

STARTECH USB32HDES USB 3.0 TO HDMI



StarTech USB32HDES USB 3.0 to HDMI Adapter User Manual

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StarTech USB32HDES USB 3.0 to HDMI Adapter



Actual products may vary from photos

Slim USB 3.0 to HDMI External Video Card Supports Windows Only

Full-Product Manual USB32HDES

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

Manual Revision: 07/21/2023

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

Requirements

- USB Enabled Host Computer (Only Windows Platforms Supported)
- Requires USB 5Gbps or Faster
- Display Device

Package Contents

- USB Display Adapter x1
- Quick-Start Guide x1

For the latest drivers/software, technical specifications, and declarations of conformance, please visit:
www.StarTech.com/USB32HDES

Product Diagram



Component		Function
1	Built-In USB Host Cable (USB-A)	<ul style="list-style-type: none"> Connect to a USB Port on a Host Computer USB 5Gbps
2	Video Output Port (HDMI)	<ul style="list-style-type: none"> Connect to an HDMI Display 1080p (1920×1200) 60Hz Resolution

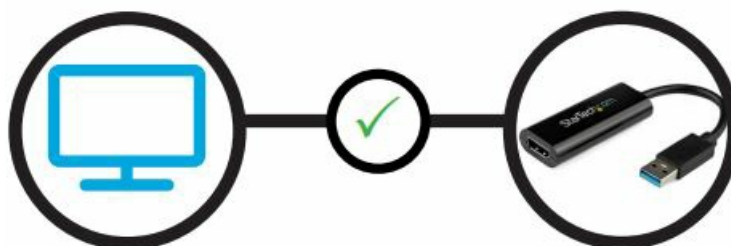
Installation

IMPORTANT PRE-INSTALLATION STEPS FOR AUTO DRIVER OR MANUAL SETUP

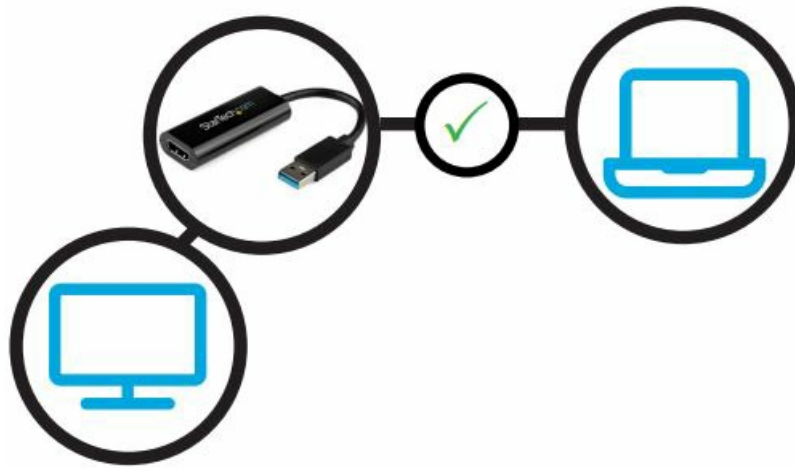
- This USB Display Adapter is intended for Windows operating systems only.
- Driver installation for the USB Display Adapter may be automatic on Host Computers running Windows 10 and up. Before connecting the USB Display Adapter to the Host Computer, please take the following steps to optimize the Host 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. Connect the Display Device(s) to the Video Output Ports on the USB Display Adapter, using the required cables (sold separately).



2. 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 been 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:

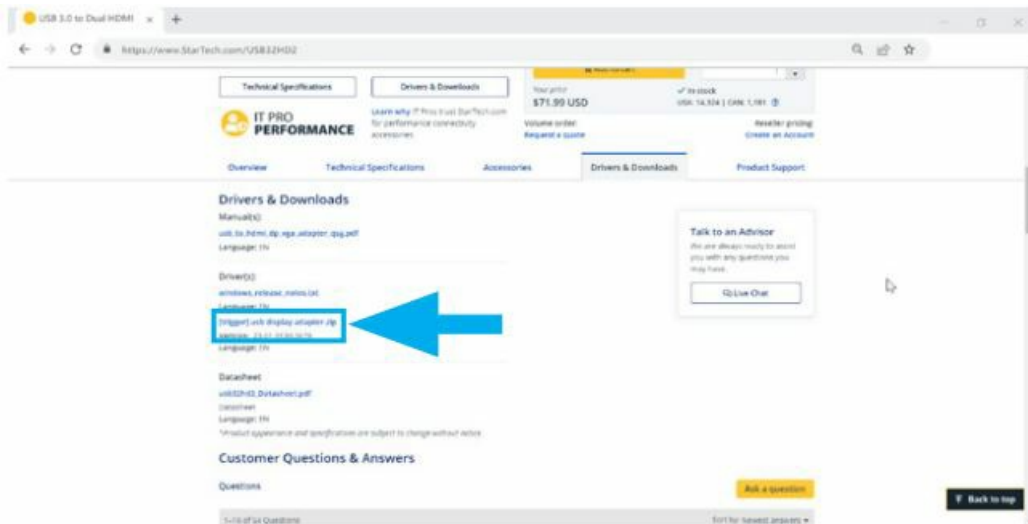
1. Disconnect the USB Display Adapter from the Host Computer.



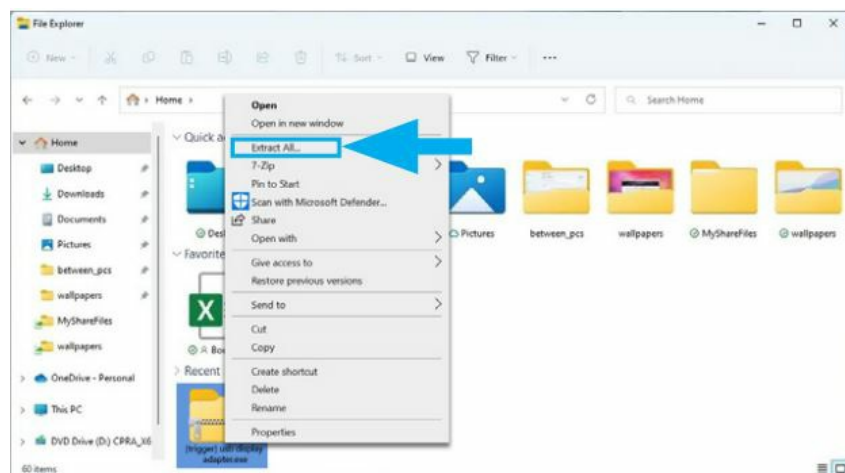
2. Navigate to www.StarTech.com/USB32HDE and click the Drivers/Downloads tab on the Product Page.



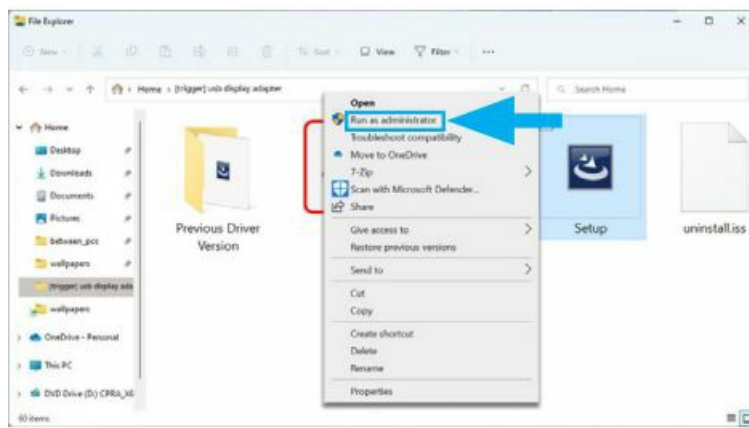
3. Under Driver(s), download the [trigger] usb display adapter.zip driver package.



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

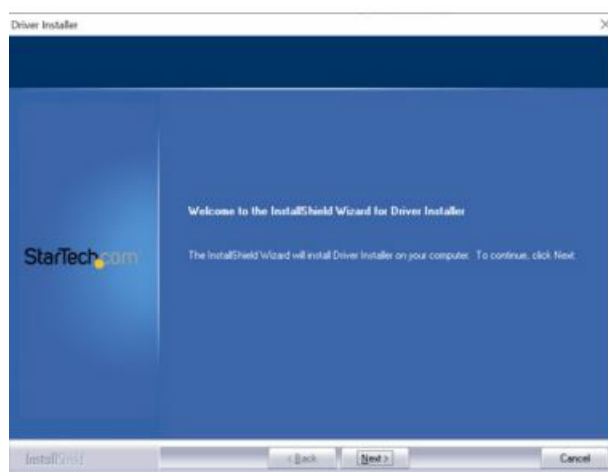


5. In the list of extracted files, right-click the Setup(.exe) file and select Run as Administrator.



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).



Operation

- Once the USB Display Adapter has been installed on the
- Host Computer, the Display Device(s) (and audio controller, if applicable) 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.

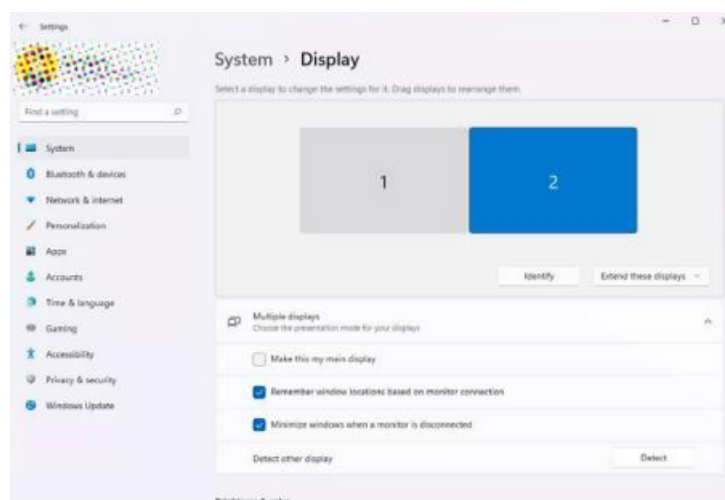
The numbers assigned to the monitors indicate their position in the monitor arrangement. The primary monitor is typically assigned the number "1," and additional monitors are assigned subsequent numbers like "2," "3," and so on. These numbers help Windows identify which monitor users are referring to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

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

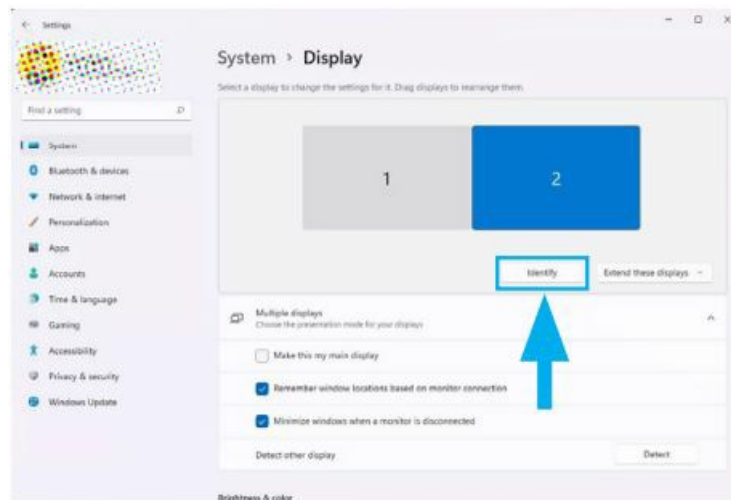
1. Right-Click anywhere on the Windows Desktop and select Display Settings.



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 with each connected Display Device is 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.

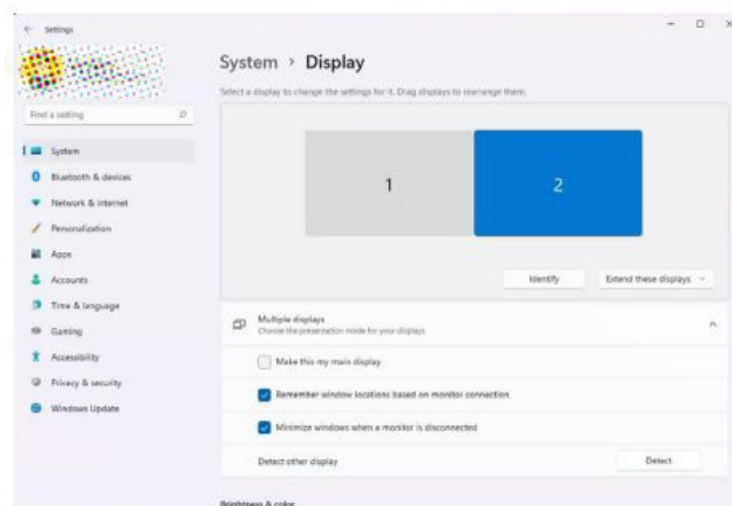
With extended desktops, users have more screen real estate to work with and can have different applications, documents, or windows open on each monitor. This makes it easier to multi-task, compare information, or work on multiple projects simultaneously.

To configure a Display Device as an extended Windows Desktop:

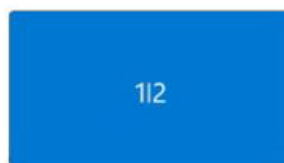
1. Right-click anywhere on the Windows Desktop and select Display Settings.



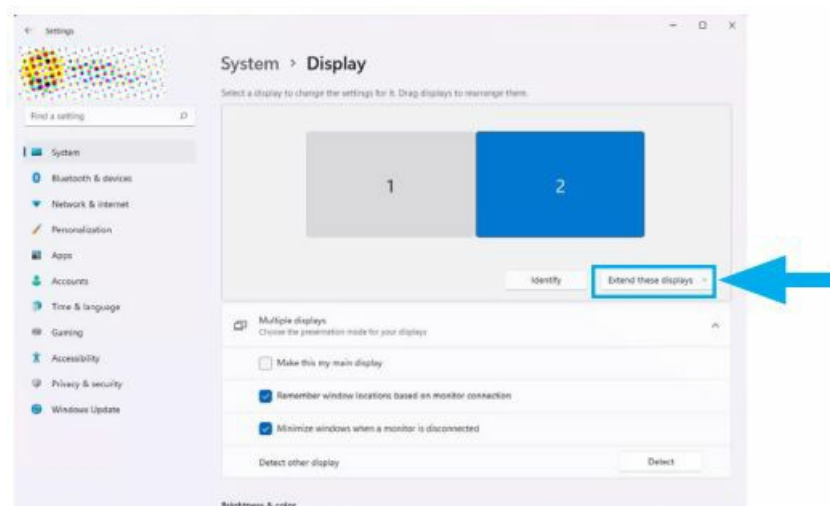
2. This will open the Windows Settings app to the Display tab. Below Select a display to change the settings for it, you will see a diagram representing the current monitor arrangement and the Display Number assigned to each monitor.
3. Click the Display Number that corresponds to the monitor that will be configured for the Extended Windows Desktop. The selected monitor will become highlighted.



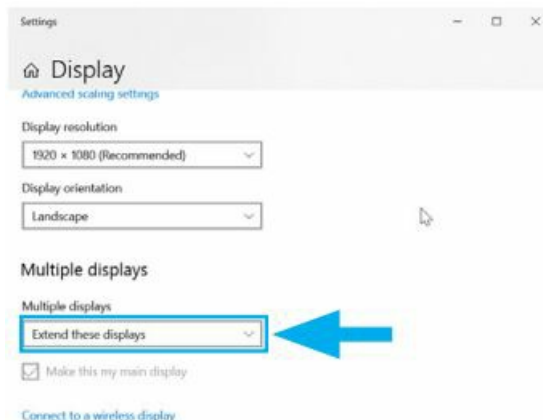
Note: Two numbers may appear within the same monitor block. This indicates that the monitors are currently configured for a mirror configuration. If the desired Display Number appears within the same monitor block as another number, simply select that monitor block which contains the desired Display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



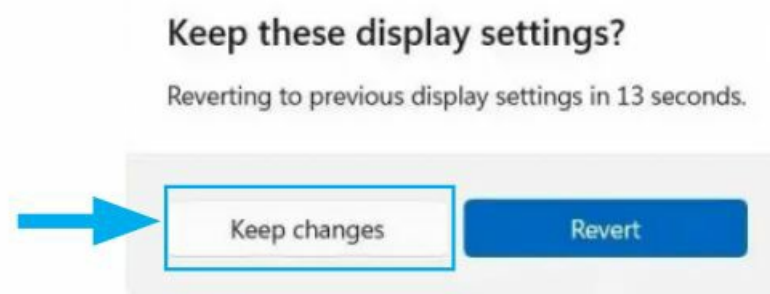
4. Select the drop-down menu within the section below Select a display to change the settings for it and select Extend these displays.



Note: 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 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.

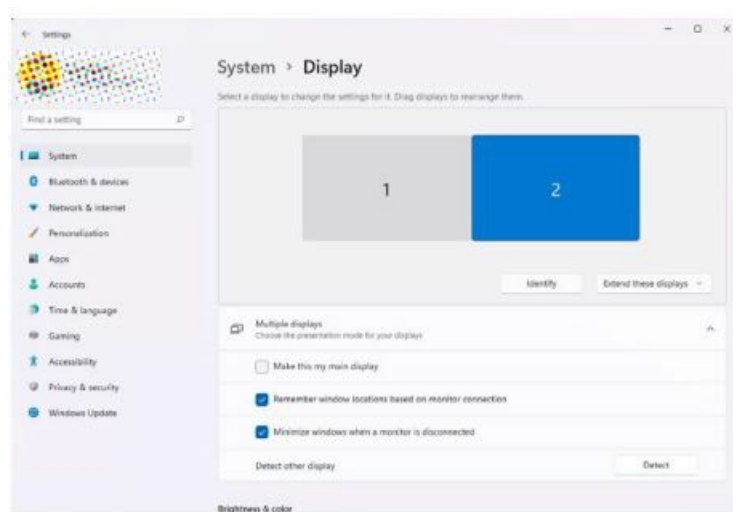
In order for the cursor edge-scrolling function to be intuitive the Display Device arrangement in Windows must match the physical arrangement of each monitor on the workstation.

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.

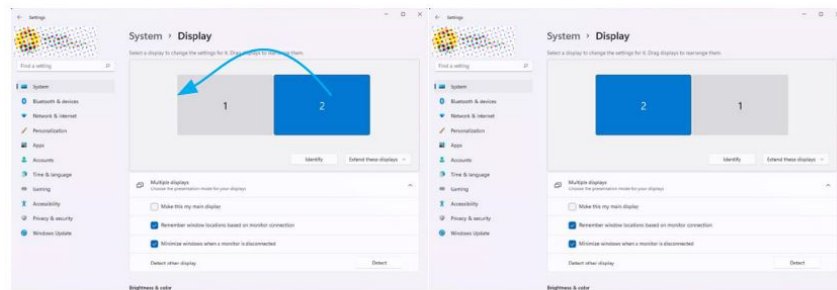


3. Observe the physical location of the monitors as they're setup on the workstation.

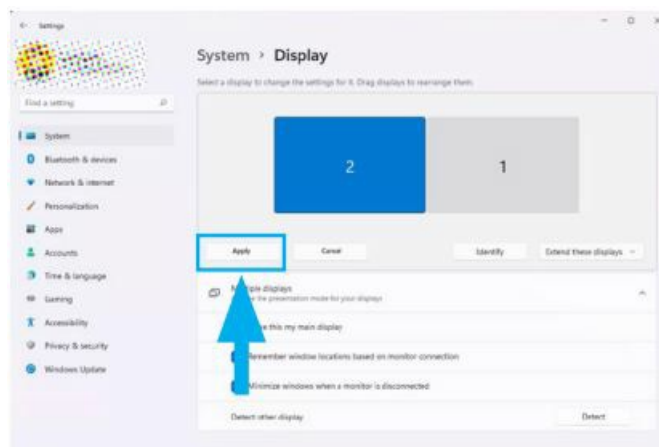


Note: You can click the Identify button to see which number corresponds to each physical display. See Identifying Display Devices Within Windows Display Settings (p.11) for more information.

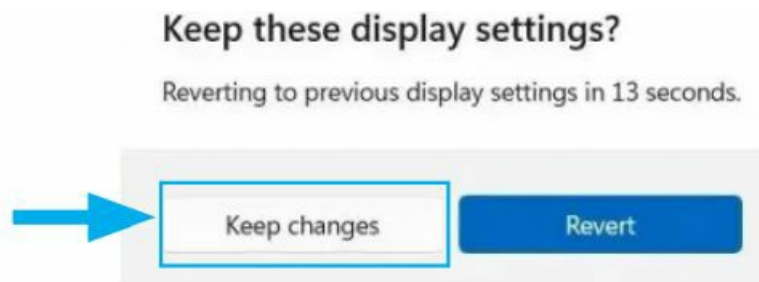
4. Click and drag the Numbered Displays (within the Display tab of Windows Settings) so that the diagram matches the physical location of the monitors as they're set up on the workstation.



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.

Configuring Display Devices for a Mirror Configuration

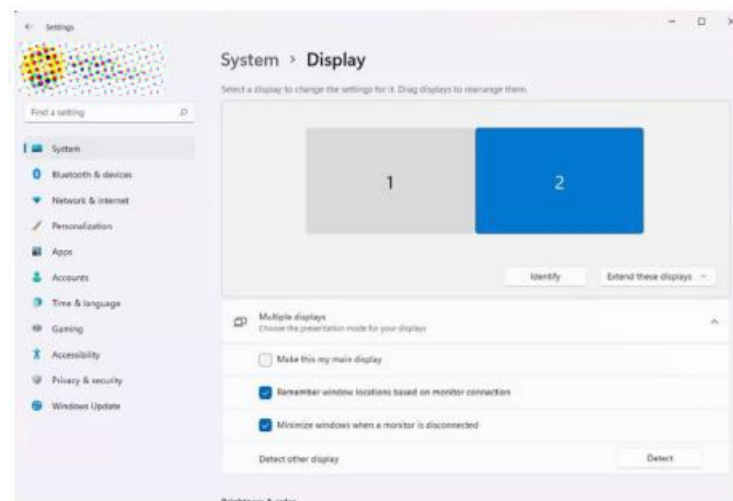
- Mirroring the Windows Desktop provides users with the ability to duplicate their screen onto another monitor or display.
- With a Mirror Configuration, users can easily duplicate the content on screen to multiple displays for presentations or demonstrations. It allows the presenter to display their 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.



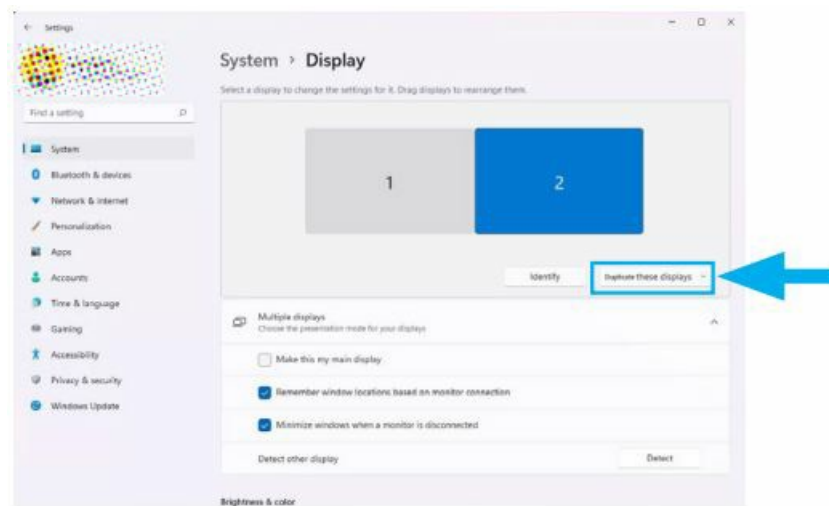
3. Click the Display Number that corresponds to the monitor that will be configured for a Mirror Configuration. The selected monitor will become highlighted.



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.14) 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 Extend 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

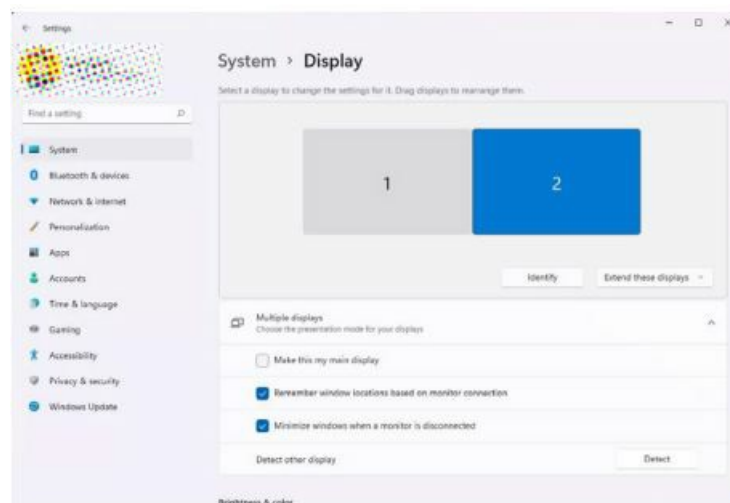
The output resolution for the Display Devices connected via the USB Video Adapter can be adjusted within Windows.

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.



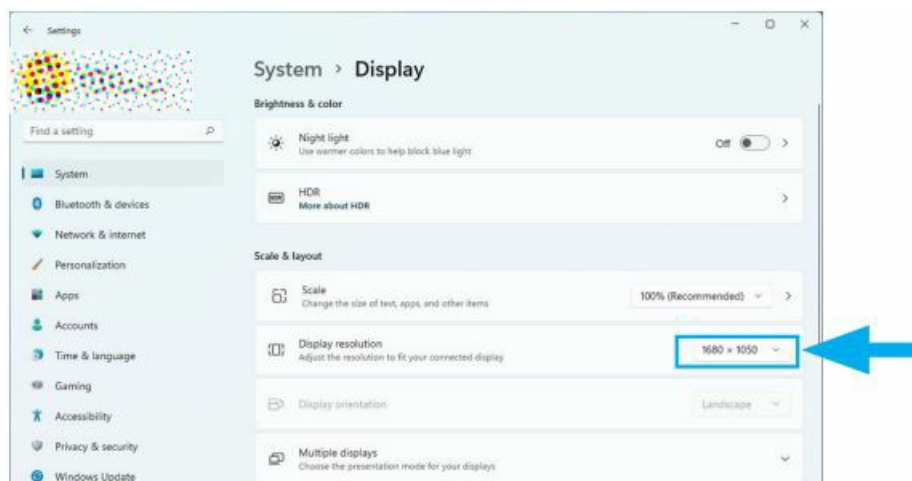
3. Click the Display Number that corresponds to the monitor that will be configured for a Mirror Configuration. The selected monitor will become highlighted.



Note: You can click the Identify button to see which number corresponds to each physical display. See [Identifying Display Devices Within Windows Display Settings](#) 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.

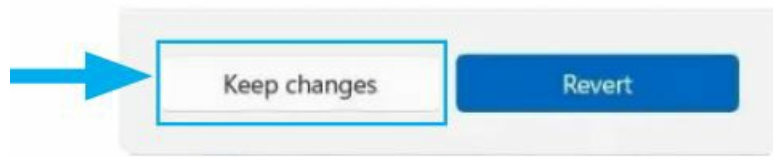
Note: Only resolutions supported by the Display Device, or USB Display Adapter will be available.



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.

Keep these display settings?

Reverting to previous display settings in 13 seconds.



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

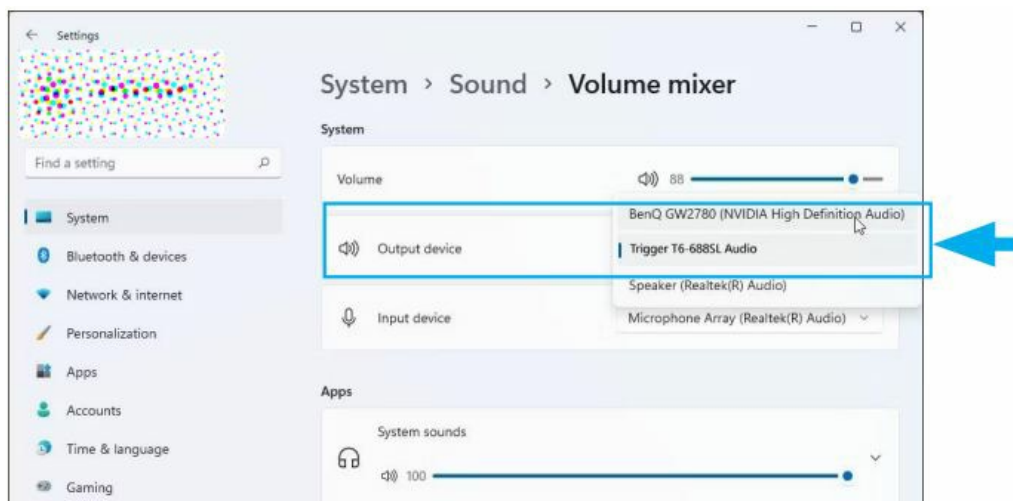
Once the USB Display Adapter has been installed on a Host Computer, Windows will recognize its audio controller as a playback device, which will give the Host Computer the ability to output audio via the HDMI output on the USB Display Adapter. The audio controller on the USB Display Adapter is separate 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 its 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.

Troubleshooting

This section of the manual aims to provide a comprehensive troubleshooting guide for this USB Display Adapter. 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:

- This device is only supported in Windows operating systems.
- 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 before 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, Silicon Motion, and Fresco Logic be removed before installing the driver for this product.
- It's recommended that all available onboard video output ports are exhausted before adding a USB Display Adapter.
- USB32HD2 will not work at 4K if connected to a USB 2.0 port.

The Driver Will Not Install

This issue typically indicates that the installer file did not obtain the elevation required to install within the Windows operating system.

To resolve this issue:

- Make sure the Setup(.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 that the driver for the USB Display Adapter is not fully installed.

To resolve this issue:

- Please review the Setup Notes and Recommendations (p.32) at the top of this troubleshooting section, and ensure all criteria outlined have been actioned on the Host Computer.
- Unplug the USB adapter from the computer and reconnect it, using a different USB port.
- 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 its performance capacity. Testing the USB Display Adapter on a more powerful computer can confirm this.

The HDMI Port 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.29) 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 Desired Output Resolution is Not Available

If the USB Display Adapter is spaced to support the desired resolution, this issue typically indicates that there is not enough bandwidth available for the USB Display Adapter to establish maximum performance.

To resolve this issue:

- 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.
- Review the maximum supported resolution for this USB Display Adapter available in the Product Diagram (p. 3) section of this manual.

The USB Display Adapter Does Not Work With a USB-A to USB-C Adapter

While properly pinned USB-A to USB-C Adapters will work with this USB Video Adapter, many of these USB-A to USB-C Adapters will drop pins which can prevent the USB Video Adapter from establishing a proper connection with the Host Computer.

To resolve this issue:

- It's recommended that a direct USB-C Video Adapter be used, such as the StarTech.com 107B-USBC-HDMI, instead of a USB-A Video Adapter.

The USB Display Adapter Does Not Power a USB-C Monitor

This device does not feature a USB-C video output and will not provide enough power to power a USB-C monitor.

To resolve this issue:

- It's recommended that a dedicated USB-C output, with sufficient power, be used to power the USB-C monitor instead of the USB output on a USB Video Adapter, or any other bus-powered downstream USB device.

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 their input and output ports must be 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

Compliance Statements

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, under 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 by 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 the receiver
- Connect the equipment to 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

This Class B digital apparatus complies with Canadian ICES-003.

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

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

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.

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

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- 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.
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- Visit www.startech.com for complete information on all StarTech.com products and to access exclusive resources and time-saving tools.
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- [StarTech.com](http://www.startech.com) Ltd.
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- [StarTech.com](http://www.startech.com) Ltd.
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- NL: startech.com/nl
- IT: startech.com/it
- JP: startech.com/jp

Frequently Asked Questions

What is the purpose of the StarTech USB32HDES USB 3.0 to HDMI Adapter?

The StarTech USB32HDES is an external video card that allows you to connect an HDMI display to your computer using a USB 3.0 port. It's designed to expand your display capabilities and support resolutions up to 1080p (1920x1200) at 60Hz.

What operating systems are supported by the USB32HDES adapter?

The USB32HDES is intended for use with Windows operating systems only.

What are the requirements for using the USB32HDES adapter?

You will need a USB-enabled host computer (Windows only) that supports USB 5Gbps or faster. Additionally, you'll need a display device with an HDMI input.

What's included in the package when I purchase the USB32HDES adapter?

The package includes one USB Display Adapter and one Quick-Start Guide.

How do I connect the USB32HDES adapter to my computer and display device?

You need to connect the USB Display Adapter to a USB port on your host computer using the built-in USB host cable (USB-A). Then, connect the Video Output Port (HDMI) to an HDMI display. Make sure you use the required cables (sold separately).

Can I extend my Windows desktop across multiple monitors using this adapter?

Yes, you can extend your Windows desktop across multiple monitors using the USB32HDES adapter. This allows you to have different applications or windows open on each monitor, effectively expanding your workspace.

How can I configure the resolution for the display connected through the USB32HDES adapter?

You can configure the resolution by right-clicking on the Windows Desktop, selecting Display Settings, and choosing the desired resolution under the Display Resolution settings.

Can this adapter handle HDCP-encrypted content?

This adapter may not handle HDCP-encrypted content effectively. It's recommended to view HDCP-protected content on displays connected to your computer's video card or onboard video outputs.

Can I use the USB32HDES adapter to capture video input?

No, this adapter is designed for video output only and cannot be used to capture video input.

Can I use multiple USB32HDES adapters simultaneously on the same computer to connect multiple HDMI displays?

Yes, you can use multiple USB32HDES adapters on the same computer to connect multiple HDMI displays. Each adapter will provide support for an additional HDMI display.

What is the maximum resolution supported by the USB32HDES adapter?

The USB32HDES supports a maximum resolution of 1080p (1920x1200) at 60Hz. This resolution should work well for most HD displays.

Do I need to install additional software or drivers on my HDMI display for it to work with the USB32HDES adapter?

No, you do not need to install any software or drivers on your HDMI display. The USB32HDES adapter handles the necessary driver installation on the host computer to enable the HDMI display to work.

Reference: [StarTech USB32HDES USB 3.0 to HDMI Adapter User Manual-device.report](#)

References

- [User Manual](#)