



**DVI to HD-SDI  
Scaler PLUS**  
USER MANUAL

## ASKING FOR ASSISTANCE

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### Notice

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## INTRODUCTION

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Gefen's DVI to HD-SDI Scaler PLUS is the newest revision of our HDSDI conversion line incorporating full single link DVI-D conversion scaled up to SD/HDSDI. Resolutions of up to 2K (2048x1080/60) 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: Genlock capability, 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 PLUS consists of:

- (1) DVI to HD-SDI Scaler PLUS
- (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 PLUS 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:

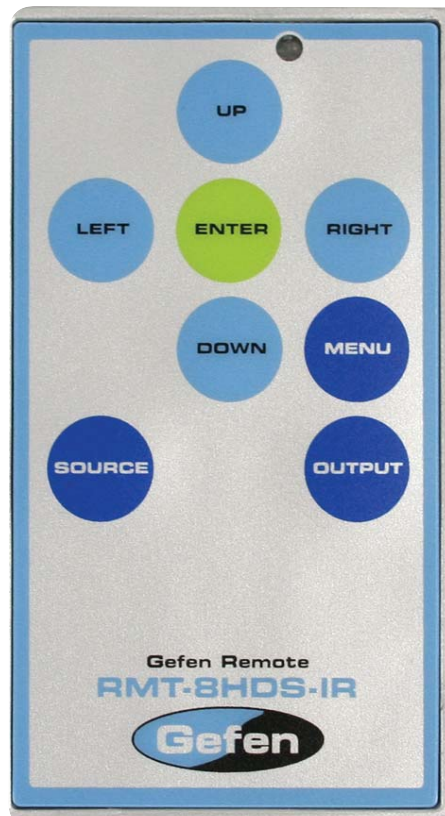
- UP (Navigates cursor up)
- LEFT (Navigates cursor left)
- Enter (Accept Operation / Return to Menu)
- RIGHT (Navigates cursor right)
- DOWN (Navigates cursor down)
- MENU (Show / Hide Onscreen Display)
- OUTPUT (Change Output Format)
- SOURCE (Non operational)

To bring up the onscreen 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 onscreen 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

RS-232 Uplink Port



5V Power Connector

DVI-D Input

Genlock Input

HD-SDI Outputs

## 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: 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 Resize 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

### 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 HDS DI 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 HDS DI 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. 2 locking methods by either the DVI input or the Reference input.  
(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	1080p/60	1280x854
480p	1080sf/23.98	1152x864/75
576i	1080sf/24	1280x768/60
576p	1080sf/25	1280x960/60
720p/25	1080sf/29.97	1280x960/85
720p/24	1080sf/30	1280x1024/60
720p/29.97	2K-p/23.98	1280x1024/75
720p/30	2K-p/24	1280x1024/85
720p/50	2K-sf/23.98	1360x768/60
720p/60	2K-sf/24	1366x768/60
720p/59.94	640x350/85	1366x923/50
1035i/59.94	640x400/85	1440x900/60
1035i/60	640x480/60	1440x1080/60
1080i/50	640x480/75	1600x1024
1080i/50M	640x480/85	1600x1200/60
1080i/59.94	800x600/60	1600x1200/65
1080i/60	800x600/75	1600x1200/70
1080p/23.98	800x600/85	1600x1200/75
1080p/24	1024x768/60	1680x1050/60
1080p/25	1024x768/75	1920x1200/60
1080p/29.97	1024x768/85	2048x1080

### Output video formats supported:

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

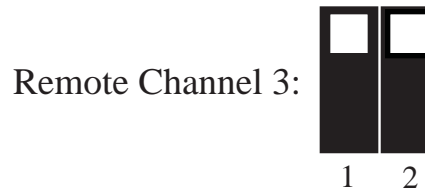
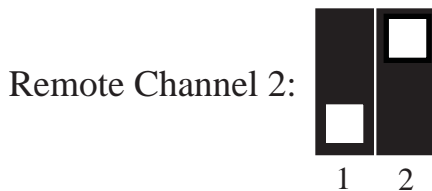
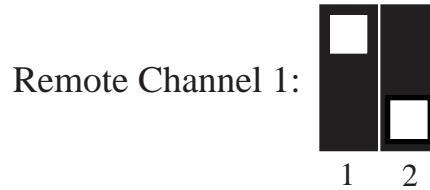
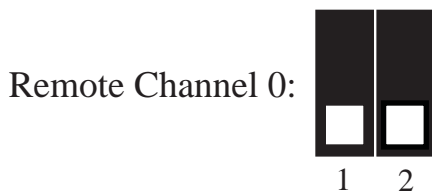
## RMT-8HDS-IR Installation

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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 HDSDI 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.....	6.6 Gbps
Output Video Bandwidth.....	2 X 1.485 Gbps
Maximum Input Resolution.....	2048x1080
Maximum Output Resolution.....	2048x1080p60
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.

## WARRANTY

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Gefen Inc. warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen Inc. is notified within two (2) year from the date of shipment, Gefen Inc. will, at its option repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications.

Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.
2. Customers outside the US are responsible for shipping charges to and from Gefen.
3. Copper cables are limited to a 30 day warranty and cable must be free from any scratches, markings, and neatly coiled.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen Inc. assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen Inc., be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding EXT-DVI-2-HDSDISP features and specifications is subject to change without notice.