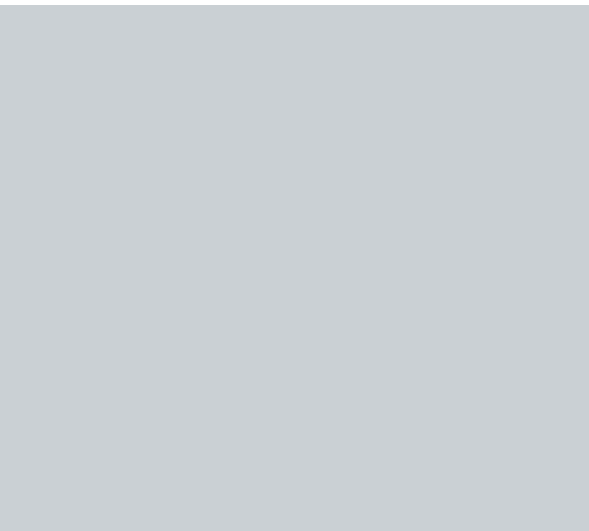# FSN DVE card

2D Digital Video Effects (DVE) card

The 2D-DVE card allows you to create PIPS from any source. A wide variety of effects are offered, including sizing, positioning, cropping, and programmable borders and shadows. Up-to two 2D-DVE cards can be installed in the FSN-1400 chassis, each card containing two independent DVE channels. All inputs and outputs signals to the DVE card are internal to the chassis, and no external connections or rear I/O connector card is required.

Keyframes and the shot box
Using the touch screen menu, you can easily create keyframe effects, allowing PIPs to 'fly' anywhere on or off screen with ease. PIP size, border and shadow parameters can all be dynamically re-sized from one keyframe to the next, creating sophisticated and visually dynamic morphing effects. In addition, a 'shot box' enables you to store and retrieve 128 keyframe 'looks'. Complete keyframe effects can also be stored and recalled from the switcher's memory system.

Flip, freeze, colorize
In addition to creating PIPs and keyframe effects, the DVE card enables you to create a variety of stunning special effects. For example, a full color image can be tinted to appear in sepia tone, monochrome, strobed at variable rates, frozen, or flipped both horizontally and vertically. In addition, each of the RGB components for any selected input can be modified independently, allowing you to colorize images according to the creative requirements of your program.

DVE menu
The system's DVE menu provides an easy and intuitive way to set up and run each DVE channel. All buttons are color-coded according to functionality, and on the menu's "size and position" tab, the central palette contains dedicated presets for rapid and accurate effect creation. Additional tabs are provided for effect setup,

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DVE applications

Following are two of the many applications for which the FSN's 2D DVE can be used.

Image cropping and resizing

In this application, the FSN's native resolution is set to 1920 x 1080i: A video server provides a background image at 720p. A live SD-SDI image with a 4:3 aspect ratio is captured by the FSN. A portion of the live image is cropped and displayed in a PIP. A border and shadow are added to the cropped image. Using a dual-keyframe effect, the PIP can be dynamically resized and moved anywhere on or off screen.

- A video server provides a background image at 720p.

- A live SD-SDI image with a 4:3 aspect ratio is captured by the FSN.

- A portion of the live image is cropped and displayed in a PIP.

- A border and shadow are added to the cropped image.

- Using a dual-keyframe effect, the PIP can be dynamically resized and moved anywhere on or off screen.

Cut and fill

In this application: The image from the video server is used as a background The high-contrast cut signal is generated on a PC The live camera provides the fill signal Individual DVE channels are assigned to both the cut and fill signals, and the resulting PIP is keyed over the background

- The image from the video server is used as a background

- The high-contrast cut signal is generated on a PC

- The live camera provides the fill signal

- Individual DVE channels are assigned to both the cut and fill signals, and the resulting PIP is keyed over the background

Note that within the FSN, any source can be used as a cut or fill signal and routed to any DVE channel.