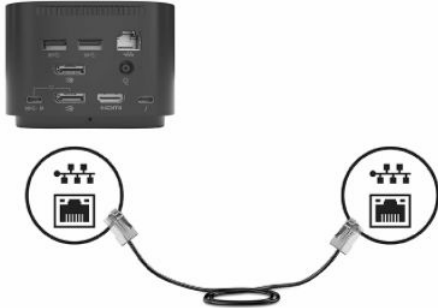
 **TIP:** Your computer might support WOL from the Off, Sleep, or Hibernation states, or only when the computer is on or in Sleep.

WLAN/LAN switching is supported only on select computers.

1. Connect the docking station to the computer.


2. Connect one end of the network cable to the 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.



Connecting USB devices


The docking station has four USB ports: one USB Type-C port on the front panel, one USB SuperSpeed port on the right panel, and two USB SuperSpeed ports on the rear panel. 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 15](#).

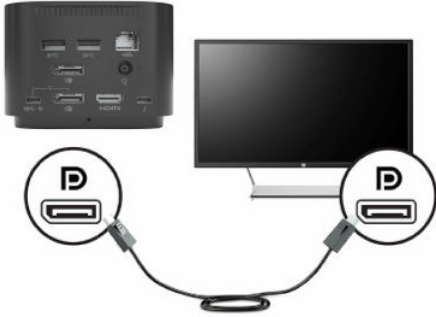


Connecting a DisplayPort device

You can connect a DisplayPort device to your docking station.

 **NOTE:** To connect a DisplayPort video device to your docking station, you need a DisplayPort cable or USB Type-C cable, purchased separately. For DisplayPort 1.4 support, use a DisplayPort cable that supports DisplayPort 1.4. DisplayPort 1.4 cables are compatible with previous versions of DisplayPort.


You can connect the docking station to an external device also, 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.

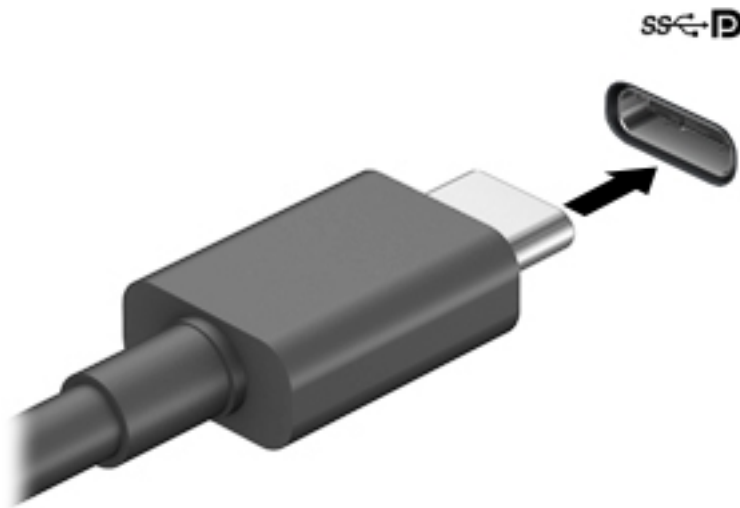
Connecting a DisplayPort device using a USB Type-C cable

You can also use a USB Type-C cable to connect a DisplayPort device to your computer.

 **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.

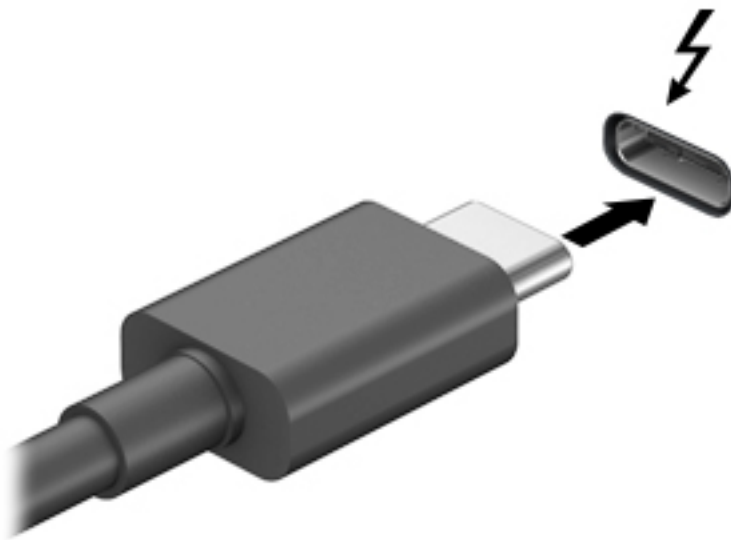
Connecting a Thunderbolt device using a USB Type-C Thunderbolt cable

To connect a Thunderbolt device to your docking station, follow these steps.

 **NOTE:** To connect a USB Type-C Thunderbolt device to your docking station, you need a USB Type-C Thunderbolt 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 Thunderbolt 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 an optional security cable

To install a security cable, follow these steps.

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

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, 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 disconnect the dock while updating software. Doing so might cause the dock to become unusable.



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

4 Troubleshooting

If you are experiencing issues with your docking station, you can attempt to resolve them using the provided solutions before contacting HP Support.

Solving common problems

The troubleshooting tables list possible problems and the recommended solutions.

General use and connection problems

Use the table to search for possible causes and solutions for general use and connection problems.

Table 4-1 General use and connection problems, causes, and solutions

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 that was 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 might not be compliant with the docking station power specifications and is using too much power.	Reset the port: <ol style="list-style-type: none">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.

Table 4-1 General use and connection problems, causes, and solutions (continued)

Problem	Possible cause	Solution
A device connected to a USB port on the docking station stops working.	The port might need to be reset.	<p>Reset the port:</p> <ol style="list-style-type: none"> 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. <p>If this procedure does not resolve the problem, restart your computer.</p> <p>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.</p>
When the docking station is connected to the computer, both the WLAN and the LAN are connected.	<p>Switching from the WLAN connection to the LAN connection might not be supported on your computer.</p> <p>NOTE: WLAN-LAN switching is supported only on select computers running the Windows 10 operating system.</p>	<p>Disable the WLAN connection:</p> <ol style="list-style-type: none"> 1. Right-click Start, and then select Network Connections. 2. Right-click Wi-Fi, and then select Disable.
A device that is connected to the docking station is not working on the computer.	<p>The device is not ready to use.</p> <hr/> <p>The port might need to be reset.</p>	<p>There might be a slight delay before devices connected to the docking station are ready to use.</p> <hr/> <p>Reset the port:</p> <ol style="list-style-type: none"> 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. <p>If this procedure does not resolve the problem, restart your computer.</p> <p>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.</p>

Video problems

Use the table to search for possible causes and solutions for video problems.

Table 4-2 Video problem causes and solutions

Problem	Possible cause	Solution
A video does not play.	The drivers are not installed.	Install the drivers. See Updating the software on page 6 .
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 that are connected to the docking station.	Configure the external monitor. See Using an external monitor on page 6 .
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 was 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.	<ol style="list-style-type: none"> 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. <p>If this procedure does not resolve the problem, restart your computer.</p> <p>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.</p>
	If your computer has NVIDIA graphics, you might need to configure the external monitors in NVIDIA Control Panel.	<p>Configure your displays in NVIDIA® Control Panel:</p> <ol style="list-style-type: none"> 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 select Apply.

Table 4-2 Video problem causes and solutions (continued)

Problem	Possible cause	Solution
A video is distorted.	The display settings might be incorrect.	<p>Change the display settings:</p> <ol style="list-style-type: none"> 1. Select Start, select Settings, and then select System. 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.	<p>Press fn + f4 to alternate the screen image between 4 display states:</p> <ul style="list-style-type: none"> • 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. <p>Each time you press fn + f4, the display state changes.</p> <p>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.</p>
The external monitor connected to the dock exhibit reduced resolution.	The current BIOS default settings do not support the maximum USB Type-C video throughput.	<p>Enable high resolution mode.</p> <ol style="list-style-type: none"> 1. While the computer is restarting, press f10. 2. Select Advanced, and then select System Options. 3. On the System Options screen, select Enable high resolution mode when connected to a USB Type-C DisplayPort mode dock. <p>NOTE: Selecting this option will reduce the USB 3.0 speed to USB 2.0 speed. This solution applies to Windows OS only.</p>

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**. Select **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.

5 Specifications

This section contains technical specifications for the physical aspects of your product, such as the weight and dimensions, as well as required environmental operating conditions and power source ranges.

Input power


The power information in this section can 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.

Table 5-1 Input power ratings

Input Power	Rating
Operating voltage and current	120W: Input 100 to 240V 1.7A 50 to 60Hz. Output is 19.5V at 6.15A.
	280W: Input 100 to 240V 1.7A 50 to 60Hz. Output is 19.5V at 14.35A.

 **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

This section provides information about the recommended operating environment for your docking station.

Table 5-2 Operating environment specifications

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)		

Table 5-2 Operating environment specifications (continued)

Factor	Metric	U.S.
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

6 Accessibility

HP's goal is to design, produce, and market products, services, and information that everyone everywhere can use, either on a stand-alone basis or with appropriate third-party assistive technology (AT) devices or applications.

HP and accessibility

Because HP works to weave diversity, inclusion, and work/life into the fabric of the company, it is reflected in everything HP does. HP strives to create an inclusive environment focused on connecting people to the power of technology throughout the world.

Finding the technology tools you need

Technology can unleash your human potential. Assistive technology removes barriers and helps you create independence at home, at work, and in the community. Assistive technology helps increase, maintain, and improve the functional capabilities of electronic and information technology.

For more information, see [Finding the best assistive technology on page 23](#).

The HP commitment

HP is committed to providing products and services that are accessible for people with disabilities. This commitment supports the company's diversity objectives and helps ensure that the benefits of technology are available to all.

The HP accessibility goal is to design, produce, and market products and services that can be effectively used by everyone, including people with disabilities, either on a standalone basis or with appropriate assistive devices.

To achieve that goal, this Accessibility Policy establishes seven key objectives to guide HP actions. All HP managers and employees are expected to support these objectives and their implementation in accordance with their roles and responsibilities:

- Raise the level of awareness of accessibility issues within HP, and provide employees with the training they need to design, produce, market, and deliver accessible products and services.
- Develop accessibility guidelines for products and services, and hold product development groups accountable for implementing these guidelines where competitively, technically, and economically feasible.
- Involve people with disabilities in the development of accessibility guidelines and in the design and testing of products and services.
- Document accessibility features, and make information about HP products and services publicly available in an accessible form.
- Establish relationships with leading assistive technology and solution providers.
- Support internal and external research and development that improves assistive technology relevant to HP products and services.
- Support and contribute to industry standards and guidelines for accessibility.

International Association of Accessibility Professionals (IAAP)

IAAP is a not-for-profit association focused on advancing the accessibility profession through networking, education, and certification. The objective is to help accessibility professionals develop and advance their careers and to better enable organizations to integrate accessibility into their products and infrastructure.

As a founding member, HP joined to participate with other organizations to advance the field of accessibility. This commitment supports HP's accessibility goal of designing, producing, and marketing products and services that people with disabilities can effectively use.

IAAP will make the profession strong by globally connecting individuals, students, and organizations to learn from one another. If you are interested in learning more, go to <http://www.accessibilityassociation.org> to join the online community, sign up for newsletters, and learn about membership options.

Finding the best assistive technology

Everyone, including people with disabilities or age-related limitations, should be able to communicate, express themselves, and connect with the world using technology. HP is committed to increasing accessibility awareness within HP and with our customers and partners.

Whether it's large fonts that are easy on the eyes, voice recognition that lets you give your hands a rest, or any other assistive technology to help with your specific situation—a variety of assistive technologies make HP products easier to use. How do you choose?

Assessing your needs

Technology can unleash your potential. Assistive technology removes barriers and helps you create independence at home, at work, and in the community. Assistive technology (AT) helps increase, maintain, and improve the functional capabilities of electronic and information technology.

You can choose from many AT products. Your AT assessment should allow you to evaluate several products, answer your questions, and facilitate your selection of the best solution for your situation. You will find that professionals qualified to do AT assessments come from many fields, including those licensed or certified in physical therapy, occupational therapy, speech/language pathology, and other areas of expertise. Others, while not certified or licensed, can also provide evaluation information. You will want to ask about the individual's experience, expertise, and fees to determine if they are appropriate for your needs.

Accessibility for HP products

These links provide information about accessibility features and assistive technology, if applicable and available in your country or region, that are included in various HP products. These resources will help you select the specific assistive technology features and products most appropriate for your situation.

- **HP Aging & Accessibility:** Go to <http://www.hp.com>, type **Accessibility** in the search box. Select **Office of Aging and Accessibility**.
- **HP computers:** For Windows products, go to <http://www.hp.com/support>, type **Windows Accessibility Options** in the **Search our knowledge** search box. Select the appropriate operating system in the results.
- **HP Shopping, peripherals for HP products:** Go to <http://store.hp.com>, select **Shop**, and then select **Monitors** or **Accessories**.

If you need additional support with the accessibility features on your HP product, see [Contacting support on page 19](#).

Additional links to external partners and suppliers that may provide additional assistance:

- [Microsoft Accessibility information \(Windows and Microsoft Office\)](#)
- [Google Products accessibility information \(Android, Chrome, Google Apps\)](#)

Standards and legislation

Countries worldwide are enacting regulations to improve access to products and services for persons with disabilities. These regulations are historically applicable to telecommunications products and services, PCs and printers with certain communications and video playback features, their associated user documentation, and their customer support.

Standards

The US Access Board created Section 508 of the Federal Acquisition Regulation (FAR) standards to address access to information and communication technology (ICT) for people with physical, sensory, or cognitive disabilities.

The standards contain technical criteria specific to various types of technologies, as well as performance-based requirements which focus on functional capabilities of covered products. Specific criteria cover software applications and operating systems, web-based information and applications, computers, telecommunications products, video and multimedia, and self-contained closed products.

Mandate 376 – EN 301 549

The European Union created the EN 301 549 standard within Mandate 376 as an online toolkit for public procurement of ICT products. The standard specifies the accessibility requirements applicable to ICT products and services, with a description of the test procedures and evaluation methodology for each requirement.

Web Content Accessibility Guidelines (WCAG)

Web Content Accessibility Guidelines (WCAG) from the W3C's Web Accessibility Initiative (WAI) helps web designers and developers create sites that better meet the needs of people with disabilities or age-related limitations.

WCAG advances accessibility across the full range of web content (text, images, audio, and video) and web applications. WCAG can be precisely tested, is easy to understand and use, and allows web developers flexibility for innovation. WCAG 2.0 has also been approved as [ISO/IEC 40500:2012](#).

WCAG specifically addresses barriers to accessing the web experienced by people with visual, auditory, physical, cognitive, and neurological disabilities, and by older web users with accessibility needs. WCAG 2.0 provides characteristics of accessible content:

- **Perceivable** (for instance, by addressing text alternatives for images, captions for audio, adaptability of presentation, and color contrast)
- **Operable** (by addressing keyboard access, color contrast, timing of input, seizure avoidance, and navigability)
- **Understandable** (by addressing readability, predictability, and input assistance)
- **Robust** (for instance, by addressing compatibility with assistive technologies)

Legislation and regulations

Accessibility of IT and information has become an area of increasing legislative importance. These links provide information about key legislation, regulations, and standards.

- [United States](#)
- [Canada](#)
- [Europe](#)
- [Australia](#)

Useful accessibility resources and links

These organizations, institutions, and resources might be good sources of information about disabilities and age-related limitations.



NOTE: This is not an exhaustive list. These organizations are provided for informational purposes only. HP assumes no responsibility for information or contacts you encounter on the internet. Listing on this page does not imply endorsement by HP.

Organizations

These organizations are a few of the many that provide information about disabilities and age-related limitations.

- American Association of People with Disabilities (AAPD)
- The Association of Assistive Technology Act Programs (ATAP)
- Hearing Loss Association of America (HLAA)
- Information Technology Technical Assistance and Training Center (ITTATC)
- Lighthouse International
- National Association of the Deaf
- National Federation of the Blind
- Rehabilitation Engineering & Assistive Technology Society of North America (RESNA)
- Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI)
- W3C Web Accessibility Initiative (WAI)

Educational institutions

Many educational institutions, including these examples, provide information about disabilities and age-related limitations.

- California State University, Northridge, Center on Disabilities (CSUN)
- University of Wisconsin - Madison, Trace Center
- University of Minnesota computer accommodations program

Other disability resources

Many resources, including these examples, provide information about disabilities and age-related limitations.

- ADA (Americans with Disabilities Act) Technical Assistance Program

- ILO Global Business and Disability network
- EnableMart
- European Disability Forum
- Job Accommodation Network
- Microsoft Enable

HP links

These HP-specific links provide information that relates to disabilities and age-related limitations.

[HP comfort and safety guide](#)

[HP public sector sales](#)

Contacting support

HP offers technical support and assistance with accessibility options for customers with disabilities.



NOTE: Support is in English only.

- Customers who are deaf or hard of hearing who have questions about technical support or accessibility of HP products:
 - Use TRS/VRS/WebCapTel to call (877) 656-7058 Monday through Friday, 6 a.m. to 9 p.m. Mountain Time.
- Customers with other disabilities or age-related limitations who have questions about technical support or accessibility of HP products:
 - Call (888) 259-5707 Monday through Friday, 6 a.m. to 9 p.m. Mountain Time.

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