Daisy Chain

Manual and Specifications

Version 5.0, July 2023

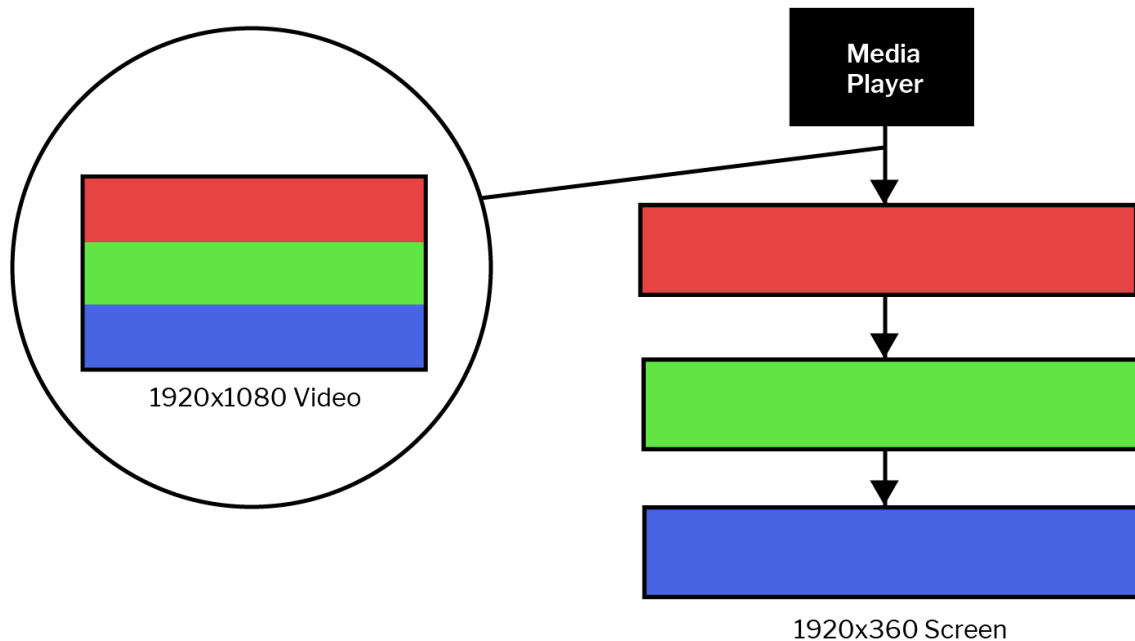# Contents

Overview

V Series Daisy Chain screens are a modification of Bluefin's V Series Screen. Each screen is able to connect to other screens across an HDMI daisy chain, leading back to a single media player. Each screen receives the full video signal from the player, but only displays a portion of that signal, allowing screens to display separate content.

Any number of screens can be daisy-chained, but the number of separate displayable images is determined by the resolution of the screen. For example, a video that is 1920x1080 can be divided evenly into three sections for 1920x360 screens.

Figure 1: Daisy Chain Explanation

Each screen can be assigned to any even section of the video. There is no additional software necessary to set up Daisy Chain screens. Content must be created to align with the pre-defined video sections for each screen size used.

Creating content for one size

To create content for daisy chain screens, identify the resolution of your display; (for example, 1920x360). Divide your 4K video into even sections of this resolution, starting from the top-left. For screens with a width of 1920, there is a second column after the first 1920 column is filled. Each section is referred to as a **serial number**

Some sizes may not evenly divide into 2160p. If there is space at the bottom of the video, but not enough for another full section, this area is skipped.

Figure 2: Dividing content for 1920x360 screens
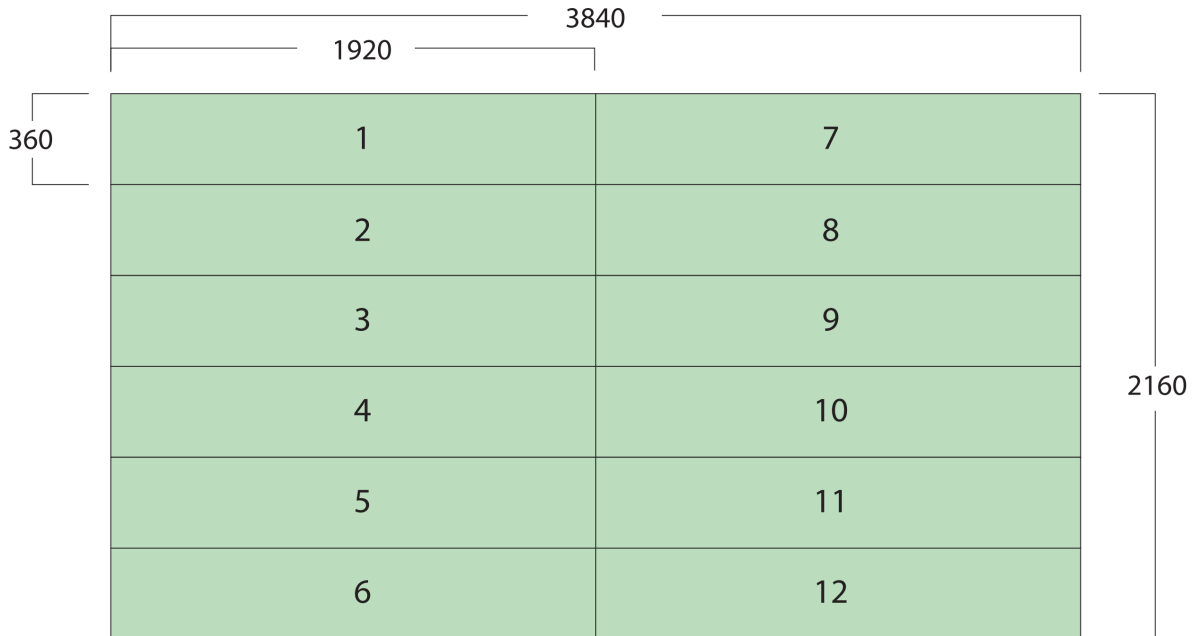
Creating content for multiple sizes

Daisy chain screens of different sizes can be chained together. Each size will divide video according to its own grid, so ensure that when you are assigning serial numbers that they do not overlap.

In the figure below, you can see how these serial numbers may overlap. The first available serial number for 1920x84 that does not overlap with 1920x540 is serial 8. A small gap will exist between both portions of the video, since serial 7 is overlaps partially.

Figure 3: Dividing content for a 1920x540 and 1920x84 screen
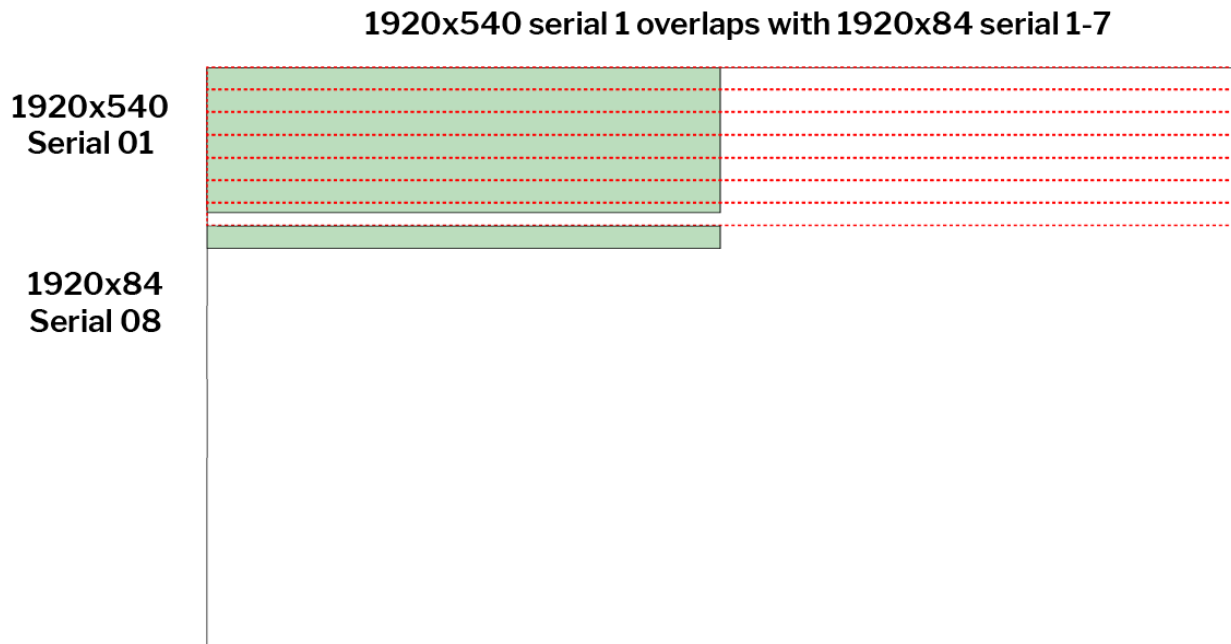
Assigning Serial Numbers

Any screen within a daisy chain can be assigned to any serial number, regardless of its physical position in the chain. By default, all screens are assigned to Serial Number 01, the top-left area of the video.

To change a screen's serial number, create a text file using notepad (windows) or textedit (mac) and write in the following variables:

Format of Variables

SerialNumber = 01 (01, 02, 03...)
MaxSN = XX (01, 02, 03...)
x = 0
y = (vertical resolution (height in pixels) of screen)
width = (horizontal resolution of screen)
high = (same as y)
const = (0 or 1)

Figure 4: barlcd.txt file for a 3840x480 screen

```
barlcd.txt - Notepad
File Edit Format View Help
SerialNumber = 01
MaxSN = 04
x = 0
y = 480
width = 3840
high = 480
const = 1
```

Explanation of variables

SerialNumber: Determines which equal section of video the screen should display. Screens come manufactured with 01 as the default setting (top left of the video)

MaxSN: Determines the maximum number of serialnumbers before the update file rolls back to 01. See "const" explanation for more info.

X: always set to 0, ignore this variable

Y: set to the height, in pixels, of the screen

Width: set to the width in pixels of the screen

High: set to the same value as y, the height in pixels of the screen

Const: This variable controls the behavior of the update file itself. You can set const to 0 or 1 depending on which update scenario works best for you.

If const = 0, the SerialNumber variable will increment one step after the update completes. If you update another screen with the same file, it will update that screen to the next serialnumber, allowing you to assign the next serial number without manually rewriting the file. If the MaxSN value is reached, SerialNumber will roll back to 01.

If const = 1, the SerialNumber variable will not change between updates. Every screen updated will be the same serialnumber value unless the file is manually changed.

Performing the Update

Bluefin's Daisy Chain screens can be updated with a simple text file, a tool to interface with the update port, and a FAT32 formatted USB flash drive. Contact support@thebluefin.com if you did not receive an update tool.

Depending on your screen's SKU number, the update method may vary slightly. Check the middle of your product SKU for one of two numbers and follows the matching instructions below.

To Update a Screen (3002)

1. Disconnect the screen from power
2. Load the barlcd.txt file to a FAT32 formatted USB flash drive
3. Connect the flash drive to one end of the daisy chain update cable. Connect the other end to the 4-pin 'UPDATE' port on the back of the screen.
4. Connect the screen to power.
5. Allow up to 30 seconds. The update is complete when an image appears on screen.
6. Remove the update cable and USB drive.

To Update a Screen (3012)

1. Disconnect the screen from power
2. Load the barlcd.txt file to a FAT32 formatted USB flash drive
3. Connect the flash drive to one end of the daisy chain update cable. Connect the other end to the 4-pin 'UPDATE' port on the back of the screen.
4. Press and hold the hard EXIT button on the screen (if buttons are present)
5. Connect the screen to power.
   a. If holding the EXIT button, release the button when the power LED begins blinking red.
6. Allow up to 30 seconds. The update is complete when an image appears on screen.
7. Remove the update cable and USB drive.

Hardware Interfaces

Power

USB-C Input and Output. Power out is available for only one (1) display of equal size. Do not mix sizes or connect more than one display, this may cause damage to the power adapter.

HDMI in

Mini-HDMI 2.0/1.4 compliant input

HDMI out

Mini-HDMI 2.0/1.4 compliant output

Absolute maximum ratings

Parameters	Value	Unit
Power supply	12	Volt
Storage temperature	-10~+70	Degree C
Operating temperature	0~+60	Degree C
Humidity	20~80	%RH

Support

Limited Warranty

There are no warranties, which extend beyond the description on the face hereof. Bluefin warrants products to be free of defects in material and workmanship for the specified warranty period of 1 year from date of shipment from Bluefin. During this period, Bluefin will at its option, repair or replace this product at no additional charge to the purchaser except as set forth below.

Bluefin, will, at its option, repair or replace products at no additional charge to the purchaser, if the defect is related to the Bluefin manufactured product, such as Power Supplies, Disk Drives, CPU Boards, Backplanes, Video Cards and other Peripheral Boards.

Bluefin warrants that the product is free from defects in material or workmanship under normal operation.

Replacement parts that are furnished at no-charge to the purchaser in completion of this warranty are warranted only for the unexpired time portion of the original warranty. Any repairs or services outside the scope of this limited warranty policy shall be at Bluefin normal rates with standard terms and conditions applicable.

Bluefin is unable to provide loaner units or advance replacements.

Repair parts and replacement products will be furnished on an exchange basis and will be either reconditioned or new. All replacement parts and products become the property of Bluefin.

Bluefin is not responsible for damages outside of Bluefin's control including, but not limited to, physical damage, modifications to products, or improper packaging and handling.

If items have been returned for warranty service and found not to be defective a nominal service expense will be charged to cover diagnoses, testing, return shipping and other related costs.

This limited warranty does not include service to repair damage to product resulting from accident, disaster, misuse, abuse, modification, alteration, or if unauthorized repairs have been attempted.

It is the customer's responsibility to back up the contents of their hard drive, including any data you have stored or software you have installed on the hard drive. Bluefin shall not be responsible for i) any loss of data due to storage media failure, ii) for any software programs, data or other information stored or used on any media or part of any product returned to Bluefin for warranty and non-warranty servicing. If during servicing the contents of the hard disk or any other data storage media are altered, deleted, modified or lost, Bluefin will not be held responsible. It is solely the customers/purchaser's responsibility to back up any software programs, data, or information stored on any storage media or any part of a product returned for servicing.

Limited warranty service may be obtained by returning the product during warranty period to Bluefin along with proof of purchase and a Returned Material Authorization (RMA) number. The RMA number is obtained in advance from Bluefin and is valid for 30 days. The RMA number should be clearly marked on the exterior of the shipping container or equivalent.

The customer or Purchaser prepays all inbound freight charges for both Warranty and Non-Warranty repairs. Bluefin is not responsible for damage during shipment. It is recommended that you either insure the product or assume full liability for loss or damage during transit.

Bluefin will cover the return freight via ground/surface service only to the original ship to address for warranty repairs within North America. If you require overnight, expedited or overseas shipments, this service will be extra and at the purchaser's expense. You may pay freight by issuing a purchase order, credit card or wire transfer. Return freight can also be covered by offering your own carrier account number (freight collect) with your specified services.

In no event will Bluefin be liable for any damages, including lost profits, lost business, lost savings, downtime, or delay, labor, repair or material cost, injury to person, property, or other incidental or consequential damages arising out of use of or inability to use such product, even if Bluefin has been advised of the possibility of such damages or losses, or for any claim by any other party. The above warranty is the only warranty authorized by Bluefin and is in lieu of any implied warranties, including implied warranty of merchant-ability and fitness for a particular purpose. Bluefin reserves the right to waive its warranty policy if the customer fails to pay invoice in full and/or on a timely basis as set out on the face of the invoice. How to Return Products for Servicing: To return products, you must obtain a valid RMA number. RMA numbers can be obtained by calling 770-205-6636 or email us at support@thebluefin.com.