Convert HDSDI to DVI

HD-SDI to DVI PLUS Scaler Box

Combines SDI and DVI Equipment for Maximum Interoperability

The HDSDI to DVI PLUS Scaler is the newest revision of our HDSDI conversion line incorporating SD/HDSDI Single or Dual link mode conversion scaled to Full Single link DVI-D. Resolutions of up to 1080p are supported over the DVI link for those that want true "High Definition". Performance has been greatly enhanced due to Gennum's VXP Scaler onboard; allowing for new features such as: Genlock, Color & Gamma Correction, Noise Reduction, Detail Enhancement, Aspect Ratio Selection, Pattern Generator Mode, & Multiple Language Menu Support. Bottom Line? -- More performance, less cost.

SDI
SDI (serial digital interface), used primarily in broadcasting, converts and transmits digital video through SDI connectors. It enables video sources to process high definition, high quality video.

How It Works

HD-SDI devices are connected to the HD-SDI input and DVI devices are connected to the DVI output. When the source, display and the Scaler are powered and connected, video signals are converted to the proper format

Note: Please click here for the RS232 control manual

Features:

- 10-bit resolution for greater precision and dynamic range
- Proprietary 10-bit motion adaptive video de-interlacing with edge interpolation for HD / SD formats.
- Advanced noise reduction and detail enhancement
- Max. active image size of 2048 samples x 2048 lines PBP processing for various combinations of video and graphics with alpha blending
- Fully integrated sprite based multi-plane OSD controller.
- Frame rate conversion to / from any refresh rate
- Pattern mode w/ color bars & cross hatch patterns
- Color correction
- Noise Reduction
- Detail Enhancement
- Brightness Adjustment
- Gamma Selection
- Aspect Ratio Select
- Custom Timing output mode
- French/English Menu Set
- RS-232 upgradeable firmware
- RS-232 and/or IR Control
- Genlock

Specifications:

- Input Video Bandwidth: 2x 1.485 Gbps (Dual Link HD-SDI)
- Output Video Bandwidth: 165 MHz (Single Link DVI-D)
- Maximum Input/Output Resolution: 2048x1024
- Audio Output: 2 channel Analog Audio
- Rack Mountable
- Power Supply: 5V DC
- Shipping Weight: 5 lbs.
- Dimensions: 8.25"W x 1.75"H x 7.5"H

Package Includes:

- HD-SDI to DVI PLUS Scaler Box
- 5v Power Supply
- RMT-8HDS-IR remote control
- Users Manual

EXT-HDSDI-2-DVISP

Supported Input formats:	Output video formats supported:
480i	483p/59.94
480p	576p/50
576i	720p/23.97
576p	720p/24
720p/23.97	720p/25
720p/24	720p/29.97
720p/25	720p/30
720p/29.97	720p/50
720p/30	720p/59.94
720p/50	720p/60
720p/60	1035i/59.94
720p/59.94	1035i/60
1035i/59.94	1080i/50
1035i/60	1080i/50M
1080i/50	1080i/59.94
1080i/50M	1080i/60
1080i/59.94	1080p/23.98
1080i/60	1080p/24
1080p/23.98	1080p/25
1080p/24	1080p/29.97
1080p/25	1080p/30
1080p/29.97	1080p/50
1080p/30	1080p/50M
1080p/50	1080p/59.94
1080p/50M	1080p/60
1080p/59.94	1080sf/23.98
1080p/60	1080sf/24
1080sf/23.98	1080sf/25
1080sf/24	1080sf/29.97
1080sf/25	1080sf/30
1080sf/29.97	2K-p/23.98
1080sf/30	2K-p/24
2K-p/23.98	2K-sf/23.98
2K-p/24	2K-sf/24
2K-sf/23.98	640x350/85
2K-sf/24	640x400/85
Auto Detect	640x480/60
	640x480/75
	640x480/85
	800x600/60
	800x600/75
	800x600/85
	1024x768/60
	1024x768/75
	1024x768/85
	1280x854
	1152x864/75
	1280x768/60
	1280x960/60
	1280x960/85
	1280x1024/60
	1280x1024/75
	1280x1024/85
	1360x768/60
	1366x768/60
	1366x923/50
	1440x900/60
	1440x1080/60
	1600x1024
	1600x1200/60
	1600x1200/65
	1600x1200/70
	1600x1200/75
	1680x1050/60
	1920x1200/60
	2048x1080

Gefen

HD-SDI to DVI
Scaler PLUS
USER MANUAL

www.gefen.com

ASKING FOR ASSISTANCE

Technical Support:
Telephone   (818) 772-9100
                             (800) 545-6900

Fax   (818) 772-9120

Technical Support Hours:
8:00 AM to 5:00 PM Monday through Friday PST

Write To:

Gefen, Inc.
c/o Customer Service
20600 Nordhoff Street
Chatsworth, CA 91311

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gsinfo@gefen.com

Notice
Gefen Inc. reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

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TABLE OF CONTENTS

The HDSDI to DVI PLUS Scaler is the newest revision of our HDSDI conversion line incorporating SD/HDSDI Single or Dual link mode conversion scaled to Full Single link DVI-D. Resolutions of up to 1080p are supported over the DVI link for those that want true "High Definition". Performance has been greatly enhanced due to Gennum's VXP Scaler onboard; allowing for new features such as: Genlock, Color & Gamma Correction, Noise Reduction, Detail Enhancement, Aspect Ratio Selection, Pattern Generator Mode, & Multiple Language Menu Support. Bottom Line? -- More performance, less cost.

HOW IT WORKS

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FEATURES
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• Advanced noise reduction and detail enhancement
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• Gamma Selection
• Aspect Ratio Select
• Custom Timing output mode
• French/English Menu Set
• RS-232 upgradeable firmware
• RS-232 and/or IR Control
• Genlock

CONTENTS
The HD-SDI to DVI Scaler consists of:

(1) HD-SDI to DVI PLUS Scaler Box
(1) 5v Power Supply
(1) Users Manual

Infrared Eye

Power Indicator
Light

RS-232
Uplink Port

5V Power
Connector

Audio Output

HD-SDI
Input 1
/ Loop
Out 1

HD-SDI
Input 2
/ Loop
Out 2

DVI-D Output

Aspect:

  -Full Screen: Stretches input to fill the Monitor.
  -Letter / Pillar Box: Sets the aspect ratio to fit a letter or pillar box format.
  -Panoramic: Panoramic Zoom feature
  -Extract: Feature to magnify the signal.
      -Exact Size: Adjusts signal magnification.
      -Horizontal / Vertical Position: Moves the magnified signal Horizontally
       and Vertically
  -Through: Feature to crop the signal.
      -Horizontal / Vertical Size: Horizontally and Vertically contracts or
       expands the cropping viewport.
      -Horizontal / Vertical Position: Move the signal Horizontally or Vertically
       inside the cropping viewport.
  -Two Screens: Option becomes available if using Dual Link HDSDI.

Layout:

  -Size and Position:
      -Horizontal / Vertical Size: Adjust Horizontal or Vertical resolution.
      -Horizontal / Vertical Position: Move image Horizontally or Vertically.

Picture:

  -Image Color:
      -Contrast: Individually adjust the contrast for red, green and blue
      -Brightness: Individually adjust the brightness for red, green and blue
      -Black level: Adjust black levels between 0 (default) and 100
  -Detail Enhancement:
      -Detail Enhancement: Digitally enhance signal
      -Noise Threshold: Adjusts noise allowed in detail enhancement
  -Noise Reduction: Digitally reduce signal noise
  -Motion Threshold

Input:

  -Input Video Format: Auto Detect by default. Signal can be forced to a specific
      High-definition resolution. (Please see Supported Input/Output
      Resolutions for more information).
  -Link Configuration: When using dual link SDI/HDSDI input, allows you to select
      either YCbPr or RGB color spaces.
  -Clean Aperture:
      -Horizontal and Vertical Size: Stretch image Horizontally or Vertically
      -Horizontal and Vertical Position: Move image in view port Horizontally or
       Vertically

Input Menu Continued...

-Audio: Selects which audio pair to use for audio output (1 - 8); Default is Channel 1.

-Remote Channel: Changes the IR code of the HD-SDI to DVI Scaler to one of 4 different settings between 0 and 3. When the remote channel is changed, dip switches in the 16 button remote must be changed to the corresponding code in order to continue operating the HD-SDI to DVI Scaler. (Please see RMT-8HDS-IR Installation page for more information.)

Output:

-Video Output Format: Select the desired HD output resolution. (Please see Supported Input/Output Resolutions for more information).

-Graphic Output Format: Select the desired computer output resolution. (Please see Supported Input/Output Resolutions for more information).

-Custom Output Format:

-V and HTotal Pixels: Total Horizontal and Vertical pixels for the DVI monitor.

-V and H Total Active Pixels: Total Horizontal and Vertical pixels actually to display the picture.

-HSync and VSync Backporch

-HSync and VSync Width

-Refresh Rate: Change custom Refresh Rate: 20-85.

-Frame Rate: 48, 50, 59.94, 60, 75, and 85Hz.

-Sync Adjust: Horizontal and Vertical Sync Adjust (0-3 with Default: 0)

-Genlock:

-Off: Free run mode.

- VIdeo Input: Locks input clock in sync with output clock.

-Ref. Input: Locks output clock with Ref. clock.

-Language: Set menu to display English or French text.

-Gamma Correction:

-Default: Set for Default Gamma settings.

-sRGB

-Custom: Enables Gamma Coefficient menu item as the current Gamma coefficient.

-Gamma Coefficient: (0.3 - 3.0); Default set at 1.0.

-User Table

Patterns:

-Color Bars: Display color bar video pattern.

-Cross Hatch: Display cross hatch video pattern.

General:

-Firmware Version

-Kernel Version

-Configuration Version

-FPGA Version

-Remote Channel

SUPPORTED INPUT/OUTPUT RESOLUTIONS

Input Video Formats Supported:

480i	720p/50	1080p/23.98	1080sf/23.98
480p	720p/59.94	1080p/24	1080sf/24
576i	720p/60	1080p/25	1080sf/25
576p	1035i/59.94	1080p/29.97	1080sf29.97
720p/23.98	1035i/60	1080p/30	1080sf/30
720p/24	1080i/50	1080p/50	2K-p/23.98
720p/25	1080i/50M	1080p/50M	2K-p/24
720p/29.97	1080i/59.94	1080p/59.94	2K-sf/23.98
720p/30	1080i/60	1080p/60	2K-sf/24

Output Video Formats Supported:

480i	720p/50	1080p/23.98	2K-p/23.98
480p	720p/59.94	1080p/24	2K-p/24
576i	720p/60	1080p/25	
576p	1035i/59.94	1080p/29.97	
720p/23.98	1035i/60	1080p/30	
720p/24	1080i/50	1080p/50	
720p/25	1080i/50M	1080p/50M	
720p/29.97	1080i/59.94	1080p/59.94	
720p/30	1080i/60	1080p/60	

Output Graphic Formats Supported:

640x350/85	1024x768/75	1280x1024/85	1920x1200/60
640x400/85	1024x768/85	1360x768/60	2048x1080
640x480/60	1280x854	1366x768/60	
640x480/75	1152x864/75	1366x923/50	
640x480/85	1280x768/60	1440x900/60	
800x600/60	1280x960/60	1440x1080/60	
800x600/75	1280x960/85	1600x1024	
800x600/85	1280x1024/60	1600x1200/60	
1024x768/60	1280x1024/75	1680x1050/60	

On power up, the HD-SDI to DVI Scaler will automatically detect the input format of the input. The unit is controlled using the included 8 button remote.

Pressing the OUTPUT button cycles the HD-SDI to DVI Scaler through the following output modes: 640x480 - 800x600 - 720p - 1080i

Other functions and output modes can be accessed through the onscreen menu.
(To Restore I/O settings, simply recycle power on the Scaler)

To bring up the onscreen menu, press the MENU button. Navigation is done using the UP, DOWN, LEFT, RIGHT and ENTER buttons.

The SOURCE button selects the input source (Input 1 or Input 2)

*Note: Both dip switches under the remote battery cover must initially be in the OFF position to communicate with the Scaler. For more information, please see page 7 for RMT-8HDS-IR Installation instructions.
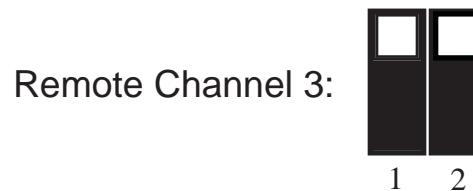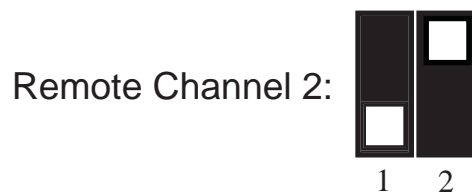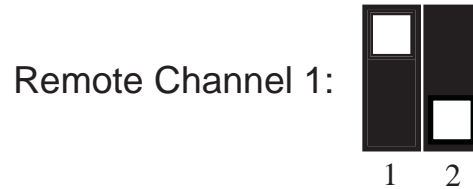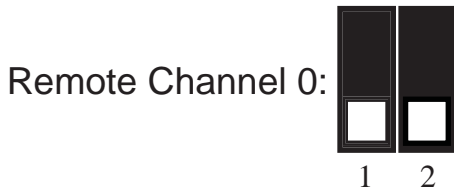
1. Remove battery cover from the back of the RMT-8HDS-IR remote.

2. Verify that dip switches 1 & 2 are in the down (OFF) position.

3. Insert the battery, hold the battery so that you can see the positive side facing up. The side that is not marked must be facing down.

4. Test the RMT-8HDS-IR remote by pressing ONLY one button at a time. The indicator light on the remote will flash once each time you press a button. WARNING: Do not press multiple buttons simultaneously and do NOT press buttons rapidly. These actions will cause the remote to reset and steps 1-4 will have to be repeated.

   Note: The RMT-8HDS-IR ships with two batteries. One battery is required for operation, the second battery is complimentary.

   The following are the dip switch combinations that correspond to the Remote Code menu option on the HD-SDI to DVI Scaler (Please see Menu Functions section for more information):

Remote Channel 0:

1   2

Remote Channel 1:

1   2

Remote Channel 2:

1   2

Remote Channel 3:

1   2

The HDSDI to DVISP can be controlled via IR remote and through the RS-2323 Uplink port. Check the download section on our website for firmware updates and information on how to control this unit. Go to http://www.gefen.com/kvm/support/download.jsp to find the necessary documents and files.

SPECIFICATIONS

Input Video Bandwidth...2x 1.485 Gbps (Dual Link HD-SDI)

Output Video Bandwidth...1.65 Gbps (Single Link DVI-D)

Maximum Output Resolution...1920x1200@60Hz

Audio Output...2 channel Analog Audio

Rack Mountable...Yes

Power Supply..5V DC

Shipping Weight...5 lbs.

Dimensions...8.25"W x 1.75"H x 7.5"H