StarTech.com

Hard-to-find made easy®

USB 3.0 to Dual HDMI Adapter -4K 30Hz/1080p 60Hz

Full-Product Manual

107B-USB-HDMI

Actual products may vary from photos

For the latest information and specifications visit
www.StarTech.com/support

Manual Revision: 05/02/2024

StarTech.com
Hard-to-find made easy®

Table of Contents

To view manuals, videos, drivers, downloads, technical drawings, and more visit www.StarTech.com/support

Requirements

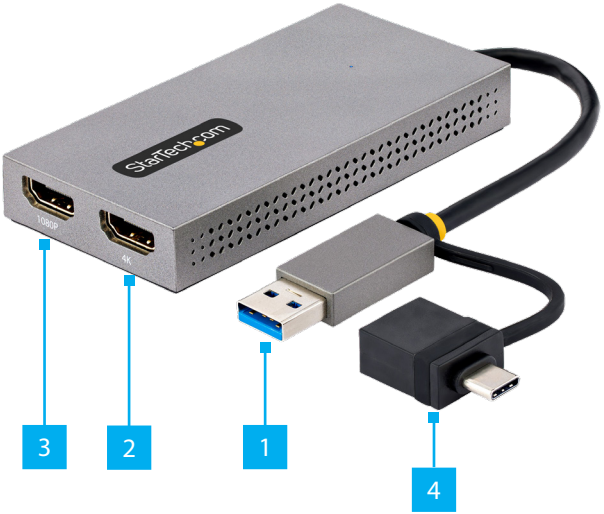
- USB Enabled Host Computer
  - a USB 5Gbps (or faster) is recommended
- Up to 2x HDMI Display Devices

Package Contents

- USB-A/USB-C to Dual HDMI Adapter x1
- Quick-Start Guide x1

For the latest drivers/software, technical specifications, and declarations of conformance, please visit:
www.StarTech.com/107B-USB-HDMI

Product Diagram



	Component	Function
1	**Built-In USB Host Cable (USB-A)**	• Connect to a USB Port on a Host Computer • USB 5Gbps
2	***Video Output Port (HDMI)***	• Connect to an HDMI Display • 4K (3840×2160) 30Hz Resolution
3	***Video Output Port (HDMI)***	• Connect to an HDMI Display • 1080p (1920x1200) 60Hz Resolution
4	***Tethered USB-A to USB-C Adapter***	• Connect to the Built-In USB-C Host Cable and to a USB-C Port on a Host Computer • USB 5Gbps

To view manuals, videos, drivers, downloads, technical drawings, and more visit www.StarTech.com/support

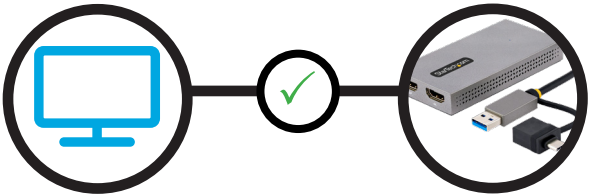
Windows Installation

IMPORTANT PRE-INSTALLATION STEPS FOR AUTO DRIVER OR MANUAL SETUP

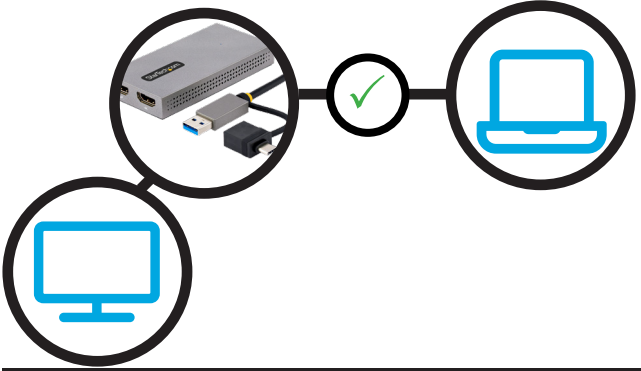
- Driver installation for the **USB Display Adapter** may be automatic on **Host Computers** running Windows 10 and up. Before connecting the **USB Display Adapter** to the **Host Computer**, please take the following steps to optimize the **Host Computer** for automatic driver installation:
  - Make sure any outstanding Windows updates are installed to ensure the **Host Computer** is running the most up-to-date version of Windows.
  - Ensure that the **Host Computer** has an active Internet connection.
  - Verify that the active user account has administrator privileges.
- This Manual provides two methods for driver installation: Automatic Driver Installation and Manual Driver Installation. If the Automatic Driver Installation fails please disconnect the **USB Display Adapter** from the **Host Computer**, and follow the steps for Manual Driver Installation.

Hardware Installation

1. (Optional) Connect the Tethered **USB-A to USB-C Adapter** to the **Built-In USB-A Host Cable**.
2. Connect the **Display Device(s)** to the **Video Output Ports** on the **USB Display Adapter**, using the required cables (sold separately).



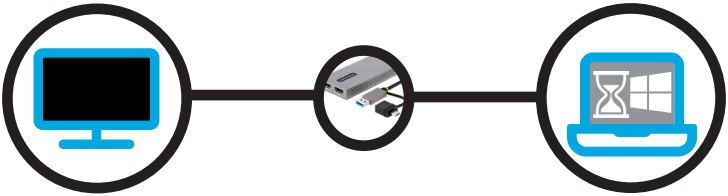
3. Connect the **Built-In USB Cable** on the **USB Display Adapter** to an available **USB Port** on the **Host Computer**.



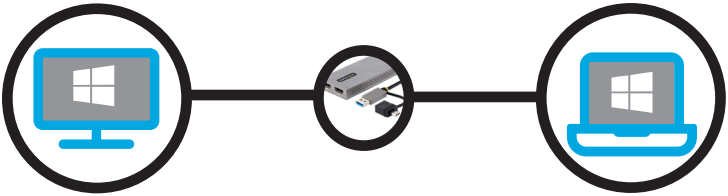
Software Installation

Automatic Driver Installation

1. Once the **USB Display Adapter** has been connected to the **Host Computer**, Windows will attempt to download and install the drivers automatically.



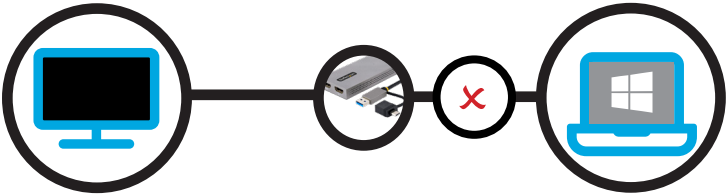
2. Installation may take several seconds to complete. During the installation process the connected **Display Device(s)** might flicker, this is normal. Once the installation has completed, the Windows desktop will appear on the connected **Display Device(s)**.



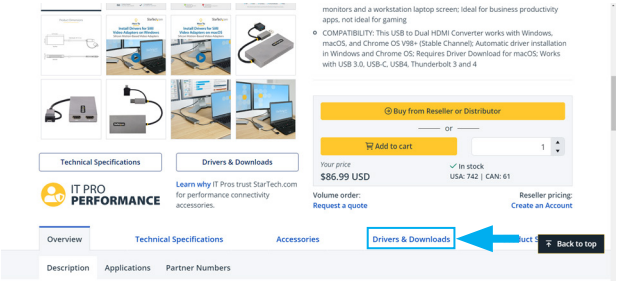
Manual Driver Installation

If after 3 minutes the Windows desktop does not appear on the connected **Display Device(s)**, it's likely that Windows has failed to automatically install the Driver, and it will be necessary to follow the below steps for Manual Driver Installation:

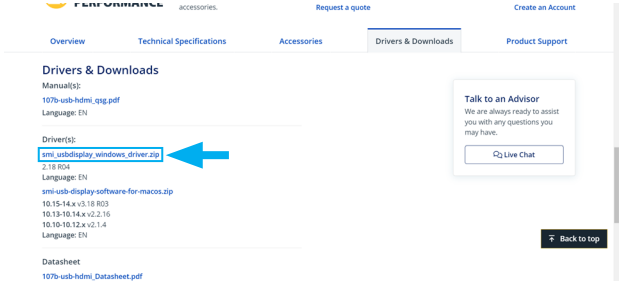
1. Disconnect the **USB Display Adapter** from the **Host Computer**.



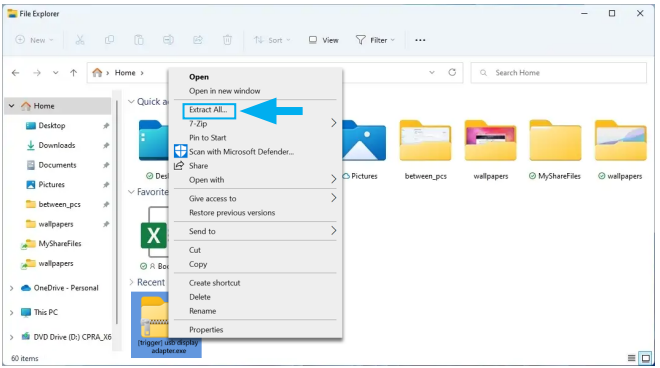
2. Navigate to www.StarTech.com/107B-USB-HDMI and click the **Drivers/Downloads** tab on the Product Page.



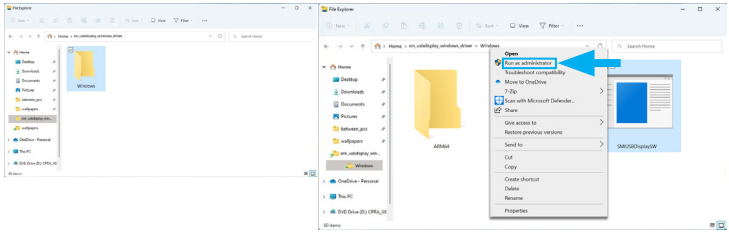
3. Under **Driver(s)**, download the **smi_usbdisplay_windows_driver.zip** driver package.



4. Right-click the zip folder that was downloaded and select **Extract All**, then follow the on-screen instructions.



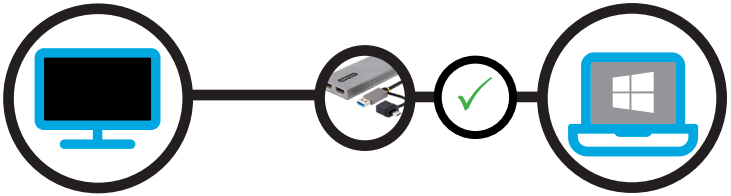
5. Open the **Windows** folder from the list of extracted files, then right-click the **SMIUSBDisplaySW(.exe)** file and select **Run as Administrator**.



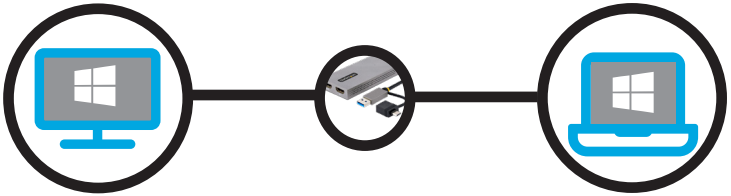
Note: If the **Run as Administrator** option is not available, it's likely that the installation file is attempting to be ran from within the zipped file. Please extract the files using the instructions in Step 5.

6. Follow the on-screen prompts to install the device drivers and restart the computer when prompted.

7. Once Windows has restarted, connect the **Built-In USB Host Port** on the **USB Display Adapter** to an available **USB Port** on the **Host Computer**.



8. Installation may take several seconds to complete. During the installation process the connected **Display Device(s)** might flicker, this is normal. Once the installation has completed, the Windows desktop will appear on the connected **Display Device(s)**.

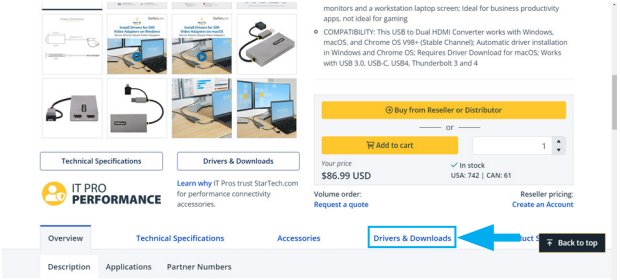


macOS Installation

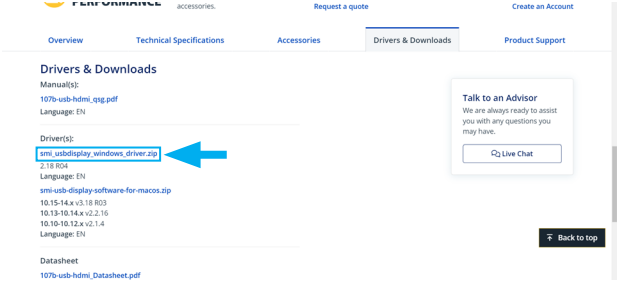
Software Installation for macOS 10.15 and Up

(InstantView Display Application Installation)

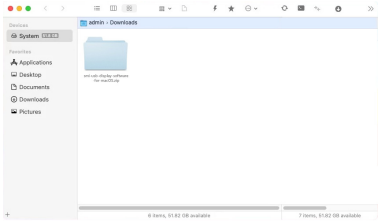
1. Navigate to www.StarTech.com/107B-USB-HDMI and click the **Drivers/Downloads** tab on the Product Page.



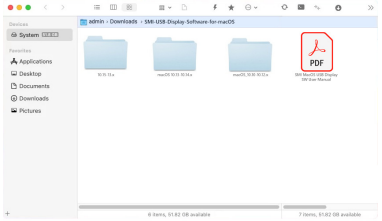
2. Under **Driver(s)**, download the **smi-usb-display-software-for-macOS.zip** software package.



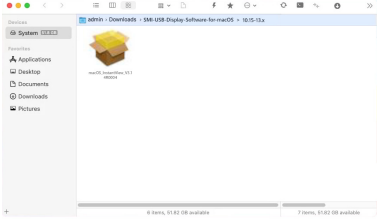
3. Double-click the zip folder that you downloaded, macOS will unzip the folder using **Archive Utility**.



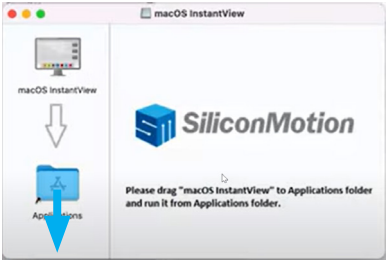
4. In the list of extracted folders, select the folder that corresponds to your version of macOS.



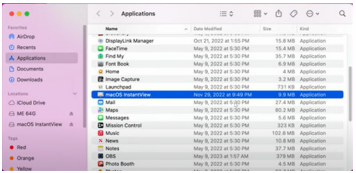
5. Double-click the **macOS_InstantView_V...(.dmg)** installation package.



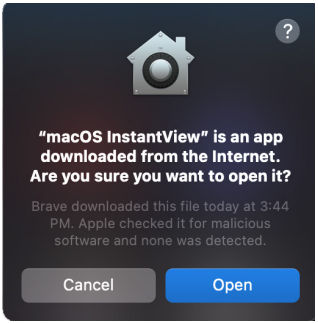
6. Drag the **macOS InstantView** icon to the **Application** folder.



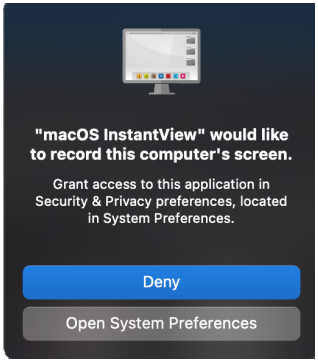
7. Click on the **Finder** menu in the top-left corner of the screen and select **Applications**, then launch **macOS InstantView**.



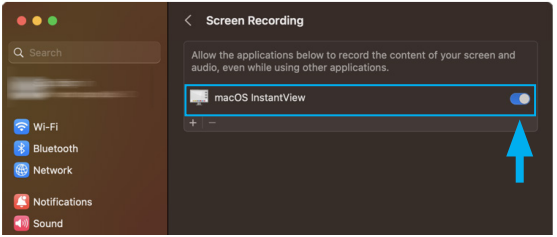
8. You may receive an alert asking if you're sure you want to open the application. If this alert appears click **Open**.



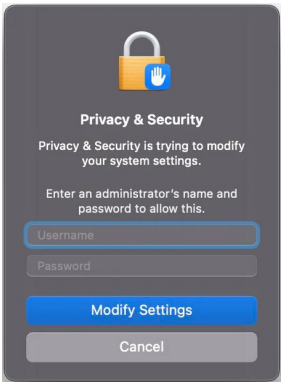
9. You may receive an alert asking if you'd like to grant access to this application Security & Privacy preferences. If this alert appears click **Open System Preferences**.



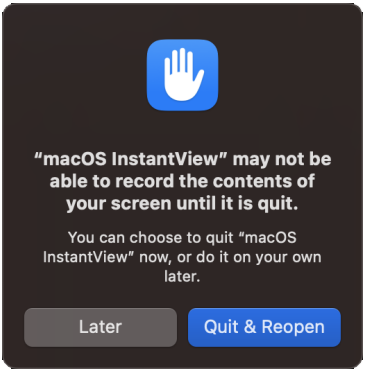
10. In the Screen Recording window, click the slider to allow **macOS InstantView**.



9. Enter the Username and password for your Mac and click Modify Settings.



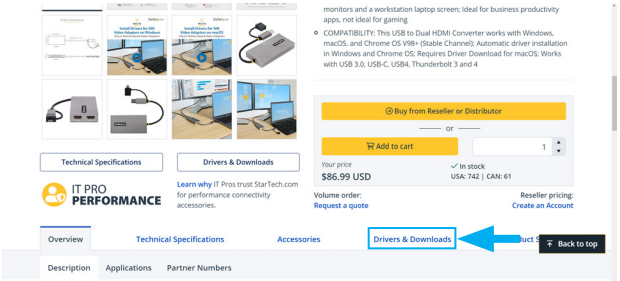
8. You will receive an alert stating that InstantView may not be able to record the contents of your screen until it is quit, click **Quit & Reopen** to complete the installation.



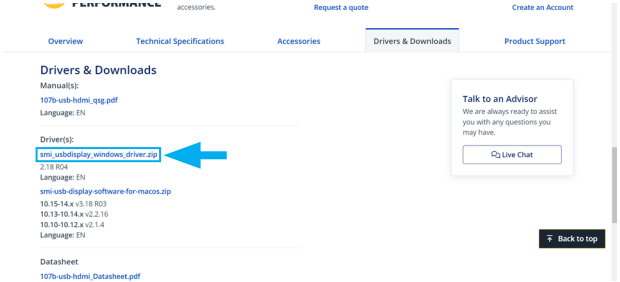
Software Installation for macOS 10.10 to 10.14

(Legacy Display Driver Installation)

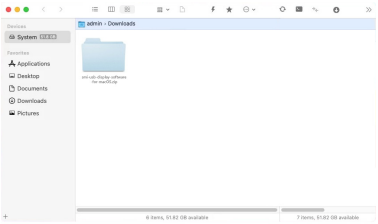
1. Navigate to www.StarTech.com/107B-USB-HDMI and click the **Drivers/Downloads** tab on the Product Page.



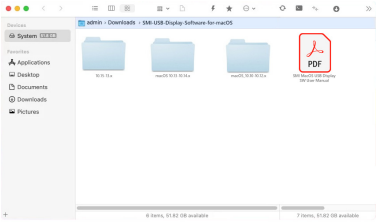
2. Under **Driver(s)**, download the **smi-usb-display-software-for-macOS.zip** software package.



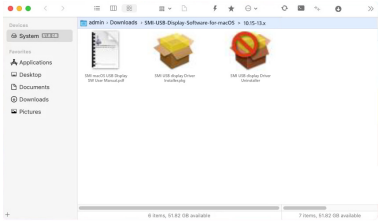
3. Double-click the zip folder that you downloaded, macOS will unzip the folder using **Archive Utility**.



4. In the list of extracted folders, select the folder that corresponds to your version of macOS.



5. Double-click the **SMI USB Display Software-for-macOS-v.. (.dmg)** installation package.

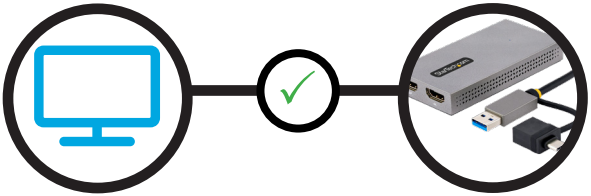


6. Follow the on-screen prompts to install the device drivers and restart the computer when prompted.

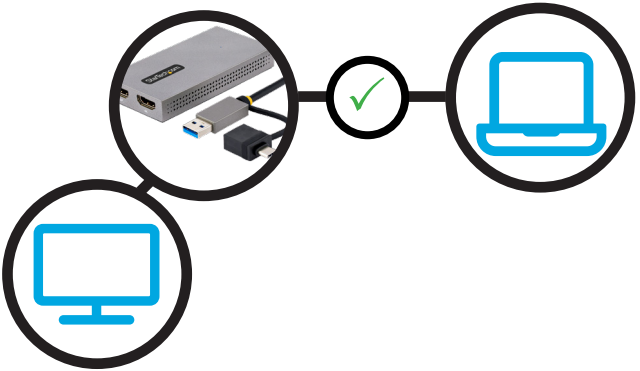
7. Once macOS has restarted, the software installation is completed.

Hardware Installation

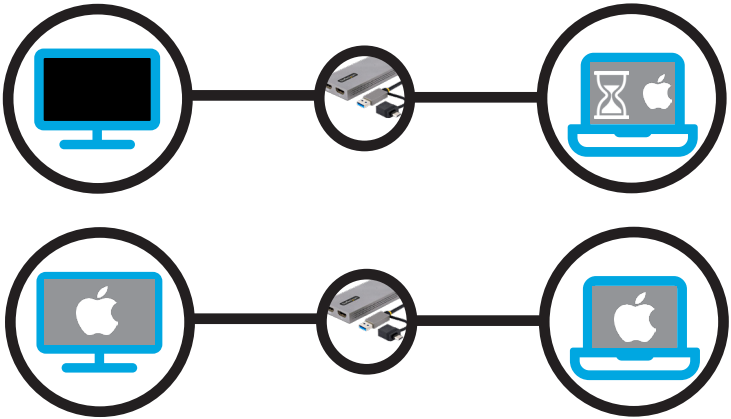
1. (Optional) Connect the tethered **USB-A to USB-C Adapter** to the **Built-In USB-A Host Cable**.
2. Connect the **Display Device(s)** to the **Video Output Ports** on the **USB Display Adapter**, using the required cables (sold separately).



3. Connect the **Built-In USB Cable** on the **USB Display Adapter** to an available **USB Port** on the **Host Computer**.



4. Installation may take several seconds to complete. During the installation process the connected **Display Device(s)** might flicker, this is normal. Once the installation has completed, the macOS desktop will appear on the connected **Display Device(s)**.



Windows Operation

Once the USB Display Adapter has been installed on the Host Computer, the Display Device(s) and audio controller will operate within Windows the same as a Display Device connected directly to the Host Computer's Graphics Controller.

This section of the manual outlines the full array of Windows configuration options associated to the USB Display Adapter.

Display Configuration

Identifying Display Devices Within Windows Display Settings

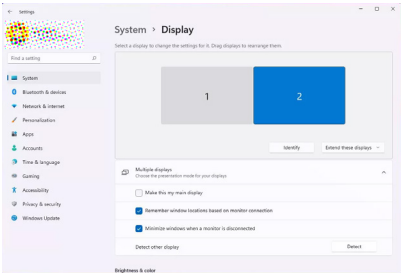
Windows assigns Display Numbers to each connected Display Device, so that users can identify and differentiate each monitor. This is useful to understand the order and arrangement of each connected monitor, especially when multiple Display Devices are connected to the Host Computer.

The numbers assigned to the monitors indicate their position in the monitor arrangement. The primary monitor is typically assigned the number "1," and additional monitors are assigned subsequent numbers like "2,""3," and so on. These numbers help Windows identify which monitor users are referring to when making changes or adjustments in display settings.

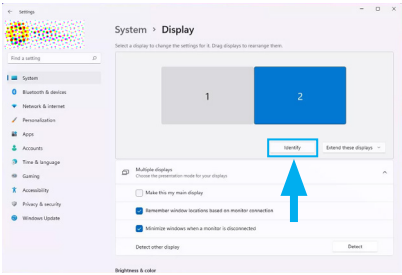
To identify which number is assigned to each connected Display Device within Windows:

1. Right-Click anywhere on the Windows Desktop and select **Display Settings**.

2. This will open the **Windows Settings** app to the **Display** tab. Below **Select a display to change the settings for it**, you will see a diagram representing the current monitor arrangement and the Display Number assigned to each monitor.



3. To identify a specific monitor, click on the **Identify** button located just below the monitor arrangement diagram.



4. Windows will display a large number on each monitor briefly. Watch for the numbers to appear on the screens. Each number that appears will correspond to a specific monitor.

The number that is associated to each connected Display Device are now identified within Windows.

Configuring Display Devices for an Extended Windows Desktop

Extending the Windows Desktop provides users with the ability to expand their workspace across multiple monitors. The mouse cursor can edge-scroll between each monitor and use them as an extension of the primary monitor.

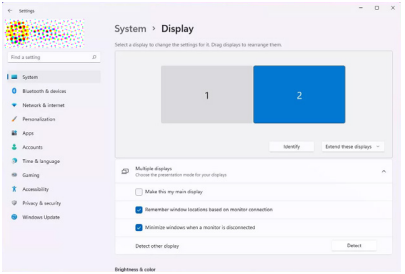
With extended desktops, users have more screen real estate to work with and can have different applications, documents, or windows open on each monitor. This makes it easier to multi-task, compare information, or work on multiple projects simultaneously.

To configure a Display Device as an extended Windows Desktop:

1. Right-Click anywhere on the Windows Desktop and select **Display Settings**.

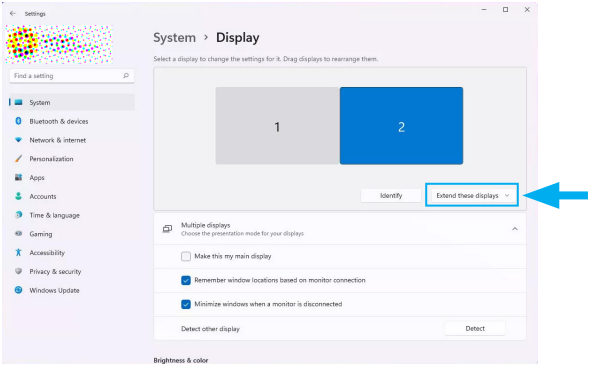
2. This will open the **Windows Settings** app to the **Display** tab. Below **Select a display to change the settings for it,** you will see a diagram representing the current monitor arrangement and the Display Number assigned to each monitor.

3. Click the Display Number that corresponds to the monitor that will be configured for Extended Windows Desktop. The selected monitor will become highlighted.

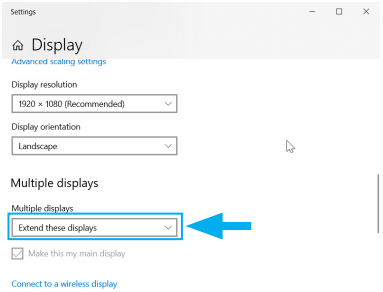


Note: It's possible that two numbers may appear within the same monitor block. This indicates that the monitors are currently configured for a mirror configuration. If the desired Display Number appears within the same monitor block as another number, simply select that monitor block which contains the desired Display Number.

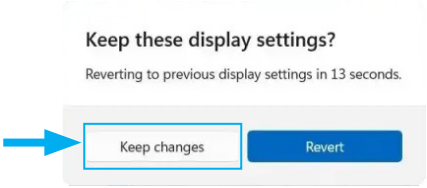
4. Select the drop-down menu within the section below **Select a display to change the settings for it** and select **Extend these displays.**



Note: In Windows 10, open **Settings**, and scroll down to **Multiple Displays**.



5. The settings will apply and a notification will appear on the screen, with a timer requesting that the new settings be confirmed. To confirm the settings, click **Keep changes** before the timer expires.



The Display Device has now been configured as an extended Windows Desktop.

Arranging Display Devices in an Extended Windows Desktop

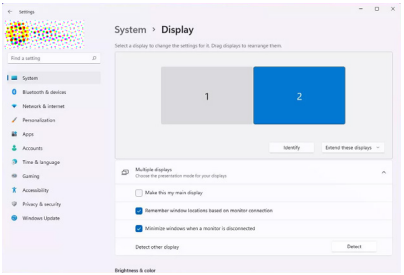
When Display Devices are configured for an Extended Windows Desktop, the mouse cursor can edge-scroll between each monitor, by moving the mouse off one screen and onto another.

In order for the cursor edge-scrolling function to be intuitive it's important that the Display Device arrangement in windows matches the physical arrangement of each monitor on the workstation.

To arrange Display Devices in Extended Windows Desktop:

1. Right-Click anywhere on the Windows Desktop and select **Display Settings**.

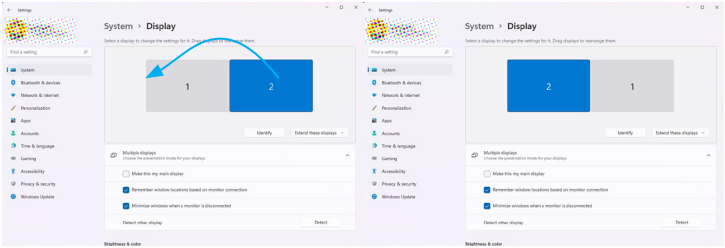
2. This will open the **Windows Settings** app to the **Display** tab. Below **Select a display to change the settings for it,** you will see a diagram representing the current monitor arrangement and the Display Number assigned to each monitor.

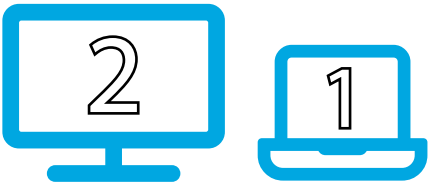


3. Observe the physical location of the monitors as they're setup on the workstation.

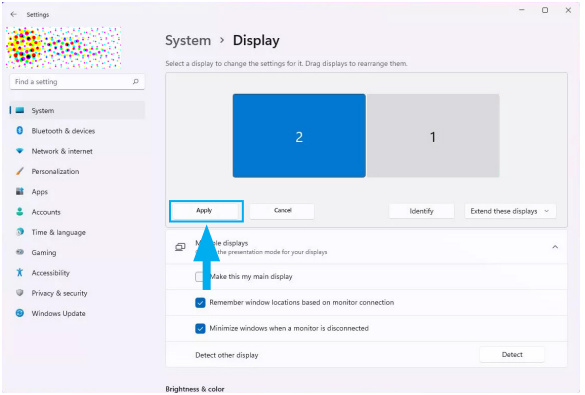
Note: You can click the Identify button to see which number corresponds to each physical display. See Identifying Display Devices Within Windows Display Settings (p.22) for more information.

4. Click and drag the Numbered Displays (within the **Display** tab of **Windows Settings)** so that the diagram matches the physical location of the monitors as they're setup on the workstation.

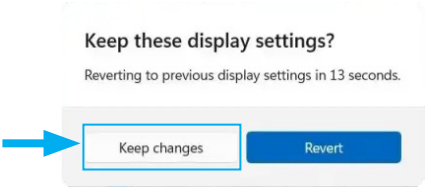




5. Once the arrangement has changed, **Apply** and **Cancel** buttons will appear. Click the **Apply** button to implement the changes.



6. The settings will apply and a notification will appear on the screen, with a timer requesting that the new settings be confirmed. To confirm the settings click **Keep changes** before the timer expires.



The Display Devices have now been arranged in Windows.

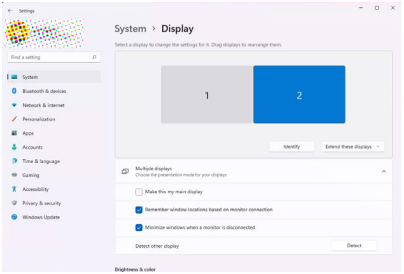
Rotate Display Devices in Windows

Rotating a Display Device in Windows enables users to change the screen orientation between horizontal *(Landscape / Landscape (flipped)*) and vertical (*Portrait / Portrait (flipped)*) to better suit a specific application. A horizontal orientation is ideal for most standard applications. However, rotating the display to a vertical orientation may be useful for tasks like reading lengthy documents or viewing images where a vertical orientation might be more suitable than the standard horizontal layout. Some specialized applications, such as graphic design or coding, might benefit from a vertical orientation to provide a larger workspace for certain tools or code lines.

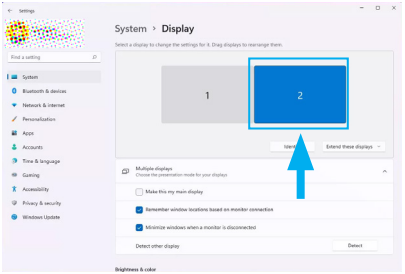
To Rotate Display Devices in Windows:

1. Right-Click anywhere on the Windows Desktop and select **Display Settings**.

2. This will open the **Windows Settings** app to the **Display** tab. Below **Select a display to change the settings for it,** you will see a diagram representing the current monitor arrangement and the Display Number assigned to each monitor.

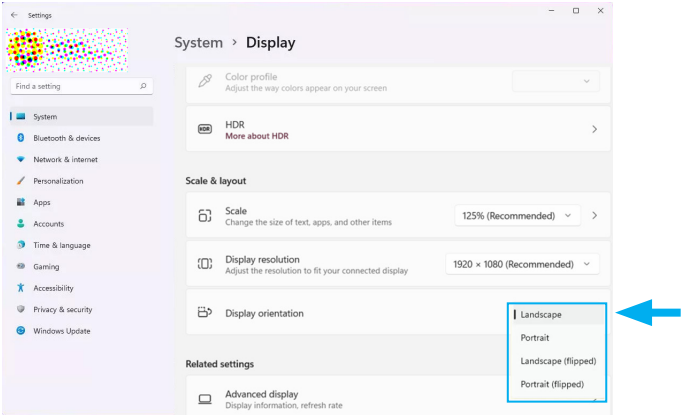


3. Click the Display Number that corresponds to the monitor that will be rotated. The selected monitor will become highlighted.

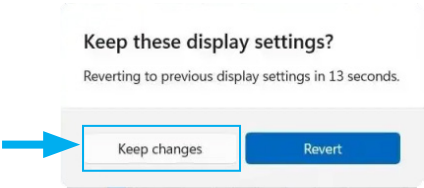


Note: Click the Identify button to see which number corresponds to each physical display. See Identifying Display Devices Within Windows Display Settings (p.22) for more information.

4. Scroll down to the **Scale & layout** section, and select the **Display Orientation** drop-down menu.



5. Select the desired orientation. The settings will apply and a notification will appear on the screen, with a timer requesting that the new settings be confirmed. To confirm the settings click **Keep changes** before the timer expires.



The Display Device has now been rotated in Windows.

Duplicating Displays in Windows

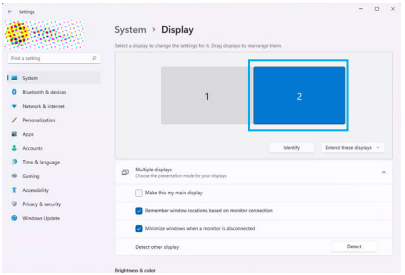
Mirroring the Windows Desktop provides users with the ability to duplicate their screen onto another monitor or display.

With a Mirror Configuration, users can easily duplicate the content on screen to multiple displays for presentations or demonstrations. It allows the presenter to display their screen on a larger monitor or projector, ensuring that the audience can see exactly what is being shown on the presenter's screen.

To configure a Display Device for a Mirror Configuration:

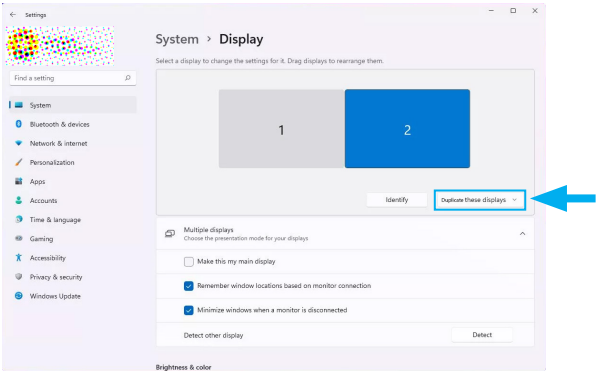
1. Right-click anywhere on the Windows Desktop and select **Display Settings**.
2. This will open the **Windows Settings** app to the **Display** tab. Below **Select a display to change the settings for it,** you will see a diagram representing the current monitor arrangement and the Display Number assigned to each monitor.

3. Click the Display Number that corresponds to the monitor that will be configured for a Mirror Configuration. The selected monitor will become highlighted.

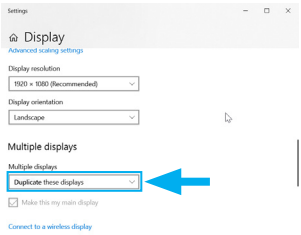


Note: It's possible that two numbers may appear within the same monitor block. This indicates that the monitors are currently already configured for a mirror configuration. However, it may not be in the desired mirror configuration. If the desired Display Number appears within the same monitor block as another number that's not the desired configuration, the monitors will need to be separated into an Extended Configuration. To separate the monitors into an Extended Configuration, follow the steps outlined in the Configuring Display Devices for an Extended Windows Desktop (p.25) section of this manual.

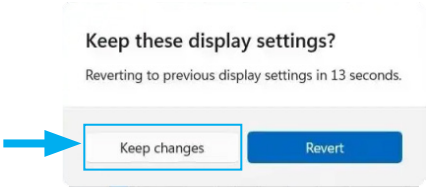
4. Select the drop-down menu within the section below **Select a display to change the settings for it** and select **Duplicate these displays.**



Note: On Windows 10 and earlier versions, it will be necessary to scroll to a lower location within the **Display tab** of the **Windows Settings** app ,to a section called **Multiple Displays** to access the drop down menu. However, the remaining steps are the same.



5. The settings will apply and a notification will appear on the screen, with a timer requesting that the new settings be confirmed. To confirm the settings, click **Keep changes** before the timer expires.



The Display Device has now been configured for a Mirror Configuration.

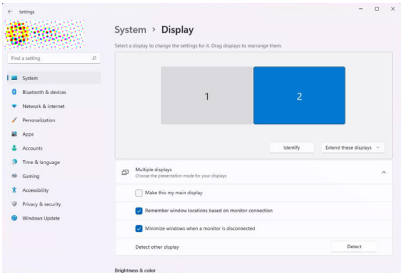
Configuring Resolution for Display Devices in Windows

The output resolution for the Display Devices connected via the USB Video Adapter can be adjusted within Windows.

To configure resolution for Display Devices in Windows:

1. Right-click anywhere on the Windows Desktop and select **Display Settings**.
2. This will open the **Windows Settings** app to the **Display** tab. Below **Select a display to change the settings for it,** you will see a diagram representing the current monitor arrangement and the Display Number assigned to each monitor.

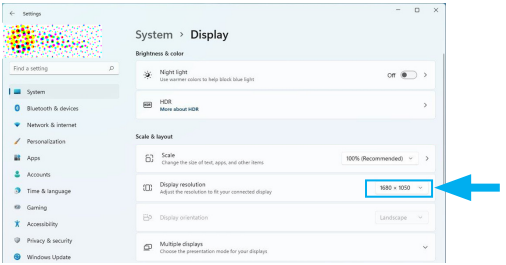
3. Click the Display Number that corresponds to the monitor that will be configured for a Mirror Configuration. The selected monitor will become highlighted.



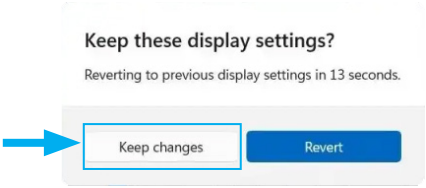
Note: You can click the Identify button to see which number corresponds to each physical display. See Identifying Display Devices Within Windows Display Settings (p.22) for more information.

4. Scroll down the screen to the **Scale & Layout** section and click the drop down menu titled **Display Resolution**, and select the desired resolution.

Note: Only resolutions supported by the Display Device, or USB Display Adapter will be available.



5. The settings will apply and a notification will appear on the screen, with a timer requesting that the new settings be confirmed. To confirm the settings click **Keep changes** before the timer expires.



The Display Device has now been configured to the desired resolution.

Audio Configuration

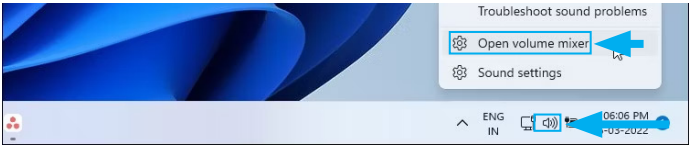
The HDMI output port on this product features an audio controller to output audio via the HDMI output.

Selecting a Playback Device in Windows

Once the USB Display Adapter has been installed on a Host Computer, Windows will recognize it's audio controller as a playback device, which will give the Host Computer the ability to output audio via the HDMI output on the USB Display Adapter. The audio controller on the USB Display Adapter is separate and distinct from other audio controllers installed on the computer (such as the Host Computer's onboard audio controller), and Windows can only designate one controller at a time as it's active playback device.

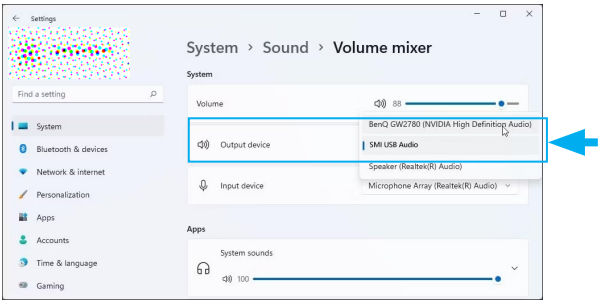
To Select an Audio Controller as a playback device in Windows:

1. Right-click on the Volume icon in the quick settings panel and select **Open Volume Mixer**.



2. This will open the **Windows Settings** app to the **Sound** and **Volume mixer** tabs. Click the drop menu titled **Output Device**, and select the desired audio output device.

The selected Audio Controller is now set as the active playback device.



Windows Troubleshooting

This section of the manual aims to provide a comprehensive troubleshooting guide for this USB Display Adapter when connected to a Windows computer. The purpose is to assist users in resolving common issues that may occur during operation. The guide will present solutions to address common issues. Each solution will be clearly outlined to ensure a straightforward troubleshooting process.

Setup Notes & Recommendations:

- Use short HDMI cables as much as possible (5m/15ft or shorter). Longer HDMI cables or HDMI extenders can be used but results may vary.
- This device provides video output only, and cannot be used to input or capture video to the Host Computer.
- USB Display Adapters require an existing video card or integrated graphics chip from Intel, AMD, or NVIDIA. A WDDM (Windows Display Driver Model) compatible driver must already be installed prior to installing the driver for this product. Most computers from 2007 or newer will meet this requirement.
- Make sure any outstanding Windows updates are installed to ensure the **Host Computer** is running the most up-to-date version of Windows.
- The following only applies to computers running Windows 8.1 and earlier operating systems. The software from other USB display adapters, and some laptop docking stations, can interfere with the installation and operation of this USB Display Adapter. It's recommended that software from DisplayLink/Synaptics, Trigger, and Fresco Logic be removed prior to installing the driver for this product.
- It's recommended that all available onboard video output ports are exhausted before adding a USB Display Adapter.
- This device will work at 4K if connected to a USB 2.0 port but expect the video performance to be poor due to the lower bandwidth of USB 2.0.
- Night Light is not supported.

The Driver Will Not Install

This issue typically indicates that the user is not an administrator on the computer.

To resolve this issue:

- Make sure the SMIUSBDisplaySW(.exe) file has been extracted before running the application.
- Verify that the active user account has administrator privileges.

The USB Display Adapter Does Not Output Video

This issue typically indicates that the computer cannot access the device, or the driver for the USB Display Adapter is not fully installed.

To resolve this issue:

1. Please review the Setup Notes and Recommendations (p.46) within this troubleshooting section, and ensure all criteria outlined has been action on the Host Computer.
2. Unplug the USB adapter from the computer and reconnect it, using a different USB port.
3. Re-install the driver by following the steps outlined in the Manual Driver Installation (p.6) instructions of this manual.

Video Performance is Slow Compared to Other Displays

This issue typically indicates that there is not enough bandwidth available for the USB Display Adapter to perform optimally, or that the application requires greater resources than the USB Display Adapter can support.

To resolve this issue:

1. Ensure that the USB port, that the USB Display Adapter is connected to, supports 5Gbps or faster. USB 480Mbps (USB 2.0) ports do not supply enough bandwidth for the USB Display Adapter to achieve full performance.
2. Make sure the latest driver for the product is installed.

Notes:

- Some applications (ex. AutoCAD, or other 3D design software) will not function properly when used on a USB connected display. These applications should be used on displays connected to the computer's video card or its onboard video outputs.
- The Host Computer may be at it's performance capacity. Testing the USB Display Adapter on a more powerful computer can confirm this.

The HDMI Output on the USB Display Adapter Does Not Output Audio

This issue typically indicates that the Audio Controller on the USB Display Adapter is not set as the active playback device in Windows.

To resolve this issue:

Follow the Steps outlined in the Selecting a Playback Device in Windows (p.43) instructions of this manual.

The USB Adapter Does Not Play Content From a Streaming Service, Blu-ray Disc or Other Media.

This issue typically indicates that the content playing is encrypted with High-bandwidth Digital Content Protection (HDCP). This USB Video Adapter does not fully support HDCP. As a result, some protected content will playback at lower quality while other content may not play at all. Similar products from other manufacturers will also have this limitation.

To resolve this issue:

It's recommend that the protected content be viewed on displays connected to the computer's video card or its onboard video outputs.

The USB Display Adapter Will Not Work with an Adapter Cable That's Connected to it

Many DisplayPort to HDMI (or VGA) cables only work in one direction and will not work with this USB Display Adapter

To resolve this issue:

Check that the adapter cable is designed to work from an HDMI video source to a DisplayPort or VGA display

The USB Display Adapter Does Not Capture a Video Input

This device provides video output only, and cannot be used to input or capture video to the Host Computer.

To resolve this issue:

Use a dedicated USB Capture Device such as the StarTech.com USB3HDCAP.

macOS Operation

This section of the manual outlines the full array of macOS configuration options associated to the USB Display Adapter.

Display Configuration

Once the USB Display Adapter has been installed on the Host Computer running macOS the Display Device(s) will operate within macOS the same as a Display Device connected directly to the Host Computer's Graphics Controller.

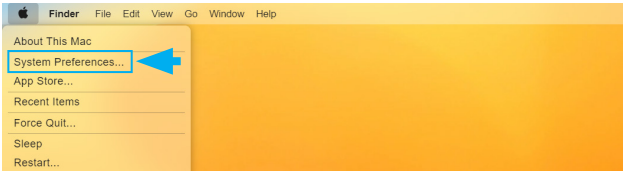
Configuring Display Devices for a Mirror Configuration within macOS

Mirroring the macOS Desktop provides users with the ability to duplicate their screen onto another monitor or display.

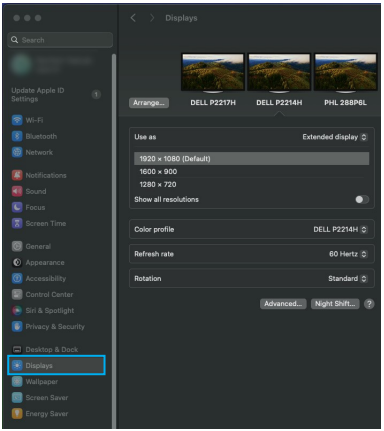
With a Mirror Configuration, users can easily duplicate the content on screen to multiple displays for presentations or demonstrations. It allows the presenter to display their screen on a larger monitor or projector, ensuring that the audience can see exactly what is being shown on the presenter's screen.

To configure a Display Device for a Mirror Configuration:

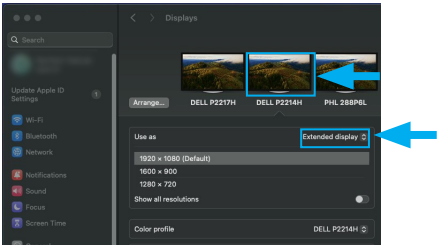
1. Click on the Apple menu in the top-left corner of the screen and select **System Preferences**.



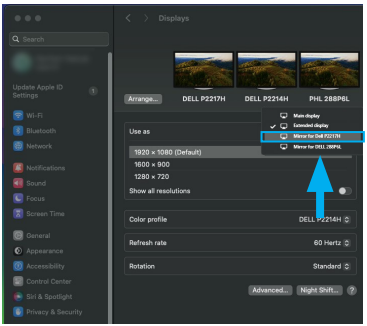
2. This will open the **macOS System Preferences** Window. Click the **Displays** icon.



3. This will open the macOS **Display** pane. Click the display you'd like to mirror, and select the **Use as** drop down menu.



4. The **Use as** drop down menu will be opened. Click the **Mirror for...** from the drop down menu, selecting the monitor that corresponds to the monitors you'd like to



The Display Device has now been configured in a mirrored configuration.

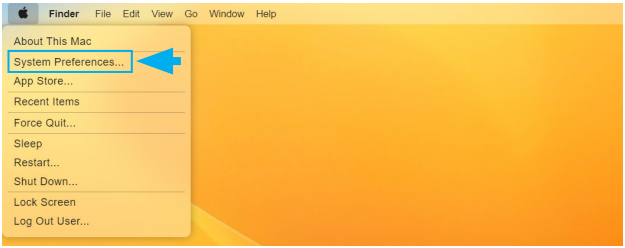
Configuring Display Devices for an Extended macOS Desktop

Extending the macOS Desktop provides users with the ability to expand their workspace across multiple monitors. The mouse cursor can edge-scroll between each monitor and use them as an extension of the primary monitor.

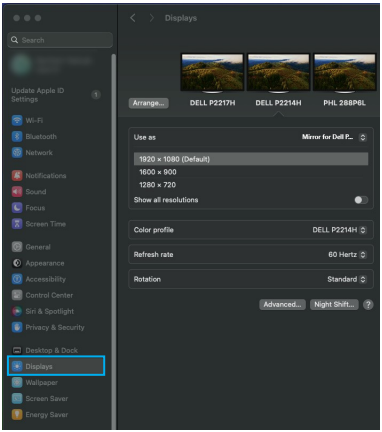
With extended desktops, users have more screen real estate to work with and can have different applications, documents, or windows open on each monitor. This makes it easier to multi-task, compare information, or work on multiple projects simultaneously.

To configure display devices for an extended macOS desktop:

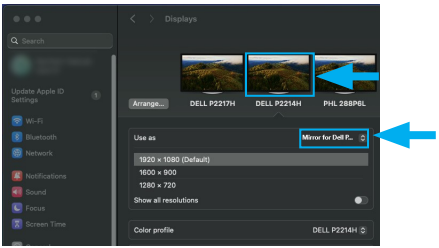
1. Click on the Apple menu in the top-left corner of the screen and select **System Preferences**.



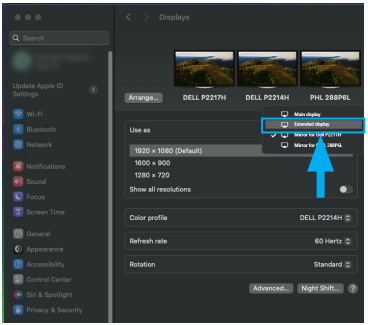
2. This will open the **macOS System Preferences** Window. Click the **Displays** icon.



3. This will open the macOS **Display** pane. Click the display you'd like to extend, and select the **Use as** drop down menu.



4. The **Use as** drop down menu will be opened. Click the **Extended display** from the drop down menu.



The Display Device has now been configured as an extended macOS Desktop.

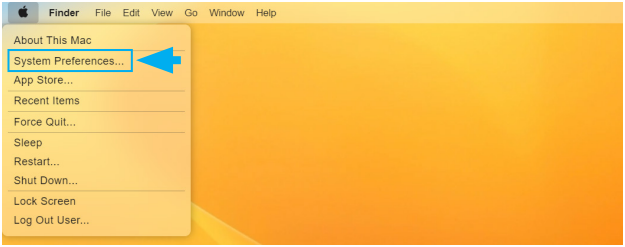
Identifying Display Devices in an Extended macOS Desktop

macOS features a visualization on the **Arrangement** tab with the **Displays** pane of **macOS System Preferences**. This visualization enables users to identify and differentiate each connected monitor.

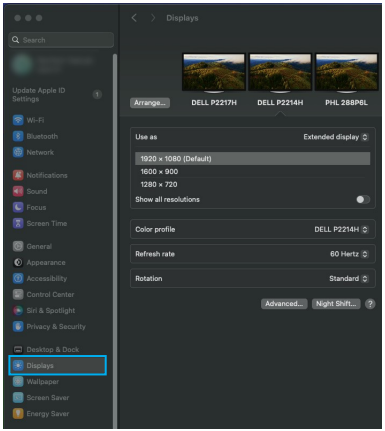
It is useful to understand the order and arrangement of each connected monitor, especially when multiple Display Devices are connected to the Host Computer.

To identify display devices in an extended macOS desktop:

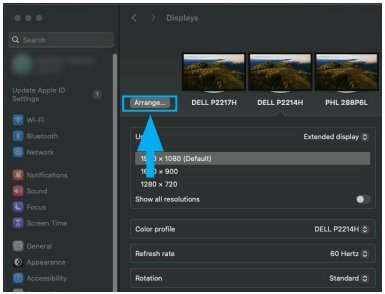
1. Click on the Apple menu in the top-left corner of the screen and select **System Preferences**.



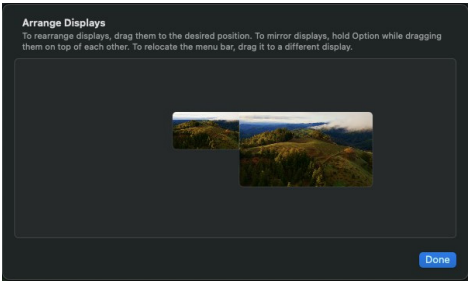
2. This will open the **macOS System Preferences** Window. Click the **Displays** icon.



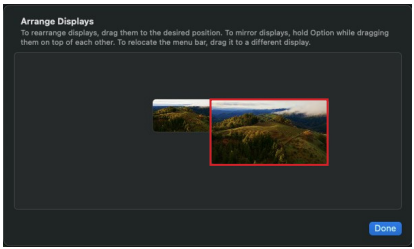
3. This will open the macOS **Display** pane. Click the **Arrangement** tab.

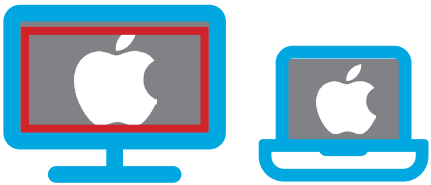


4. A diagram will be displayed representing the current monitor arrangement, and each display will be represented by a rectangle. macOS will identify the primary display with a white menu bar at the top of the rectangle.



5. Click and drag each of the rectangles (within the Arrangement tab). As you drag a display, you'll notice that a red-box visualization will appear on both the physical screen of the monitor that's being adjusted, and the rectangle being dragged.





The red-box visualization can be used to identify each display in an extended macOS Desktop.

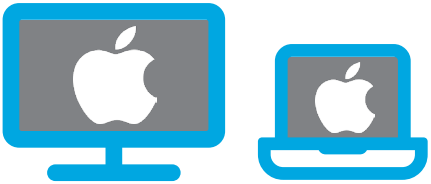
Arranging Display Devices in an Extended macOS Desktop

When Display Devices are configured for an Extended macOS Desktop, the mouse cursor can edge-scroll between each monitor, by moving the mouse off one screen and onto another.

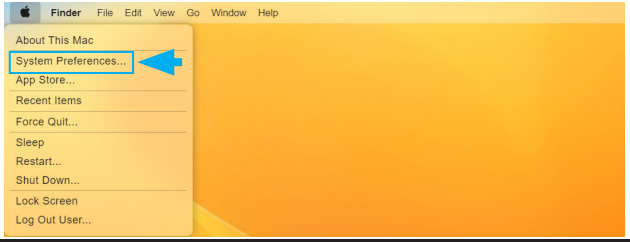
In order for the cursor edge-scrolling function to be intuitive it's important that the Display Device arrangement in macOS matches the physical arrangement of each monitor on the workstation.

To arrange display devices in an extended macOS desktop:

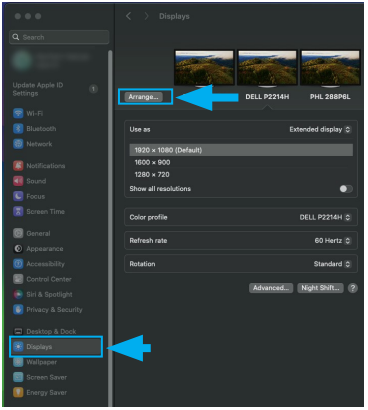
1. Observe the physical location of the monitors as they're setup on the workstation.



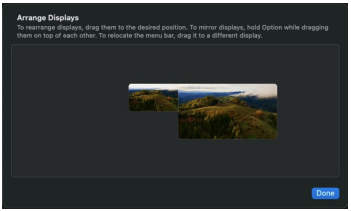
2. Click on the Apple menu in the top-left corner of the screen and select **System Preferences**.



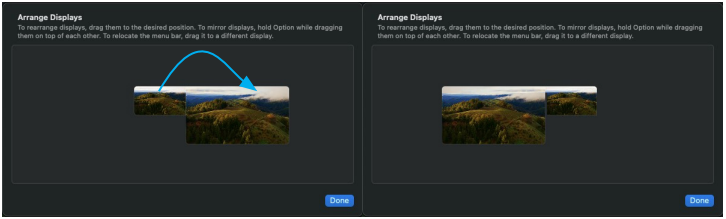
3. This will open the **macOS System Preferences** Window. Click the **Displays** icon followed by the **Arrangement** Tab.

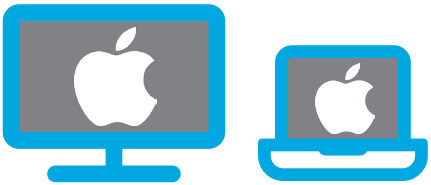


4. A diagram will be displayed representing the current monitor arrangement, and each display will be represented by a rectangle.



5. Click and drag each of the rectangles (within the **Arrangement** tab) so that the diagram matches the physical location of the monitors as they're setup on the workstation.





The display devices have now been arranged in an extended macOS desktop.

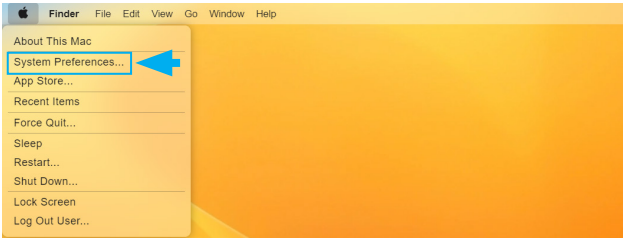
Rotate Display Devices in macOS

Note: Display rotation is not supported on Intel based Macs running 10.15 or lower.

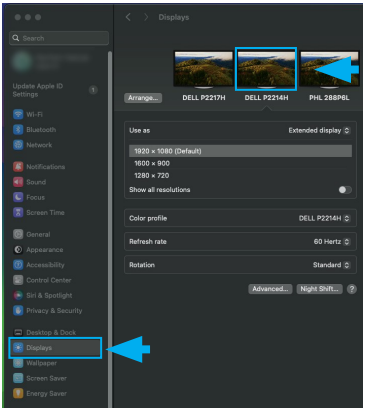
Rotating a Display Device in macOS enables users to change the screen orientation between horizontal (Standard/1080°) and vertical (90°/270°) to better suit a specific application. A Landscape orientation is ideal for most standard applications However, rotating the display to a vertical orientation may be useful for tasks like reading lengthy documents or viewing images where a vertical orientation might be more suitable than the standard horizontal layout. Some specialized applications, such as graphic design or coding, might benefit from a vertical orientation to provide a larger workspace for certain tools or code lines.

To Rotate Display Devices in macOS:

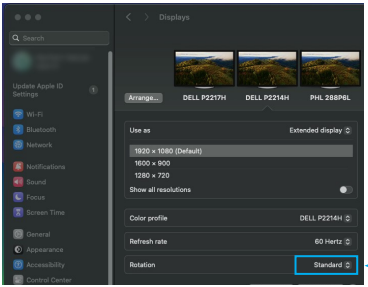
1. Click on the Apple menu in the top-left corner of the screen and select **System Preferences**.



2. This will open the **macOS System Preferences** Window. Click the **Displays** icon, then select the display you'd like to rotate.



3. Select the **Rotate** drop down menu, and choose your desired rotation.



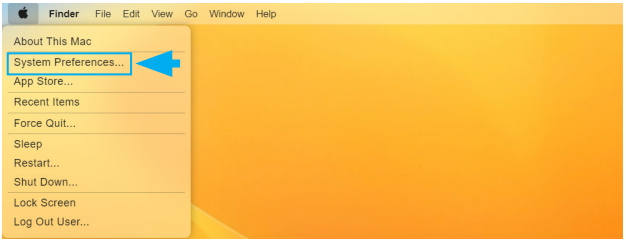
The Display Device has now been configured to the desired rotation.

Configuring Resolution for Display Devices in macOS

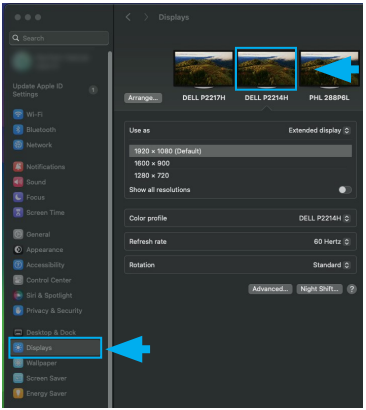
The output resolution for the Display Devices connected via the USB Video Adapter can be adjusted within macOS.

To configure resolution for Display Devices in macOS:

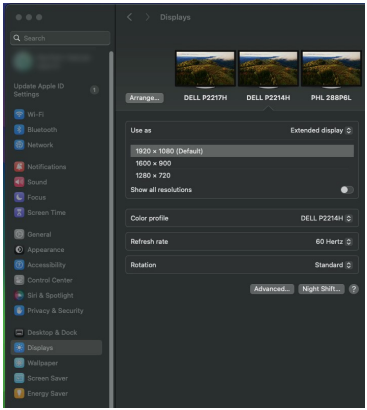
1. Click on the Apple menu in the top-left corner of the screen and select **System Preferences**.



2. This will open the macOS System Preferences Window. Click the Displays icon, then select the display you'd like to adjust.



3. Choose your desired resolution.



Note: Only resolutions supported by the Display Device, or USB Display Adapter will be available.

The Display Device has now been configured to the desired resolution.

InstantView Application Operation

Mac computers can also be configured using the InstantView Display Application (installed during Software Installation for macOS 10.15 and Up).

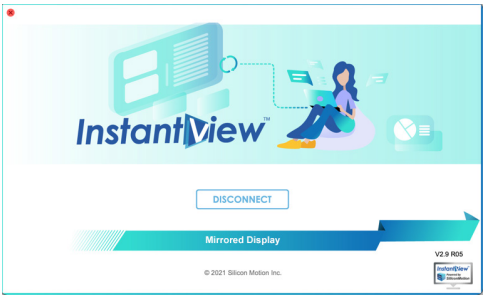
Configuring Display Devices for a Mirror Configuration Using the InstantView Application

Mirroring the Desktop provides users with the ability to duplicate their screen onto another monitor or display.

With a Mirror Configuration, users can easily duplicate the content on screen to multiple displays for presentations or demonstrations. It allows the presenter to display their screen on a larger monitor or projector, ensuring that the audience can see exactly what is being shown on the presenter's screen.

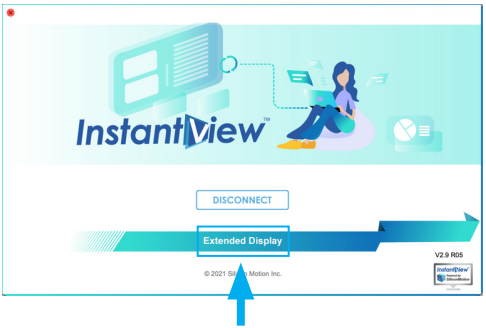
To configure a Display Device for a Mirror Configuration:

1. Launch the InstantView application to open the InstantView User Interface.
2. Once the InstantView Interface has been launched the



Mirrored/Extended Display toggle button can be used to switch between modes:

Select **Mirrored Display**, to switch to a Mirrored Display.



The Display Devices have now been configured in a mirrored configuration.

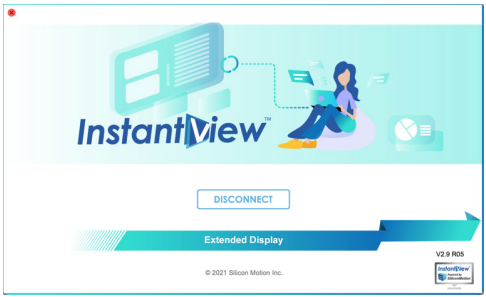
Configuring Display Devices for an Extended Display Using the InstantView Application

Extending the macOS Desktop provides users with the ability to expand their workspace across multiple monitors. The mouse cursor can edge-scroll between each monitor and use them as an extension of the primary monitor.

With extended desktops, users have more screen real estate to work with and can have different applications, documents, or windows open on each monitor. This makes it easier to multi-task, compare information, or work on multiple projects simultaneously.

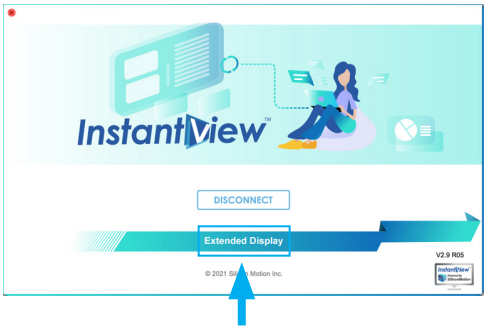
To configure display devices for an extended configuration:

1. Launch the InstantView application to open the InstantView User Interface.



Once the InstantView Interface has been launched the Mirrored/Extended Display toggle button can be used to switch between modes:

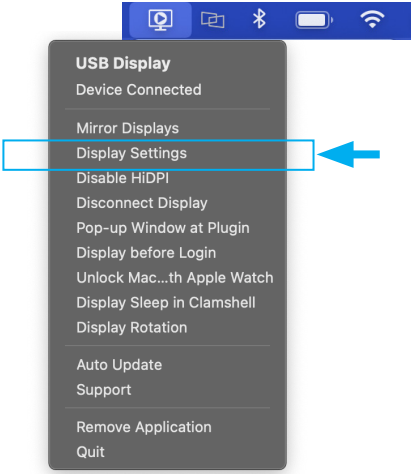
Select **Extended Display**, to switch to an Extended Display.



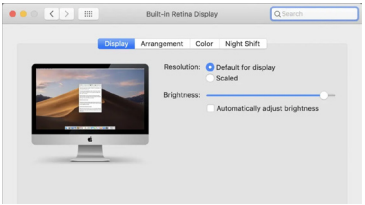
The Display Devices have now been configured in an extended configuration.

Access macOS Display Settings Using the InstantView Application

- Hold-down the **control** key on the keyboard, and click on the InstantView icon in the top right-corner of the screen, then select **Display Settings**.



The macOS **Display Settings** pane is now open.



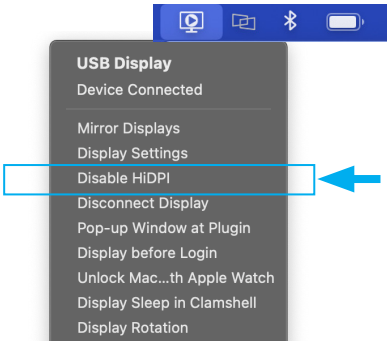
Disable HiDPI Using the InstantView Application

HiDPI (High Dots Per Inch) is are displays that have a higher pixel density compared to traditional displays. These high-resolution displays pack more pixels into the same physical space, resulting in sharper and crisper images, text, and graphics.

Disabling HiDPI could potentially be desirable in certain situations, such as saving battery life, or improving compatibility or performance with certain applications.

To disable HiDPI:

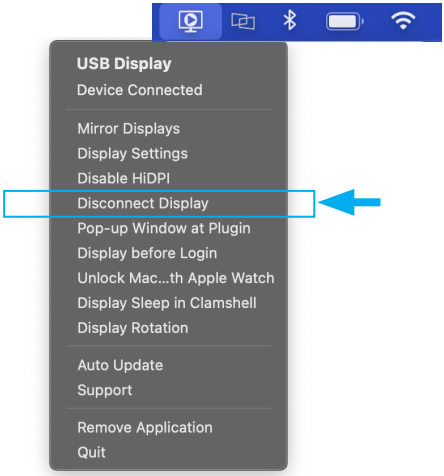
- Hold-down the **control** key on the keyboard, and click on the InstantView icon in the top right-corner of the screen, then select **Disable HiDPI**.



HiDPI has now been disabled.

Disconnect the Displays Connected to the Display Adapter Using the InstantView Application

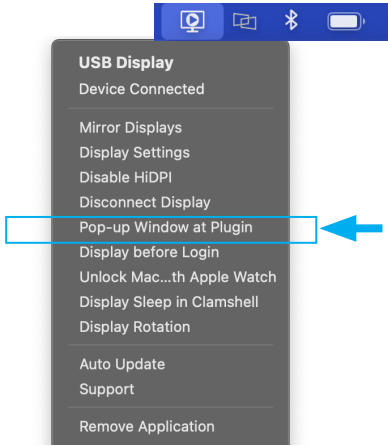
- Hold-down the **control** key on the keyboard, and click on the InstantView icon in the top right-corner of the screen, then select **Disconnect Display**.



The connected displays have been disconnected.

Configure the InstantView Application to Open when the Display Adapter is Connected

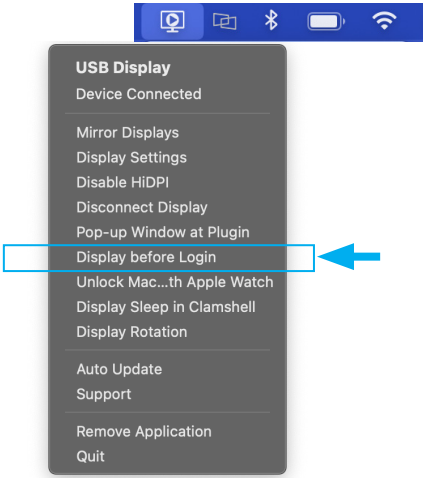
- Hold-down the **control** key on the keyboard, and click on the InstantView icon in the top right-corner of the screen, then select **Pop-up Window at Plugin**.



The InstantView application has now been configured to open when the Display Adapter is connected.

Configure the Displays Connected to the Display Adapter to Display the Login Screen While the User is Logging In

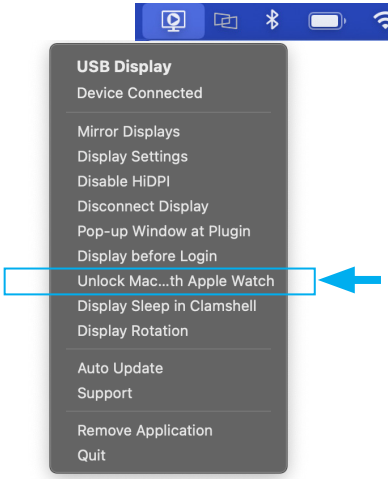
- Hold-down the **control** key on the keyboard, and click on the InstantView icon in the top right-corner of the screen, then select **Display Before Login**.



The displays connected to the display adapter have been configured to display the Login Screen while the user is Logging in.

Configure the InstantView Application to Support Unlocking MacBook with Apple Watch

- Hold-down the **control** key on the keyboard, and click on the InstantView icon in the top right-corner of the screen, then select **Unlock Mac...th Apple Watch**.

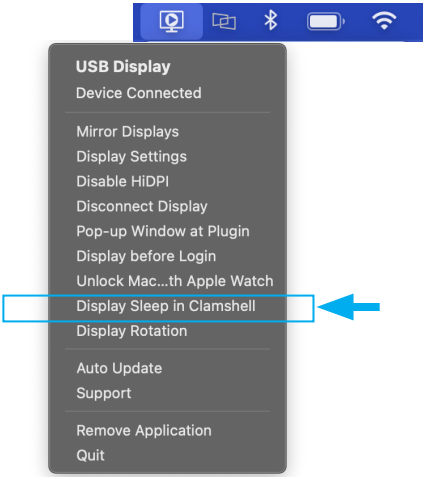


The InstantView Application has been configured to support unlocking your MacBook with Apple Watch.

Note: *The MacBook and Apple Watch must also be configured to support this feature. Configure the Instant-View Application to Support Unlocking MacBook with Apple Watch.*

Configure the InstantView Application to Put the Displays Connected to the Display Adapter into Sleep Mode When the MacBook Lid is Closed

- Hold-down the **control** key on the keyboard, and click on the InstantView icon in the top right-corner of the screen, then select **Display Sleep in Clamshell**.



The displays connected to the Display Adapter will now go into sleep mode when the lid on the MacBook is closed.

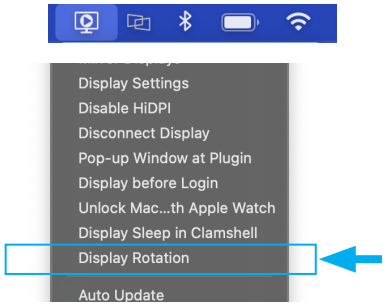
Rotate Display Devices Using the InstantView Application

Note: Display rotation is not supported on Intel based Macs running 10.15 or lower.

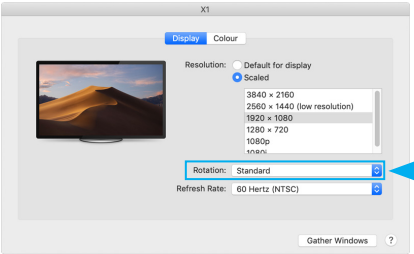
Rotating a Display Device in macOS enables users to change the screen orientation between horizontal (Standard/1080°) and vertical (90°/270°) to better suit a specific application. A Landscape orientation is ideal for most standard applications However, rotating the display to a vertical orientation may be useful for tasks like reading lengthy documents or viewing images where a vertical orientation might be more suitable than the standard horizontal layout. Some specialized applications, such as graphic design or coding, might benefit from a vertical orientation to provide a larger workspace for certain tools or code lines.

To Rotate Display Devices using the InstantView Application:

1. Hold-down the **control** key on the keyboard, and click on the InstantView icon in the top right-corner of the screen, then select **Display Rotation**.



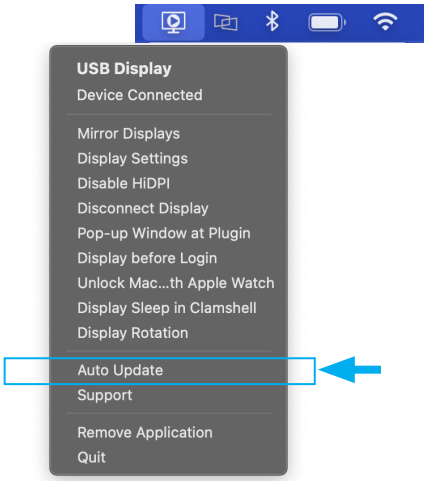
2. This will open the macOS **Display** pane on each connected display. On the display you intend to adjust, choose your desired rotation.



The Display Device has now been configured to the desired rotation.

Configure the InstantView Application for Automatic Updates

- Hold-down the **control** key on the keyboard, and click on the InstantView icon in the top right-corner of the screen, then select **Display Sleep in Clamshell**.



The InstantView Application is now configured for automatic updates.

Additional Features of the InstantView Application

- Hold-down the **control** key on the keyboard, and click on the InstantView icon in the top right-corner of the screen, to access these additional features.

Support

Visit the InstantView Application support page.

Remove Application

Uninstall the InstantView Application from the MacBook.

Quit

Close the InstantView Application.

Audio Configuration

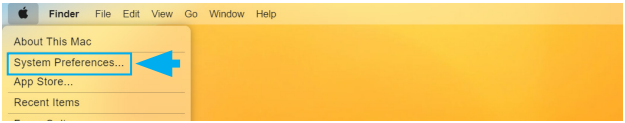
The HDMI output port on this product features an audio controller to output audio via the HDMI output.

Selecting a Playback Device in macOS

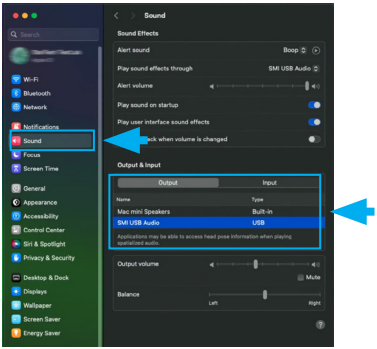
Once the USB Display Adapter has been installed on a Host Computer, macOS will recognize it's audio controller as a playback device, which will give the Host Computer the ability to output audio via the HDMI output on the USB Display Adapter. The audio controller on the USB Display Adapter is separate and distinct from other audio controllers installed on the computer (such as the Host Computer's onboard audio controller), and macOS can only designate one controller at a time as it's active playback device.

To Select an Audio Controller as a playback device in macOS:

1. Click on the Apple menu in the top-left corner of the screen and select **System Preferences**.



2. This will open the **macOS System Preferences** Window. Click the **Sound** icon.
3. Click **Output**, then select the device you want to use in the list of sound output devices.



The selected Audio Controller is now set as the active playback device.

macOS Troubleshooting

This section of the manual aims to provide a comprehensive troubleshooting guide for this USB Display Adapter when connected to a macOS computer. The purpose is to assist users in resolving common issues that may occur during operation. The guide will present solutions to address common issues. Each solution will be clearly outlined to ensure a straightforward troubleshooting process.

Note: Night Shift in macOS is not supported.

A Supported Monitor Resolution is not Available:

This issue typically indicates that macOS is hiding some resolutions by default, depending upon the monitor and connection type.

To resolve this issue:

1. Open Display from the System Preferences menu.
2. Find the preferences window for the screen you want to adjust.
3. If not already selected, choose the Default for display resolution setting.
4. While keeping the option (alt) key pressed, choose the Scaled resolution setting.

The complete list of resolutions accepted by macOS should now be visible.

The above information is documented in the following link of Apple tech note:

https://support.apple.com/en-us/HT202471

4K Monitor is Only Outputting 1080p Resolution

This issue typically indicates that macOS is set to scale 1920x1080 resolution to 4K by default.

To resolve this issue:

1. Open the Displays from System Preferences menu.
2. Find the preferences window for the screen you want to adjust.
3. Select 3840 x 2160 from the list of available resolutions.

The resolution will now be set to true 4K.

Video Output on the Adapter is Non-Functional

macOS High Sierra 10.13 and above have introduced a feature that requires users to approve third-party Kernel extensions or software operation will be denied by the operating system.

The Silicon Motion Display Adapter software includes a kernel extension, and failure to approve this extension will prevent the USB Display Adapter from operating.

To resolve this issue:

1. Open **Security & Privacy** from System Preferences menu.
2. From within the **General** section, locate the **System software from developer "SILICON MOTION, INC." was blocked from loading** alert.
3. Click the **Allow** button.
4. Restart the Mac.

The video output on the Display Adapter will now function.

Notes:

- Users should receive an Alert to give this approval during installation. However, on occasions it will not display during installation.
- The **Allow** option will only be available within the **General** section of **Security & Privacy** for 30 minutes after initial installation. If the option is not available the software will need to be uninstalled and reinstalled. After reinstallation please immediately proceed to the **General** section of **Security & Privacy** to grant access.

The HDMI Output on the USB Display Adapter Does Not Output Audio

This issue typically indicates that the Audio Controller on the USB Display Adapter is not set as the active playback device in macOS.

To resolve this issue:

Follow the Steps outlined in the Selecting a Playback Device in macOS (p.83) instructions of this manual.

The USB Adapter Does Not Play Content From a Streaming Service, Blu-ray Disc or Other Media.

This issue typically indicates that the content playing is encrypted with High-bandwidth Digital Content Protection (HDCP). This USB Video Adapter does not fully support HDCP. As a result, some protected content will playback at lower quality while other content may not play at all. Similar products from other manufacturers will also have this limitation.

To resolve this issue:

It's recommended that the protected content be viewed on displays connected to the computer's video card or its onboard video outputs.

The USB Display Adapter Will Not Work with an Adapter Cable That's Connected to it

This issue typically indicates that the Adapter Cable that's being used is not the correct orientation for the video output port on the USB Display Adapter. DisplayPort, HDMI and VGA Adapter cables will typically only work in one direction, and it's necessary that their input and output ports are the correct orientation for the respective video output and video input.

To resolve this issue:

Use an Adapter Cable that's the correct orientation for the video output port on the USB Display Adapter and the video input port of the Display Device.

The USB Display Adapter Does Not Capture a Video Input

This device provides video output only, and cannot be used to input or capture video to the Host Computer.

To resolve this issue:

Use a dedicated USB Capture Device such as the StarTech.com/USB3HDCAP.

Compliance Statements

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

CAN ICES-3 (B)/NMB-3(B)

Use of Trademarks, Registered Trademarks, and other Protected Names and Symbols

This manual may make reference to trademarks, registered trademarks, and other protected names and/or symbols of third-party companies not related in any way to StarTech.com. Where they occur these references are for illustrative purposes only and do not represent an endorsement of a product or service by StarTech.com, or an endorsement of the product(s) to which this manual applies by the third-party company in question. Regardless of any direct acknowledgement elsewhere in the body of this document, StarTech.com hereby acknowledges that all trademarks, registered trademarks, service marks, and other protected names and/or symbols contained in this manual and related documents are the property of their respective holders.

PHILLIPS® is a registered trademark of Phillips Screw Company in the United States or other countries.

Safety Statements

Safety Measures

- Wiring terminations should not be made with the product and/or electric lines under power.
- Cables (including power and charging cables) should be placed and routed to avoid creating electric, tripping or safety hazards.

Mesures de sécurité

- Les terminaisons de câblâge ne doivent pas être effectuées lorsque le produit et/ou les câbles électriques sont sous tension.
- Les câbles (y compris les câbles d'alimentation et de chargement) doivent être placés et acheminés de façon à éviter tout risque électrique, de chute ou de sécurité

安全対策

- 電源が入っている状態の製品または電線の終端処理を行わないでください。
- ケーブル（電源ケーブルと充電ケーブルを含む）は、適切な配置と引き回しを行い、電気障害やつまづきの危険性など、安全上のリスクを回避するようにしてください。

Misure di sicurezza

- I terminiali dei fili elettrici non devono essere realizzate con il prodotto e/o le linee elettriche sotto tensione.
- I cavi (inclusi i cavi di alimentazione e di ricarica) devono essere posizionati e stesi in modo da evitare pericoli di inciampo, rischi di scosse elettriche o pericoli per la sicurezza.

Säkerhetsåtgärder

- Montering av kabelavslutningar får inte göras när produkten och/eller elledningarna är strömförda.
- Kablar (inklusive elkablar och laddningskablar) ska dras och placeras på så sätt att risk för snubblingsolyckor och andra olyckor kan undvikas.

Warranty Information

This product is backed by a three-year warranty.

For further information on product warranty terms and conditions, please refer to www.startech.com/warranty.

Limitation of Liability

In no event shall the liability of StarTech.com Ltd. and StarTech.com USA LLP (or their officers, directors, employees or agents) for any damages (whether direct or indirect, special, punitive, incidental, consequential, or otherwise), loss of profits, loss of business, or any pecuniary loss, arising out of or related to the use of the product exceed the actual price paid for the product.

Some states do not allow the exclusion or limitation of incidental or consequential damages. If such laws apply, the limitations or exclusions contained in this statement may not apply to you.

StarTech.com
Hard-to-find made easy®

Hard-to-find made easy. At StarTech.com, that isn't a slogan. It's a promise.

StarTech.com is your one-stop source for every connectivity part you need. From the latest technology to legacy products — and all the parts that bridge the old and new — we can help you find the parts that connect your solutions.

We make it easy to locate the parts, and we quickly deliver them wherever they need to go. Just talk to one of our tech advisors or visit our website. You'll be connected to the products you need in no time.

Visit www.startech.com for complete information on all StarTech.com products and to access exclusive resources and time-saving tools.

StarTech.com is an ISO 9001 Registered manufacturer of connectivity and technology parts. StarTech.com was founded in 1985 and services a worldwide market.

Reviews

Share your experiences using StarTech.com products, including product applications and setup, what you love about the products, and areas for improvement.

StarTech.com Ltd.
45 Artisans Cres
London, Ontario
N5V 5E9
Canada

StarTech.com LLP
4490 South
Hamilton Road
Groveport, Ohio
43125
U.S.A.

StarTech.com Ltd.
Unit B, Pinnacle 15
Gowerton Rd,
Brackmills
Northampton
NN4 7BW
United Kingdom

StarTech.com Ltd.
Siriusdreef 17-27
2132 WT
Hoofddorp
The Netherlands

FR: startech.com/fr

DE: startech.com/de

ES: startech.com/es

NL: startech.com/nl

IT: startech.com/it

JP: startech.com/jp