



4 Display Video Wall Processor Data Sheet



Model #: DVI-VIDEOWALL-4HD



WUXGA
1920x1200

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Section 1: General Description

Avenview 4 Display Video Wall Processor, DVI-VIDEOWALL-4HD is a display wall controller that accepts a standard single or dual-link DVI input and can flexibly display this across four output monitors.

Each output can be driven as DVI or analog RGB, and can represent an arbitrary crop region of the original input image. The output resolution and frame rate does not need to be related to that of the input as the Avenview DVI-VIDEOWALL-4HD will optionally upscale and frame-rate convert each cropped region independently. Additionally, each output can be independently mirrored or rotated through 90°, 180° or 270° to support creative mixes of landscape and portrait monitors.

At high resolution, DVI signals cannot normally be guaranteed beyond 5m cables due to the nature of the signal losses inherent in the DVI cables and connectors. Avenview have added active equalization hardware on the DVI-VIDEOWALL-4HD which is able to compensate for these losses and support cable lengths of up to 20m even at full dual-link resolutions (330Mhz pixel clocks). Lower resolutions will allow even longer cable lengths.

Section 2: Features

- Supports full bezel width and height correction for all types of displays
- Ideal for use with edge blending projectors and also supports image overlapping.
- Splits a single DVI input into four independent monitor outputs.
- Accepts Dual Link DVI, Single Link DVI or HDMI* input. (*HDMI input requires the optional DVI/HDMI Adapter)
- The input EDID is programmable to allow arbitrary input resolutions and frame rates.
- Flexibly drives four displays, each from any selected region of the input image.
- Supports both DVI and analog RGB output monitors.
- Stand alone operation supports auto-detecting of input resolution and output monitor native resolutions. Output screen configuration is defined by internal non-volatile memory.
- Output configuration is programmable via a USB connection to a PC. Graphical utility allows easy control of cropping, scaling, rotation and gaps
- Active equalization hardware for longer cable support up to 20m for full Dual Link, for more flexible positioning.

Section 3: Advanced Features

3.1 Supports Creative Monitor Arrangements

Each output monitor can take its input from any region of the input DVI image, since all the required cropping, scaling, rotation and frame-rate conversion is handled by the DVI-VIDEOWALL-4HD hardware. These regions can overlap to allow any output to replicate another, or they can be configured to support any creative splice of the source material. This allows the support of many non-rectangular screen arrangements with uneven gaps, and any mix of monitor orientations.



3.2 Dual-Link DVI Input Supports High Resolutions

Dual-Link DVI input will support high resolution pixel-perfect source images for display. The Avenview DVI-VIDEOWALL-4HD can additionally present a default native resolution to the source to allow still higher custom resolutions at reduced frame rate, but still remain within the capabilities of the Dual-Link interface.

Most standard graphics card sources will output at this native resolution. Since the DVI-VIDEOWALL-4HD will scale and frame-rate convert, using a triple-buffered capture architecture, the output monitors can still be driven at their preferred frame rates and resolutions.

3.3 Easily Configurable

The DVI-VIDEOWALL-4HD supports simple editing of custom input and output configurations via a USB connection to a PC.

Once configured, the DVI-VIDEOWALL-4HD will run stand-alone, without the need for the USB connection, and will auto detect input resolutions and adjust internal scaling appropriately to drive the output monitors in a consistent manner.

3.4 Genlock

The Avenview DVI-VIDEOWALL-4HD will auto-sense input and output frame rates and automatically genlock when possible. Four identical output monitors will automatically be driven genlocked and if the input timings match they are additionally genlocked and clock-locked to the source signal.

Section 4: Specification

| Item | Description |
|---|--|
| Model | DVI-VIDEOWALL-4HD |
| Unit Description | 4 Display Video Wall Controller |
| Video Format Support | HDMI, DVI, VGA, Component, S-Video, Composite (Only one Digital and one Analog can be input simultaneously) |
| Output Support | DVI & VGA (VGA via DVI to VGA adapter) |
| Audio Support | No |
| 1x Dual Link DVI Capture | To 330 Mpixels/s |
| Input Surface | 4k x 4k maximum |
| System Control | USB |
| 4X Single Link DVI or Analog RGB Outputs | To 165 Mpixels/s |
| Output Screen Resolutions | Up to 2.5Mpixel (maximum 2048 pixels in either direction) |
| Arbitrary Up Scaling | 64x original surface area |
| Firmware Support | Updates via USB |
| Input Connectors | DVI x 1 |
| Output Connectors | DVI x 4 |
| DVI Connector | DVI-I (29-pin female, digital only) |
| Dimensions (L x W x H) | 9.25" x 6.9" x 1.75" |
| Power Supply | 5V DC Power 100~240V |
| Power Consumption | 11 Watt (max) |
| Environmental | |
| Operating Temperature | 32° ~ 90°F (0° to 35°C) |



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