Expand visual real estate by daisy chaining displays

Did you know that many professional display manufacturers build in tools to help you create video walls? Displays are connected together using DisplayPort, HDMI or DVI connections to allow a single source to be viewed across multiple displays. This process is called daisy chaining.

Setting up a display daisy chain varies by manufacturer but usually involves the following steps:

- Connect a video cable (HDMI, DisplayPort, DVI) from the output of the first display to the input of the second display. Continue by connecting the output of the second display to the input of the third. Continue in this fashion until you reach your last display in the wall.

- Display control can also by synchronized by connecting a LAN, USB or serial cable in the same fashion as the video cables in the previous step.

- Configure the display IDs and wall layout. This allows the displays to calculate how many units wide by how many units high the video wall is physically and where each display resides in the wall.

- Adjust the picture settings like color correction, white balance, brightness and contrast to ensure the picture quality is the same on all displays in the wall.

- Adjust picture framing and compensate for the gaps (bezels) between displays. This ensures that your image displayed across the wall does not have vertical or horizontal shifts.

Here is an example of a 9-panel (3 high x 3 wide) video wall made by daisy chaining next to a single panel output.
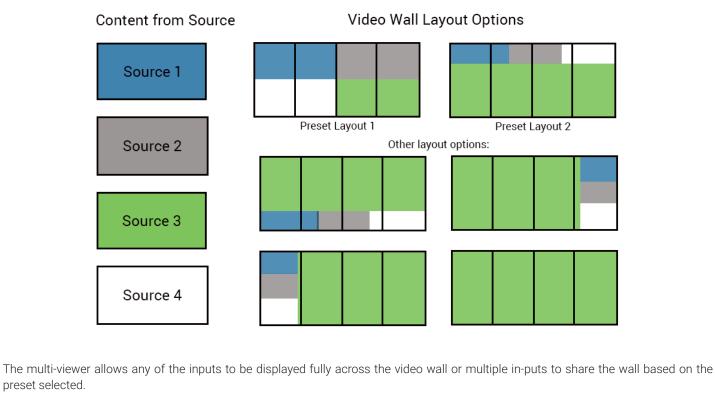

Single Wall

Video Wall

The use of displays that can be daisy chained adds size, visibility and ultimately impact to your content without adding a video wall processor.

For additional impact, consider a multi-viewer. Multi-viewers allow multiple inputs to be individually or simultaneously shown on a single display. Remember that the daisy chain video wall acts as a single display even though it is made up of multiple displays.

Lets take a look at 4 inputs processed through a multi-viewer and displayed on a 4 wide x 1 high daisy chain video wall with preset 1 and 2 mapped to them and the lower right are the remaining preset examples.

Content from Source

Source 1

Source 2

Source 3

Source 4

Video Wall Layout Options

Preset Layout 1

Preset Layout 2

Other layout options:

The multi-viewer allows any of the inputs to be displayed fully across the video wall or multiple in-puts to share the wall based on the preset selected.

If your application matches the examples shown here, a daisy chain video wall or a daisy chain video wall with a multi-viewer should allow you to increase your impact using built in technology.

Application Example with Black Box Quad Multiviewer (AVSC-0501QMV)

DisplayPort screen mirroring video wall

DisplayPort cable

Display 1

HDMI in   HDMI out

Display 2

HDMI in   HDMI out

Display 3

HDMI in   HDMI out

Display 4

HDMI in   HDMI out

4K HDMI screens in a daisy chain

Quad Multiviewer (AVSC-0501QMV)

4K media player

HDMI cables

Blu-ray player

Thermal camera

DisplayPort cable

External audio system

Industry controller

DisplayPort computer

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