

## DisplayLink Video to Broadcast Software Instructions

These instructions will go through the steps to connect a DisplayLink Plus computer, video board controller, and video capture device to easily live stream video board data.

There are 5 versions of controllers offered by CTS through the years that have the capability to output video suitable for a live stream. These 5 controllers can be broken down into 2 types of connections.

- **Type 1** will cover how to connect MCTRL-300, MCTRL-600 and MIC-VPU-01 controllers.



MCTRL-300



MCTRL-600



MIC-VPU-01

- **Type 2** will cover how to connect VX4 and MCTRL-660 controllers.



VX4



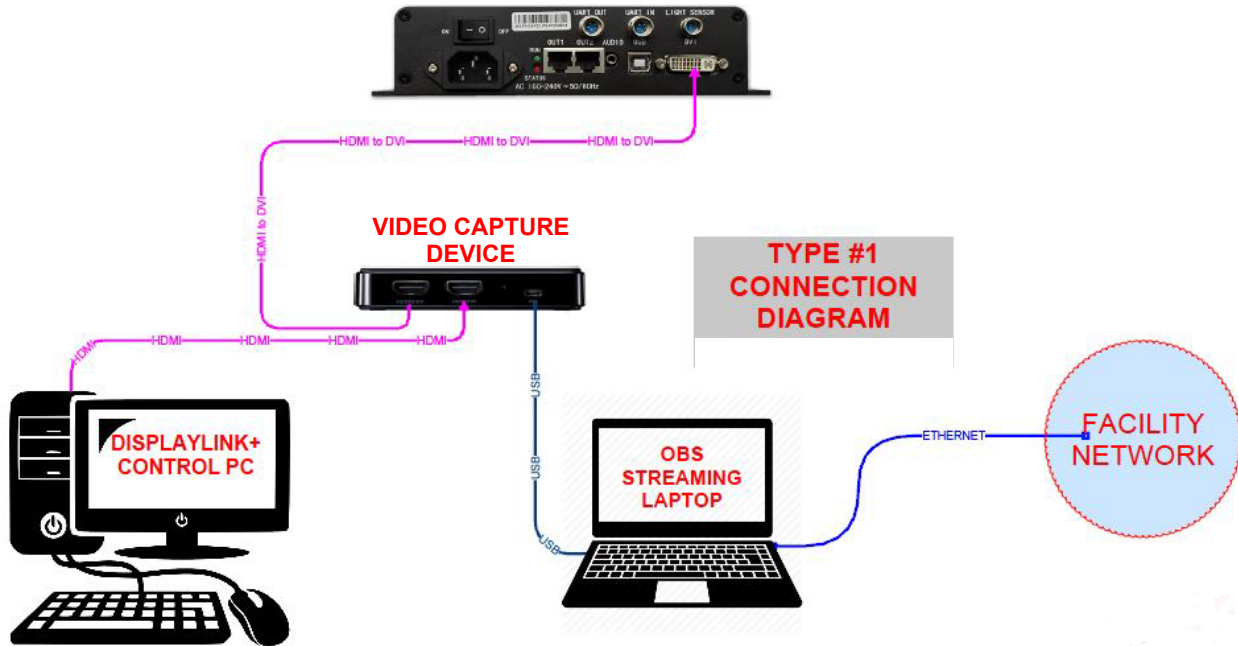
MCTRL-660

Video capture devices and broadcast software referenced in this document are neither supplied nor endorsed by Colorado Time Systems and are referenced based on either being common to the industry or having been utilized by other CTS customers.

## Type 1

As computer specs have changed through the years, we recommend verifying the video connection type going from the DisplayLink computer to the video display controller. These instructions will focus on the most common cabling (HDMI to DVI). If your system has another type of cable connecting the DisplayLink computer to the controller, conversion cables will most likely need to be purchased that match the system's needs.

Some common types of video connections that CTS has utilized in the past include DVI to DVI cable, DisplayPort (DP) to DVI conversion box, and DisplayPort(DP) to DP cable.

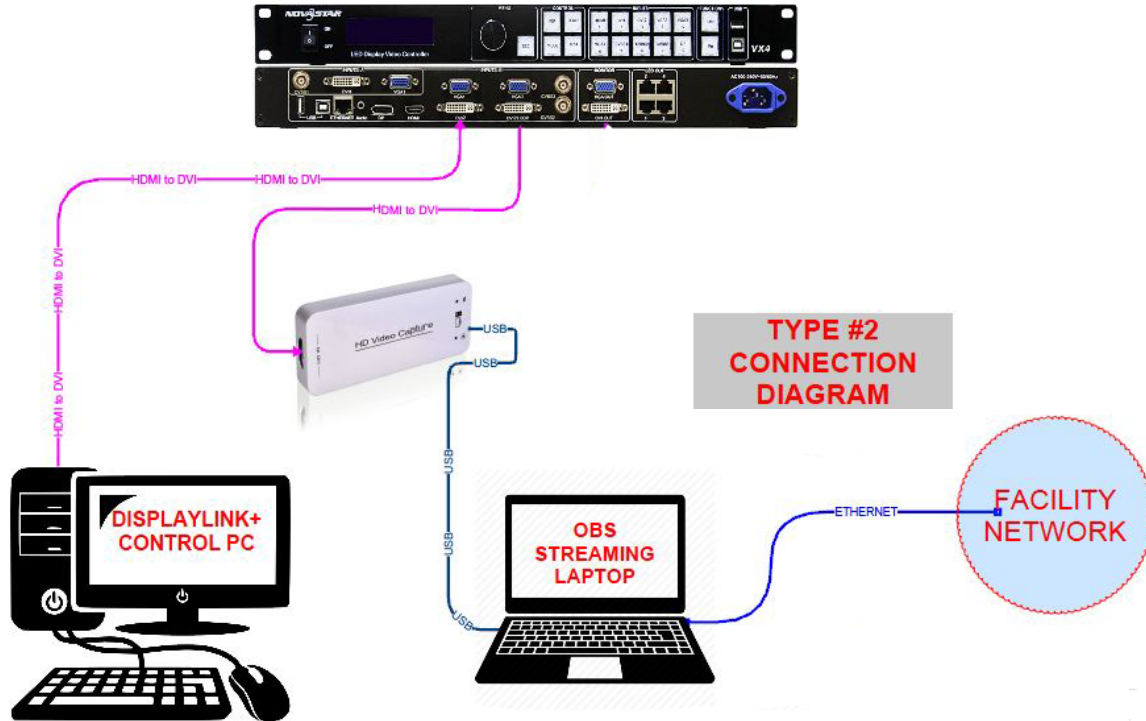


1. Connect your DisplayLink computer to a video capture device using an **HDMI** cable connected from your DisplayLink computer's HDMI output to the capture device's HDMI input.
  - a. The MCTRL-300, 600 and MIC-VPU-01 require a pass-through video capture device, similar to the AverMedia GC311.
2. Connect an **HDMI to DVI** cable to the capture device's HDMI output and connect the other end to the DVI input on the controller.
3. Connect the video capture device to the streaming computer using a USB cable.



## Type 2

For this type of connection, no change is needed for the connection from the Displaylink computer to the controller. Connections will only need to be made between the controller, capture device, and streaming computer.



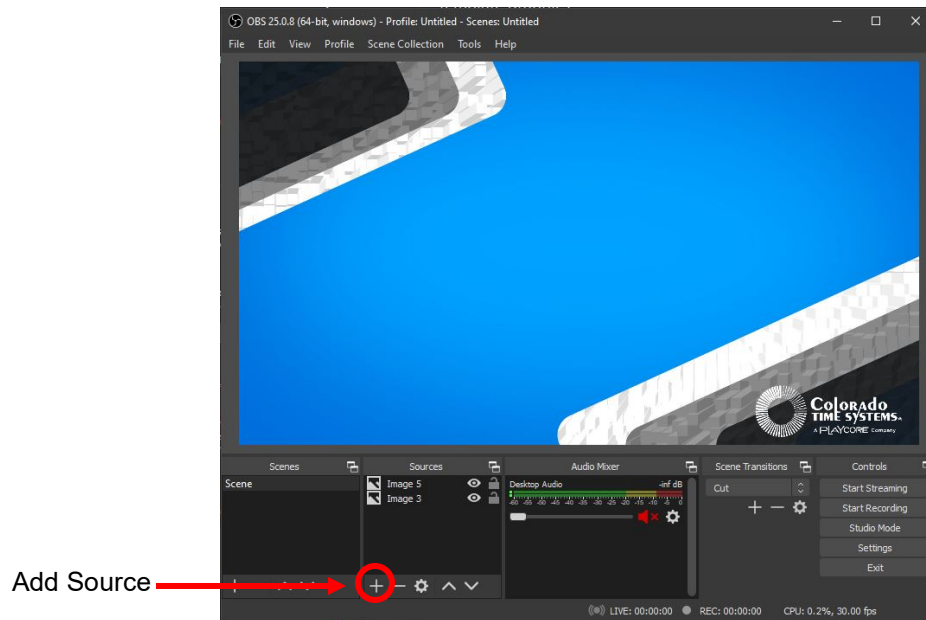
1. Connect a DVI to HDMI cable from the controller to the capture device's HDMI input.
  - VX4: Connect DVI to HDMI cable to the Input DVI2LOOP
  - MCTL-660: Connect DVI to HDMI cable to the DVI output.
    - a. The VX4 and MCTRL-660 are compatible with any type of video capture device such as the Digitnow USB 3.0 Video Capture Dongle and are not limited to pass-through style devices.
2. Connect the video capture device to the streaming computer using a USB cable. With these connections complete, you are ready to pull the video feed into a broadcast software.



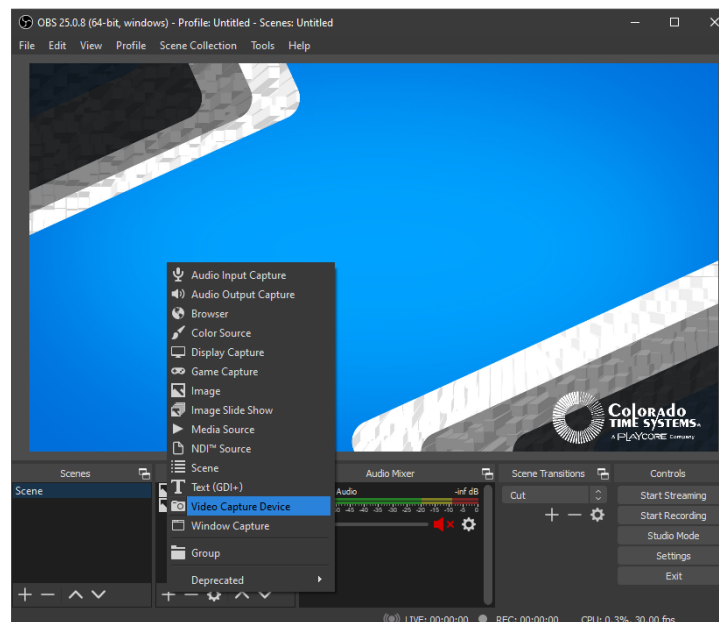
## Getting the video feed

With the components properly connected, the data shown on the video scoreboard can now be pulled into a broadcast software to be used for live streaming. We will be showing how to bring the video feed in using the free, Open Broadcast Software (OBS) although other broadcast software are available.

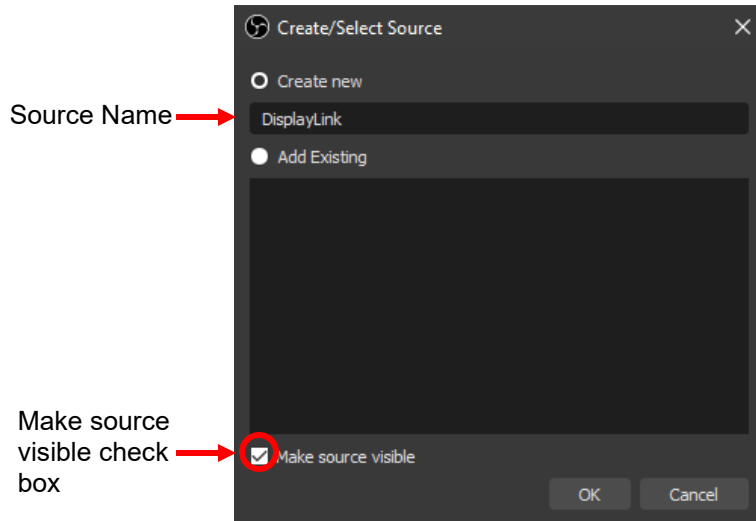
1. Start DisplayLink on the DisplayLink computer and open the broadcast software on the streaming computer.
2. Select the **add source** or **add input** button in the broadcast software.



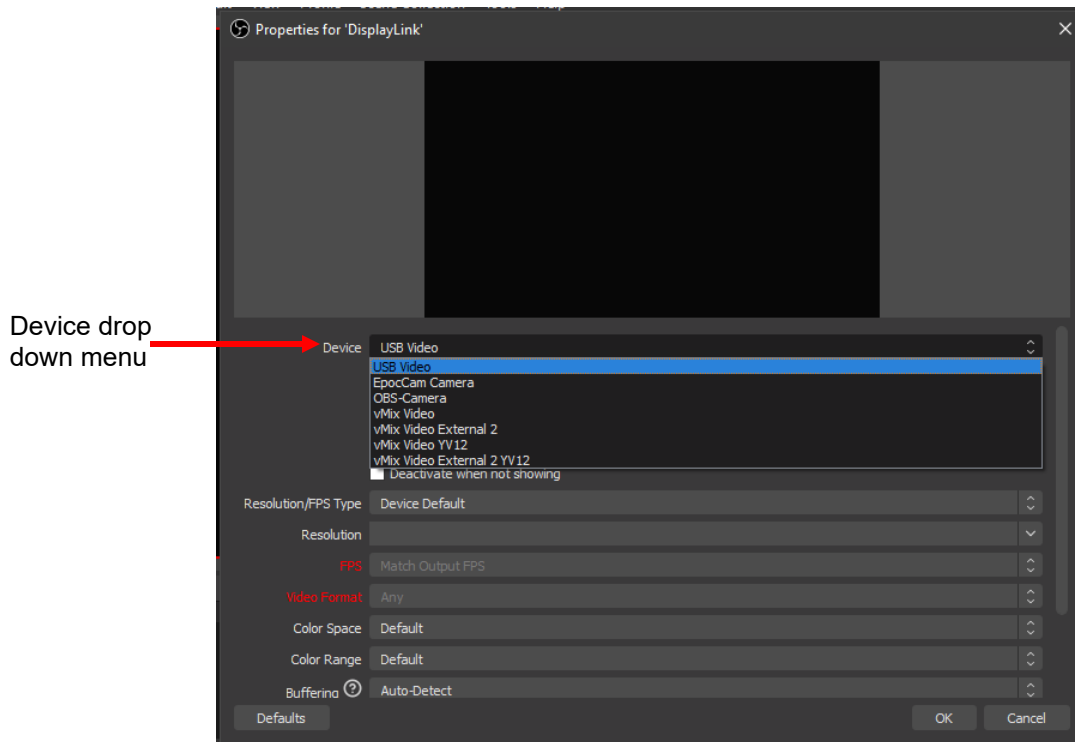
3. Select either **Video Capture Device** or **Camera** depending on which is available.



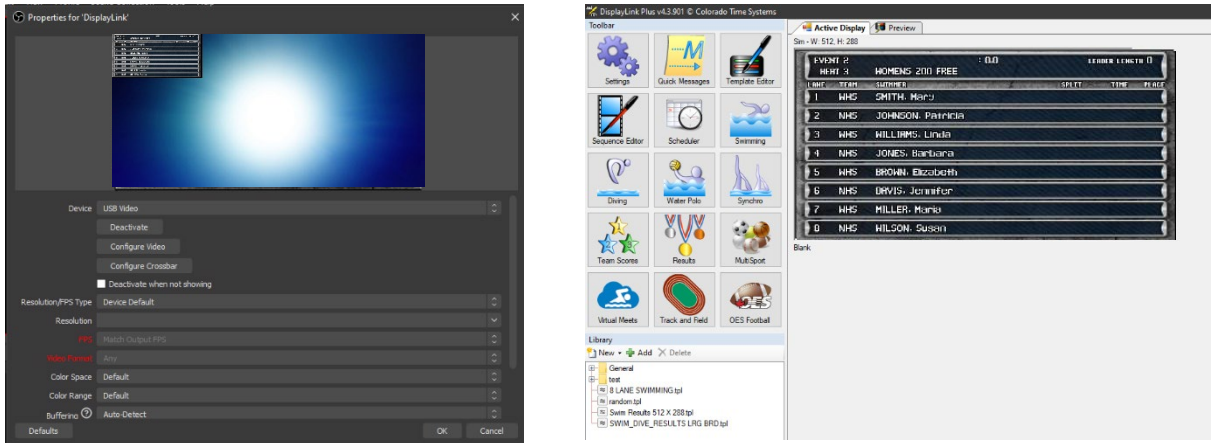
4. Name the video capture device in the broadcast software, and make sure “**Make source visible**” is checked, then click ok.



5. In the next window use the **Device** drop down menu to select **USB video**. If multiple video sources are available, the source name could be different.

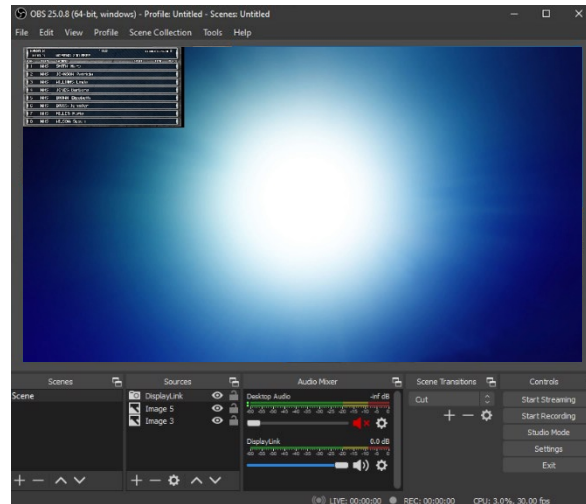


- Verify that the sample feed is the same as what is being displayed in the active window in DisplayLink.



- In this window parameters such as color, resolution, and frames per second can be adjusted.
- When finished, click **OK** to add the input source to the canvas.

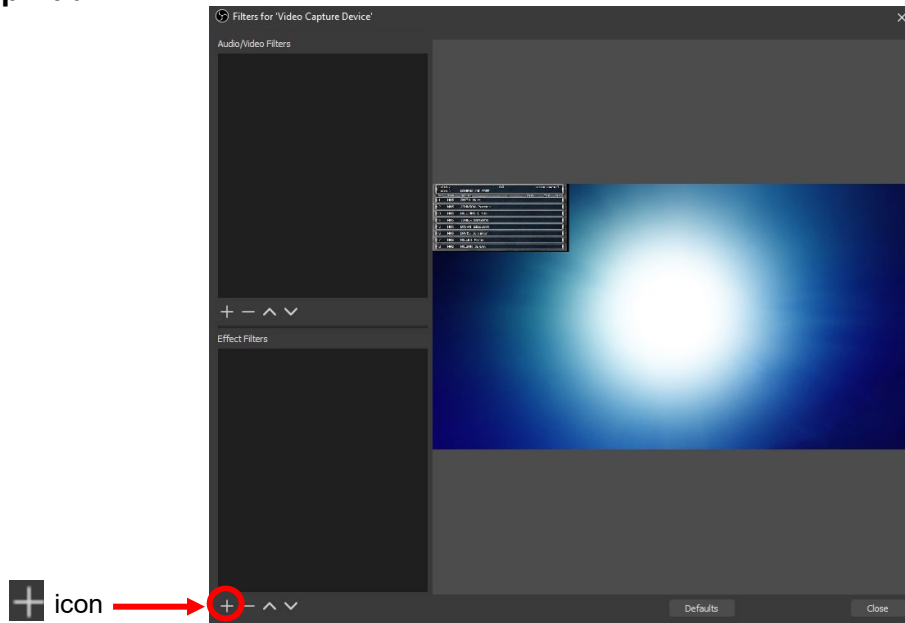
Due to the way that Displaylink transmits data to the video board, the entire monitor from the DisplayLink computer will be shown.



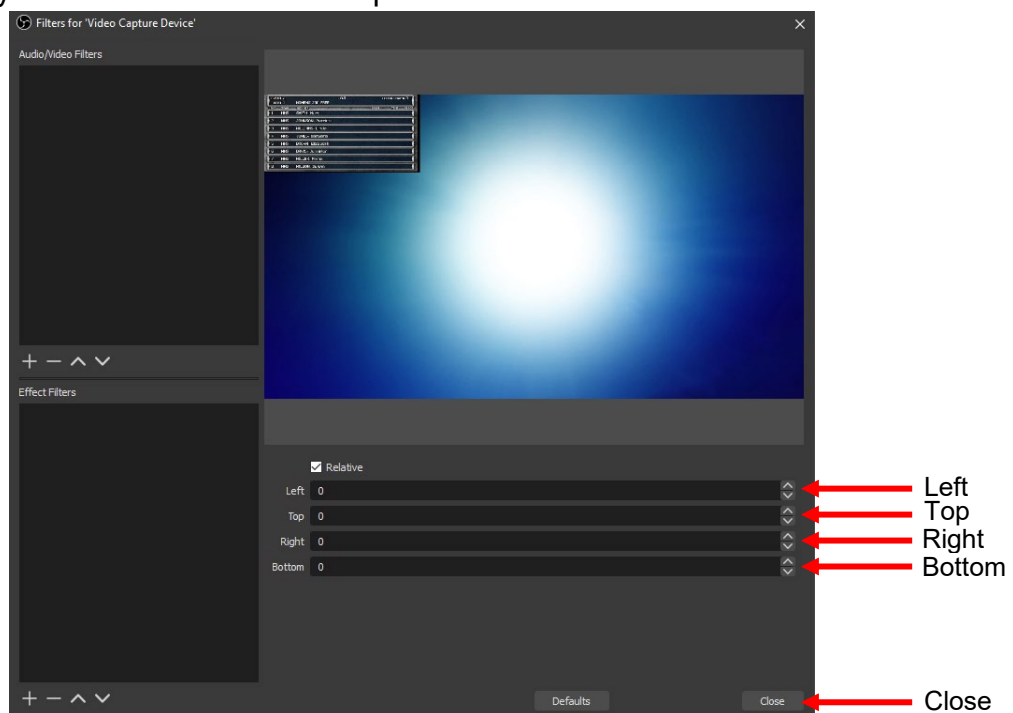
- To isolate just the scoreboard video output, the input source needs to be cropped.
- Right click on the video capture source and then click **filters**.



2. In the new window, click the **+** icon in the **Effect Filters** section and select **Crop/Pad**.



3. Set left and top to zero. Right and bottom crop values are determined by the monitor resolution and are calculated by subtracting the board width and height from the monitor resolution width and height. For example: if the monitor resolution on the DisplayLink computer is set to 1920x1080, and the DisplayLink template size is 544x272, set the right crop to 1376 and the bottom to 808 to view only the scoreboard video output.



4. Click **Close** when finished to save the crop settings



The video input from DisplayLink can now be resized and moved on the canvas as needed and you can now set up the rest of your stream and have clear live scoreboard data available to your audience.

OBS and other broadcast software have large support networks. We recommend researching online for more information on setting up a successful live stream using your chosen broadcast software.

