

# Stand Alone Display Wall Controller

## Advanced Graphics Display Technology



x4

### Description

The Datapath x4 is a stand alone 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 Datapath x4 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. Datapath have added active equalization hardware on the x4 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.

### Features

- Supports full bezel width and height correction for all types of displays
- Ideal for use with edge blending projectors – 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.

## Advanced Features

### 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 x4 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.



### Dual-Link DVI Input supports high resolutions

Dual-Link DVI input will support high resolution pixel-perfect source images for display. The Datapath x4 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.

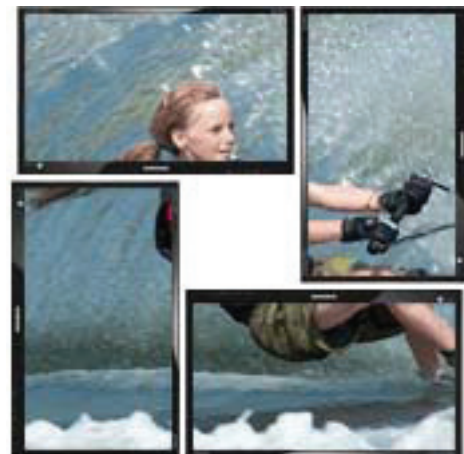
Most standard graphics card sources will output at this native resolution. Since the x4 will scale and frame-rate convert, using a triple-buffered capture architecture, the output monitors can still be driven at their preferred frame rates and resolutions.

### Easily Configurable

The x4 supports simple editing of custom input and output configurations via a USB connection to a PC. Once configured, the x4 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.

### Genlock

The Datapath x4 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.



## Advanced Features

Physical Dimensions	235 x 175 x 44mm/9.25" x 6.9" x 1.75"
Operating Temperature Range	0 - 35 DegC/32 - 96 DegF
Power Requirements	5V DC, 18W. Universal mains power adapter supplied (100-240V)
USB 2.0	Full speed (12Mbits/s) operation supported
Cooling	Cooling by internal fan. The input/output vents should not be restricted.
1x Dual link DVI capture	To 330Mpixels/s
Input Surface	4k x 4k maximum
4x Single link DVI or analog RGB outputs	To 165Mpixels/s
Output Screens Resolutions	Up to 2.5Mpixel (maximum 2048 pixels in either direction)
Arbitrary Up Scaling	64x original surface area
Firmware Support	Updates supported via USB
MTBF	50,000hrs
Warranty	3 years

**PLEASE NOTE: The X4 does not handle HDCP content**