

ScreenSHAPER™

Video Mapping System

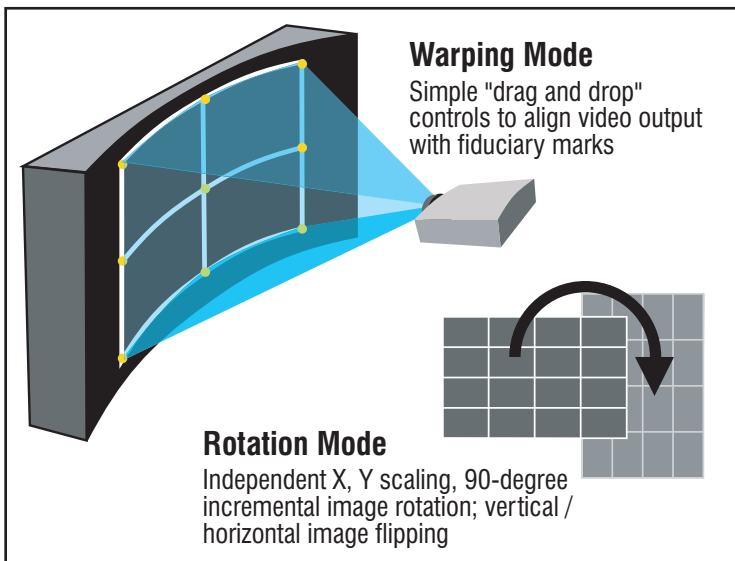


System Description

ScreenSHAPER is a self-contained 19-inch rack mount unit. The unit processes an input image to correct geometry errors introduced when an image is projected off-axis (keystone correction) or on a screen that is not flat in Warp Mode and for non-curve applications to adjust overlap region aberrations caused by lens distortion or imperfect projector placement. However, in Rotation Mode, ScreenSHAPER performs image rotation, image mirroring and scan conversion. ScreenSHAPER accepts high-resolution video in analog RGB or digital DVI format. The unit automatically locks to the input video and processes it in real time. The operator can process the entire input image or select an input area of interest to be scaled and processed.

In Warp Mode ScreenSHAPER supports general-purpose distortion correction through the use of drag and drop controls for the alignment of image elements to fiducial marks on the screen surface. In Rotation Mode, ScreenSHAPER supports rotation of an input image in 90-degree increments: 0, 90, 180, and 270 as well as image mirroring (flipping an image left-to-right) and inversion (flipping an image from top-to-bottom)

ScreenSHAPER can perform scan conversion in addition to the specified re-mapping functions. The output format may be selected by the user to match the native resolution of the output device to optimize image fidelity.



System Features:

- Accepts analog RGB or digital DVI video with resolutions up to 1280x1024, non-interlaced
- Automatically locks to the input video and processes it in real-time
- Processes the entire input image or a user-defined "area of interest"
- Supports independent X, Y scaling for aspect ratio correction
- Image flip: left-to-right and top-to-bottom
- Simple "drag and drop" controls are used to align image elements with fiducial marks
- User-selectable Output Formats: VGA (640x480), SVGA (800x600), XGA (1024x768), SXGA (1280x1024)
- Supports RGB or DVI video output
- Simple, intuitive front panel controls support quick set-up
- RS-232/485 serial interface for remote control of all functions
- Rugged 19" rack-mount chassis
- Non-volatile storage of configuration data
- Built-in test generator
- Backed by full three-year warranty

Typical Operation

Warp Mode: ScreenSHAPER can be used whenever it is necessary to correct geometry errors introduced by an optical system. Typical applications include correction for distortion when an image is projected off-axis or onto surfaces that are not flat.

Rotation Mode: ScreenSHAPER can be used whenever it is necessary to rotate or flip a high-resolution image. Typical applications include conversion of vertically-scanned images to standard raster format, rotation to support displays in portrait mode (rather than in the typical landscape mode) and mirroring to correct for image flips introduced by optical systems.

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▶ specifications

Video Input

Number: 1

Video Signal Format: Accepts analog (RGB) and digital (DVI) video

Resolution: Supports resolutions up to 1280x1024, 60 Hz, non-interlaced

Input Sync Format: Separate H & V Sync, C sync or Sync on Green.

Connector: DVI-I connector supports both digital and analog input; HD-15 adapters are available.

Termination: 75 ohms for analog video

Video Output

Number: 1

Video Signal Format: Outputs analog (RGB) and digital (DVI) video

Resolution: Supports resolutions up to 1280x1024, 60 Hz, non-interlaced

Output Sync Format: Separate H & V Sync, C sync or Sync on Green.

Connector: DVI-I connector supplies digital and analog output; HD-15 adapters are available.

Output Impedance: 75 ohm for analog video

Video Processing

Processes the entire input image or a user-defined "area of interest" in real time

Transport delay: 2 frames

User-selectable Output Format: VGA (640x480), SVGA (800x600), XGA (1024x768), SXGA (1280x1024)

WARP MODE

Geometry Correction: General-purpose algorithm supports precise alignment

ROTATION MODE

Supports independent X,Y scaling for aspect ratio correction.

Supports rotation in 90-degree increments: 0, 90, 180 and 270

Image Flip: Left-to-right and top-to-bottom

User Controls

Front Panel Controls: Electro-luminescent display, control knob and six keys provide a menu-based front panel interface to simplify set-up and adjustments.

Remote Control: RS-232/RS-485 serial interface provides remote control of all functions.

Physical

Width: 17" (432mm) or 19" (483 mm) with rack mount option

Height: 1.75" (44.5mm) one Rack Unit

Depth: 16" (454.5mm) all input/output connectors are mounted on the rear of the unit

Weight: 9 lbs (4.1 kg); Shipping Weight: 13 lbs (5.91 kg)

Input Power

98-264 VAC, 47-63 Hz, auto-ranging, 45 watts maximum

Environmental

Operating temperature: 0-40 degrees C; Humidity: 0-95%, non-condensing

Warranty

All video products are designed and tested to the highest quality standards and are backed by a full three-year parts and labor warranty.

About Folsom Research

Folsom Research, Inc., has been designing and marketing specialized down converter and image processing products since 1979. These products are used in computer graphics, broadcast, presentation, medical, radar, government, and military applications. We are continually expanding our product lines to meet the needs of our customers.

Engineering support and custom design services are provided by our experienced design staff. We commonly modify existing products or provide custom designs to satisfy unique application requirements. For further information on our products or engineering services, please contact us by one of the means listed below.

More Information

Telephone (916) 859-2505 or toll-free (888) 414-7226; fax (916) 859-2515; e-mail to sales@folsom.com; or visit our web site at www.folsom.com

ScreenSHAPER Real Panel



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