



# Convert DVI to HDSDI

## Included Products



RMT-8HDS-IR

## Optional Accessories



## Related Products



HD-SDI to DVI Single Link Scaler Box



DVI to HD-SDI PLUS Scaler Box



HD-SDI to DVI PLUS Scaler Box



HDMI to HD-SDI Scaler Box



HD-SDI to HDMI Scaler Box

## DVI to HD-SDI Single Link Scaler Box

### Enables Compatibility Among SDI and DVI Devices

#### Combines SDI and DVI Equipment for Maximum Interoperability

The DVI to HDSDI Single Link Scaler is the newest revision of our HDSDI conversion line incorporating single link DVI-D conversion scaled to SD/HDSDI Single link modes. Resolutions of up to 1080p are supported over the HDSDI 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 Color & Gamma Correction, Noise Reduction, Detail Enhancement, Aspect Ratio Selection, Pattern Generator Mode, & Multiple Language Menu Support. The Bottom Line? -- More performance, less cost.

#### How It Works

DVI devices are connected to the DVI input and SDI devices are connected to the SDI 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 remote 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
- Lifetime support

#### Specifications:

- Input Video Bandwidth: 165 MHz
- Output Video Bandwidth: 1.485 Gbps
- Maximum Input/Output Resolution: 2048x1080
- DVI Connector: DVI-I 29 pin female (digital only)
- SDI/HDSDI Connector: BNC female
- Data Port: Serial RS-232
- Power Supply: 5V DC
- Power Consumption: 20 watts (Max.)
- Dimensions: 6.5"W x 1"H x 6.75"H
- Shipping Weight: 5 lbs.

#### Package Includes:

- DVI to HDSDI Single Link Scaler
- 5V DC Power Supply
- RMT-8HDS-IR Remote Control
- User's Manual
- Rack Ears



EXT-DVI-2-HDSDISSL

Input video formats supported: Supported output formats:

480i
480p
576i
576p
720p/23.97
720p/24
720p/25
720p/29.97
720p/30
720p/50
720p/60
720p/59.94
1035i/59.94
1035i/60
1080i/50
1080i/50M
1080i/59.94
1080i/60
1080p/23.98
1080p/24
1080p/25
1080p/29.97
1080p/30
1080p/50
1080p/50M
1080p/59.94
1080p/60
1080sf/23.98
1080sf/24
1080sf/25
1080sf/29.97
1080sf/30
2K-p/23.98
2K-p/24
2K-sf/23.98
2K-sf/24
640x350/85
640x400/85
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
Auto Detect

480i
483SDp/59.94
576i
576SDp/50
720p/23.97
720p/24
720p/25
720p/29.97
720p/30
720p/50
720p/59.94
720p/60
1035i/59.94
1035i/60
1080i/50
1080i/50M
1080i/59.94
1080i/60
1080p/23.98
1080p/24
1080p/25
1080p/29.97
1080p/30
1080sf/23.98
1080sf/24
1080sf/25
1080sf/29.97
1080sf/30
2K-p/23.98
2K-p/24
2K-sf/23.98
2K-sf/24



**DVI to HD-SDI  
Single Link  
Scaler  
USER MANUAL**

## ASKING FOR ASSISTANCE

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### 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.

### Write To:

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[support@gefen.com](mailto:support@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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# INTRODUCTION

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Gefen's DVI to HD-SDI Single Link Scaler is the newest revision of our HD-SDI conversion line incorporating full single link DVI-D conversion scaled up to SD/HD-SDI single resolutions. Resolutions of up to 1080p are supported over the HDSDI 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: 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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DVI devices are connected to the DVI input and SDI devices are connected to the SDI output. When the source, display and the Scaler are powered and connected, video signals are converted to the proper format.

### CONTENTS

The DVI to HD-SDI Scaler SL package consists of:

- (1) DVI to HD-SDI SL Scaler
- (1) 6 foot DVI Cable (M-M)
- (1) RMT-8HDS-IR Remote Control
- (1) 5V DC Power Supply
- (1) User's Manual

## OPERATION NOTES

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

The following are the buttons for the RMT-8HDS-IR:

- UP (Navigates cursor up)
- LEFT (Navigates cursor left)
- Enter (Accept Operation / Return to Menu)
- RIGHT (Navigates cursor right)
- DOWN (Navigates cursor down)
- MENU (Show / Hide On-screen Display)
- OUTPUT (Change Output Format)
- SOURCE (Non operational)

To bring up the on-screen menu, press the MENU button. Navigation is done using Buttons up, left, right, and down; Push the Enter button to accept the cursor focus.

Pressing the Output button cycles through the following output modes:  
480i - 576i - 720p - 1080i

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

\*Note: Both dip switches under the remote battery cover must initially be in the OFF position to communicate with the Scaler.



# PANEL DESCRIPTIONS



Infrared Eye

Power Indicator  
Light



5V Power  
Connector

DVI-D Input

RS-232  
Uplink Port

HD-SDI  
Output

## MENU FUNCTIONS

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### 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 Zoom feature

- Extract: Feature to magnify the signal.
  - Extract 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.

### Layout: Feature to Re-size Image resolution.

- 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

## MENU FUNCTIONS (..CONT.)

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### 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).
  
- Input Graphic Format: Auto Detect by default. Signal can be forced to a specific computer resolution. (Please see Supported Input/Output Resolutions for more information).
  
- Clean Aperture:
  - Horizontal and Vertical Size: Stretch image Horizontally or Vertically
  - Horizontal and Vertical Position: Move image in view port Horizontally or Vertically
  
- Remote Channel: Changes the IR code of the DVI to HD-SDI Scaler to one of 4 different settings between 0 and 3. When the remote channel is changed, dip switches in the remote must be changed to the corresponding code in order to continue operating the DVI to HD-SDI Scaler.

(Please see RMT-8HDS-IR Installation page for more information.)

### Output:

- Output Format: Select the desired output resolution. (Please see Supported Input/Output Resolutions for more information).
  
- Genlock Reference: Locks input clock in sync with output clock. (Note: feature only works if input and output frequencies are multiples of each other)
  
- 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.

### Patterns:

- Color Bars: Display color bar video pattern.
  
- Cross Hatch: Display cross hatch video pattern.

## SUPPORTED INPUT/OUTPUT RESOLUTIONS

### Input 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	

### Input Graphic Formats Supported:

640x350/85	1024x768/75	1280x1024/85	1080p/60
640x400/85	1024x768/85	1360x768/60	1920x1200/60
640x480/60	1280x854	1366x768/60	2048x1080
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	

### Output video formats supported:

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

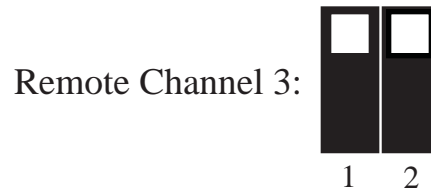
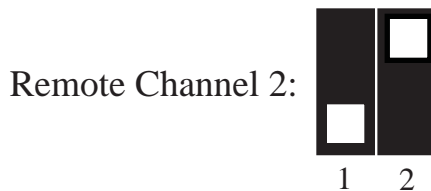
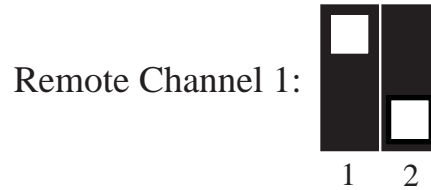
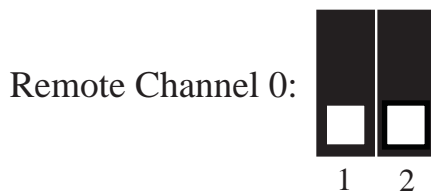
## RMT-8HDS-IR INSTALLATION

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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 DVI to HD-SDI Scaler (Please see Menu Functions section for more information):



## FIRMWARE UPDATE PROCEDURE

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Please check <http://www.gefen.com/kvm/support/download.jsp> for firmware updates and procedures.

## SPECIFICATIONS

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Input Video Bandwidth.....	1.65 Gbps
Output Video Bandwidth.....	1.485 Gbps
Maximum Input Resolution.....	2048x1080
Maximum Output Resolution.....	2048x1080p24
DVI Connector.....	DVI-I 29 pin female (digital only)
SDI/HD-SDI Connector.....	BNC fe- male
Data Port.....	Serial RS-232
Power Supply.....	5V DC
Power Consumption.....	20 watts (Max.)
Dimensions.....	6.5"W x 1"H x 6.75"H
Shipping Weight.....	5 lbs.