

# PLANAR WALLSYNC

Technology Overview – January  
2020



# Introducing Planar® WallSync™

## Industry's First Fully Integrated Synchronized Video Wall Technology

- Supports video wall synchronization to a range of customer selectable internal and external sync sources
- Ensures perfectly synchronized video display without misalignment or tearing
- Includes unique Smart Genlock feature that works in concert with Planar® Big Picture Plus™ scaling technology
- Works with select LCD and LED video walls from Planar



# Clarity® Matrix® G3 LCD Video Wall System

## Industry-Leading Performance and Value



46" and 55" Ultra-narrow and Extreme Narrow Bezel

- Enhanced video wall processing and software
- Mission-critical design with off-board electronics, hot-swappable redundant power supply
- Industry's thinnest installed depth and micro adjustments and easiest to service
- Most advanced and comprehensive line up of LCD video wall models
- Now with Planar WallSync – delivering the industry's first fully integrated video wall content synchronization

# Planar® Video Controller

Used in Clarity Matrix G3 and Planar DirectLight X Video Walls



Built-in  
Synchronization  
Board

Sync to external signals – i.e. house sync in Broadcast environments

Sync Video Controllers by cabling Sync Out to Sync In

Genlock to any single input within the video wall

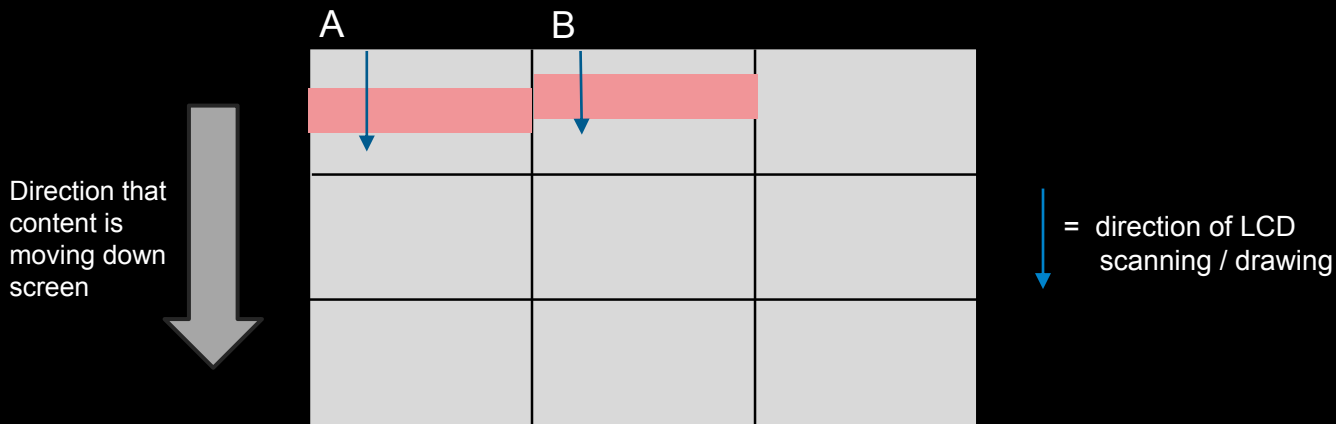
Mini-BNC connector with adapter to BNC

# Genlock and Synchronization Critical to Performance

## Planar WallSync Ensures All VCs and Panels are Synchronized

If panel A and B are not genlocked or synchronized:

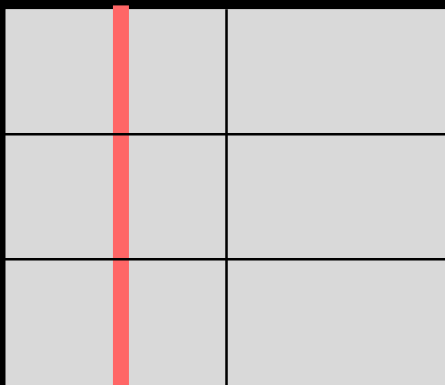
- They begin drawing at different times
- Horizontal content with vertical motion can appear to tear where the panels meet along the vertical bezel



# LCD Video Wall Appearance of Video Tearing

## Common Artifact Seen In Narrow Bezel Tiled LCD Video Walls

- Even with synchronized or genlocked video walls, tearing artifact still appears
- Occurs with combination of fast horizontal motion or panning with content that includes vertical content elements



Stopped Image

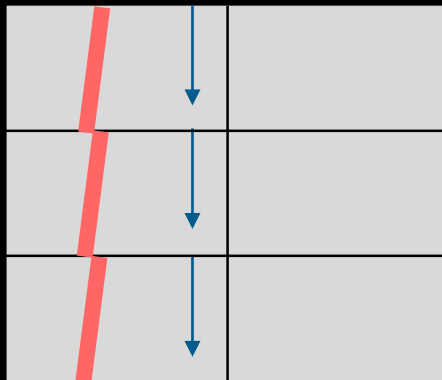


Image in motion moving  
across screen

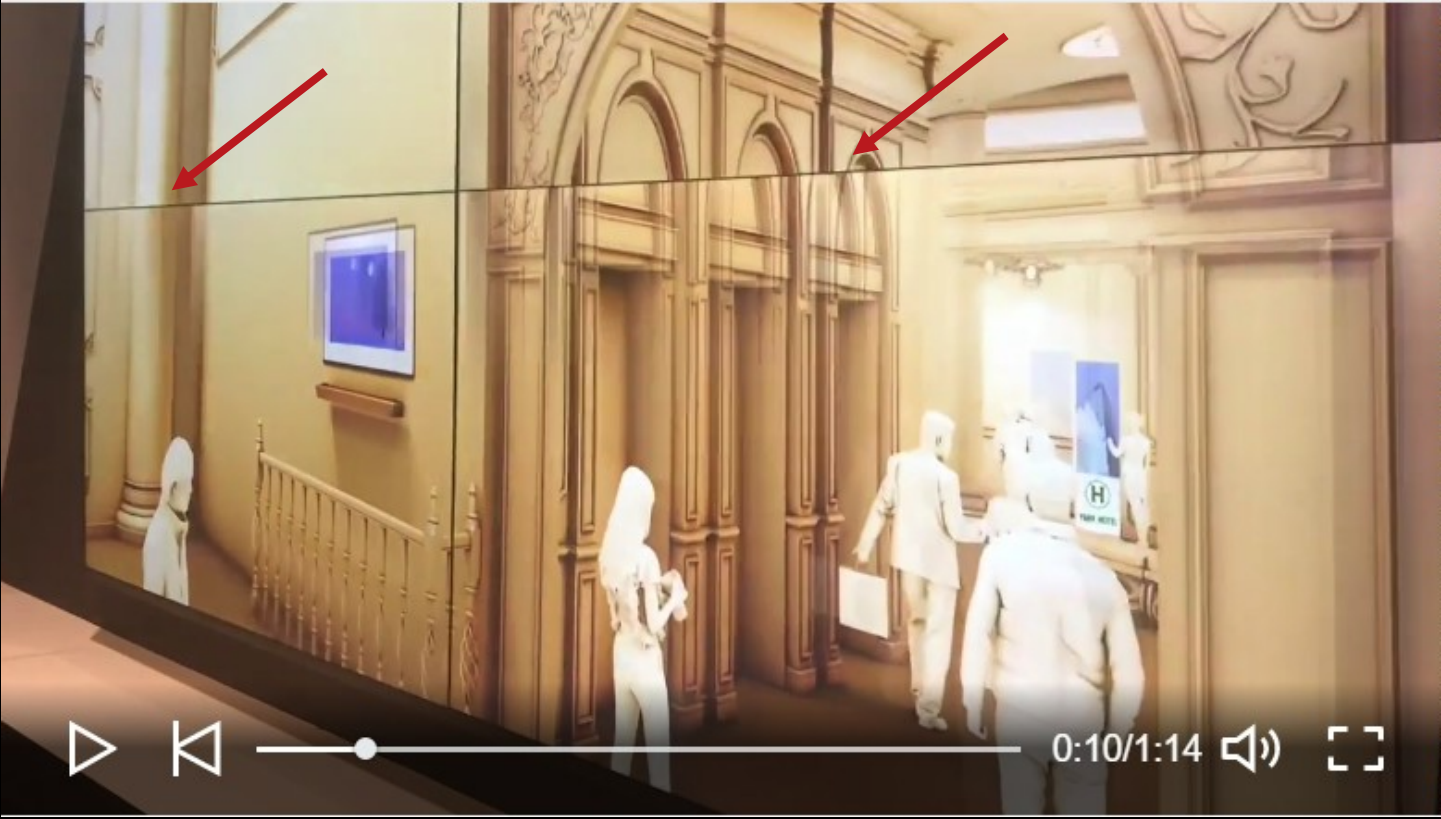


- LCD panels draw top to bottom and are synced to start exactly together
- Vertical content element in combination with horizontal motion, causes tearing artifact
- Even in the latest generation video walls

# Example: Horizontal Tearing

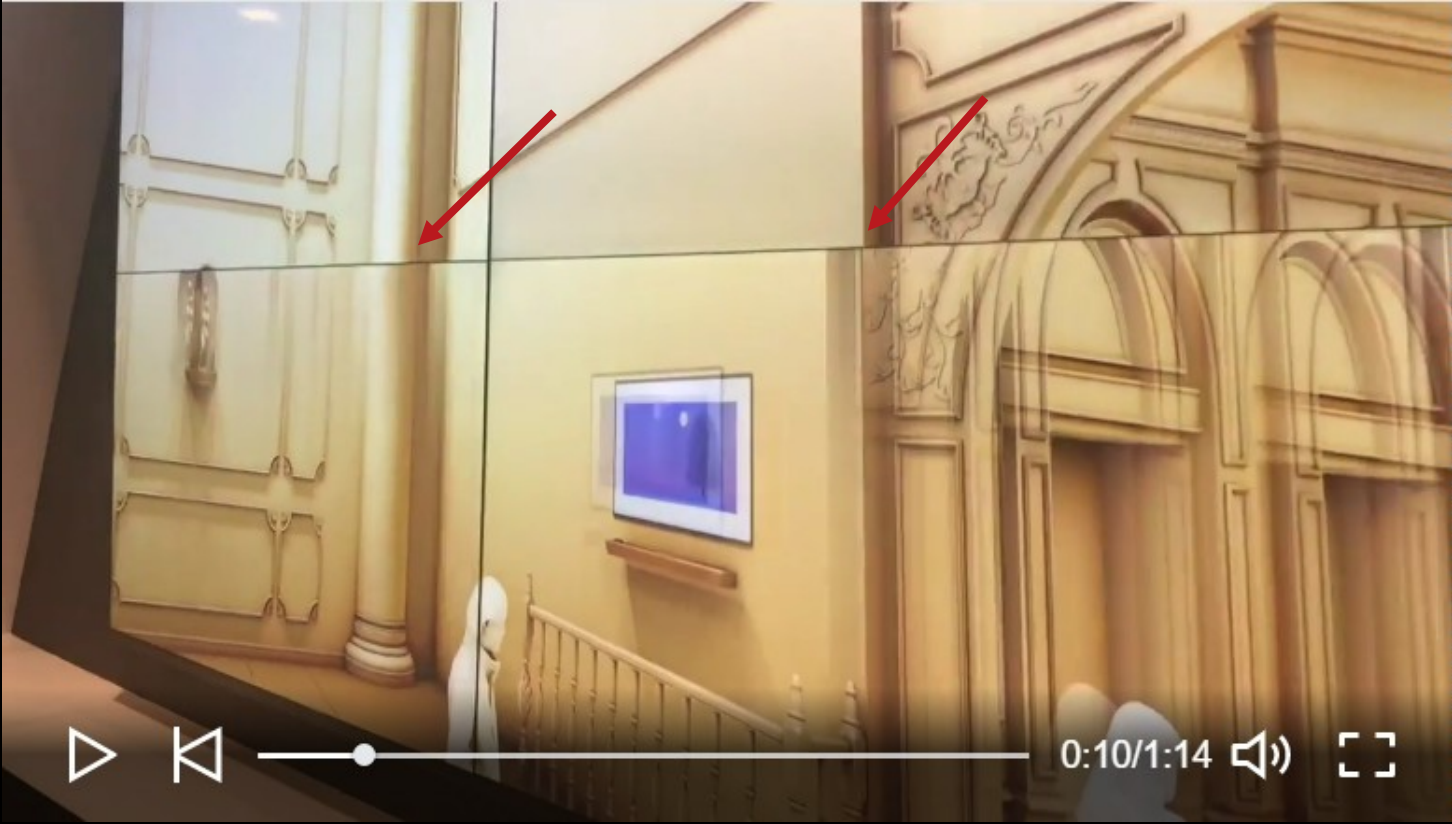


# Example: Horizontal Tearing





# Example: Horizontal Tearing

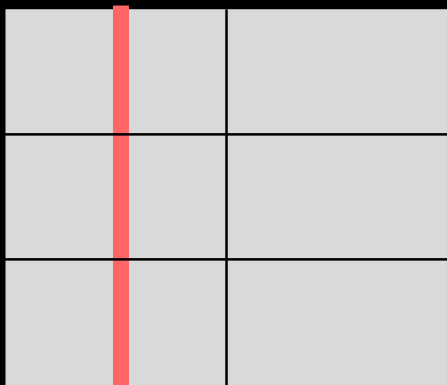


# Example: Horizontal Tearing

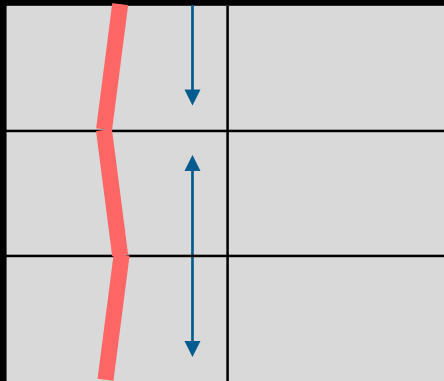


# Planar WallSync Eliminates Tearing Artifact

Clarity Matrix G3 LCD panels are not only perfectly synchronized to internal sources or external sync clocks, they are driven in a way that eliminates this horizontal tearing artifact.



**Stopped Image**



**Image in motion moving  
across screen**

- Planar WallSync's scan inversion ensures vertical images "meet" at the horizontal bezel
- Tearing artifact is eliminated and eye perceives smooth motion of vertical image across the screen
- Makes physical panel alignment with Planar EasyAxis Mounting System even more critical for best visual performance

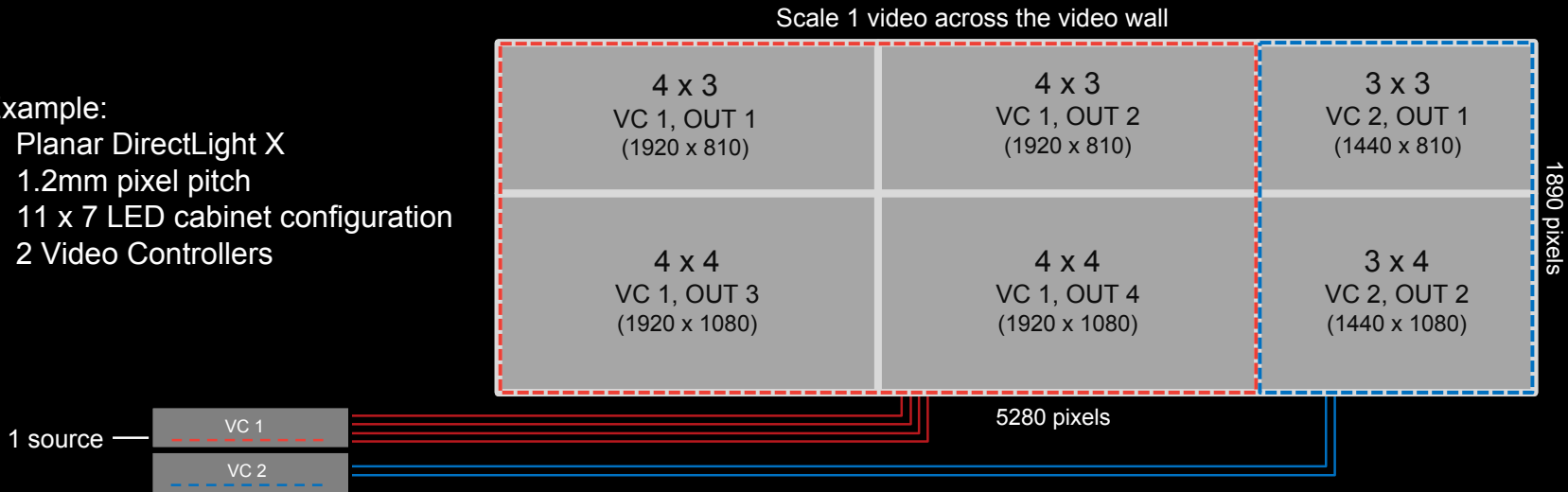
# Addressing Challenges of LED with Planar WallSync

## Accommodating Uncommon Resolutions

- Sync or genlock to 1 source
- Sync multiple VCs
- > 4K video wall with perfectly synchronized video playback and no tearing between 1080 bezel-less sections

### Example:

- Planar DirectLight X
- 1.2mm pixel pitch
- 11 x 7 LED cabinet configuration
- 2 Video Controllers

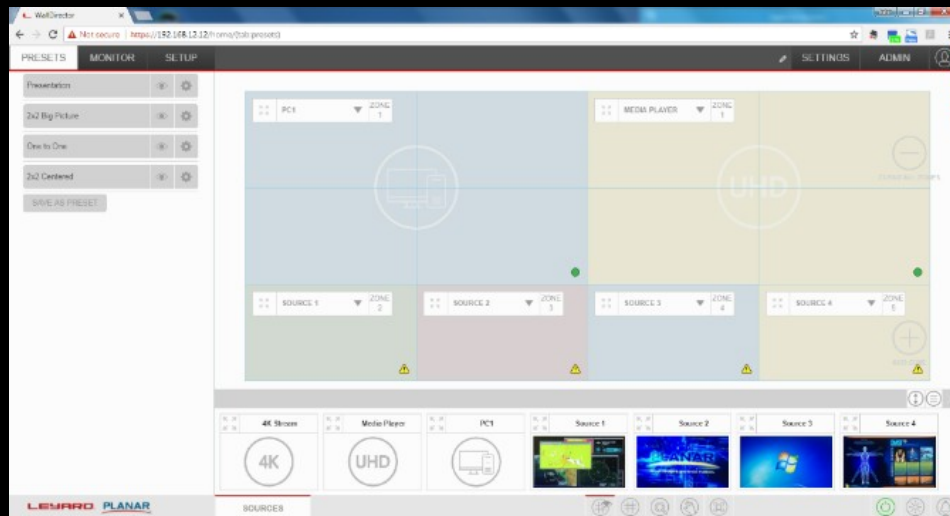


# Planar WallDirector Software

Simple, Comprehensive Interface For Clarity Matrix G3 and Planar DirectLight X

Allows for user control of all Planar WallSync features:

- Turn on/off Smart (Auto) Genlock
- Set sync reference per VC
- Turn on/off scan inversion (only applies to LCD)



# Configuring Planar WallSync

Smart (Auto) Genlock (default):

- Automatically genlocks video wall to whichever input source is configured as the Planar Big Picture Plus (full screen) source

Set Sync Reference (per Planar Video Controller):

- Smart (Auto) Genlock (default)
- Sync In
- HDMI 1, 2, 3 or 4 In
- DisplayPort In (Loop In)

Scan Inversion (per video wall) – *Only applies to Clarity Matrix G3:*

- On (default) – Self-configures to every even number row of displays
- Off

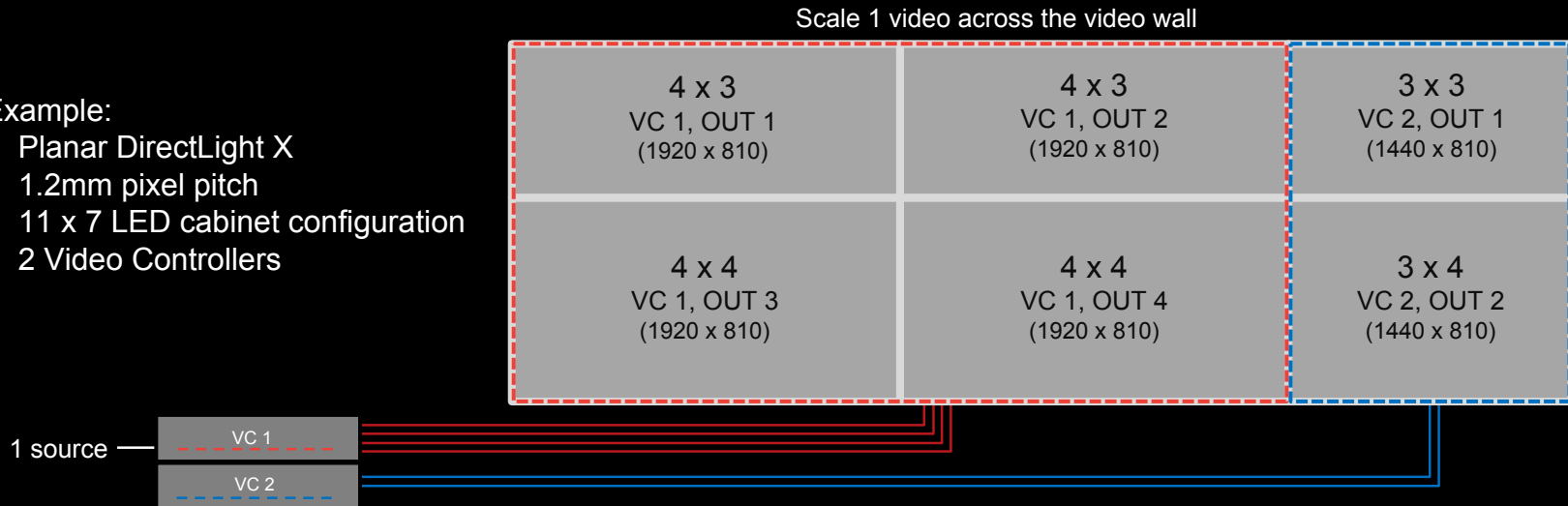
# Addressing Challenges of LED with Planar WallSync

## Accommodating Uncommon Resolutions

- Sync or genlock to 1 source
- Sync multiple VCs
- > 4K video wall with perfectly synchronized video playback and no tearing between 1080 bezel-less sections

### Example:

- Planar DirectLight X
- 1.2mm pixel pitch
- 11 x 7 LED cabinet configuration
- 2 Video Controllers



# How to Apply Planar WallSync to 1-VC Video Walls

Two Use Cases:

1. Sync In hardware allows for genlocking to external source
2. Scan Inversion has value in 2x2 Clarity Matrix G3 LCD video walls with horizontal-motion video performance along horizontal bezel. (Does not require Sync board in VC)

For syncing to a video source connected to the VC, the VC already synchronizes the 4 video outputs to a single clock.

- With a multi-VC wall, the sync cable between VCs ensures synchronization
- Syncing on DisplayPort In (loop channel) with no sync cable interconnection works well too as a means to sync VCs



# Planar WallSync Launch Timing

Date	Item
May 23	Press Release for Clarity Matrix G3 with Planar WallSync Updated Clarity Matrix G3 web pages on Planar.com Updated Clarity Matrix G3 Brochure Updated Clarity Matrix G3 Bid Specs – Partner Portal
In process	Sync Board hardware now being cut into all VC stock
In process	Clarity Matrix G3 in Demo fleet and showroom units updated as necessary – Ron coordinating
In process	Clarity Matrix G3 training materials being updated
June 6-9	Demonstrate at InfoComm
June end	Planar WallSync software release – functionality + WallDirector UI updates

# Upgrading Existing Clarity Matrix G3 Customers

- Upon request by customer
- For-fee upgrade service offering
  - On-site VC upgrades by Planar technician

# Introducing Planar® WallSync™

## Industry's First Fully Integrated Synchronized Video Wall Technology

- Supports video wall synchronization to a range of customer selectable internal and external sync sources
- Ensures perfectly synchronized video display without misalignment or tearing
- Includes unique Smart Genlock feature that works in concert with Planar® Big Picture Plus™ scaling technology
- Works with select LCD and LED video walls from Planar



**THANK YOU**

**PLANAR**<sup>®</sup>