

geratech<sup>®</sup>



## EGE-CNV-HD-3SDIAUD

HDMI to 3G-SDI Video  
Converter with Audio





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## SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

## REVISION HISTORY

| VERSION NO. | DATE DD/MM/YYYY | SUMMARY OF CHANGE        |
|-------------|-----------------|--------------------------|
| VS1         | 23/02/12        | First release            |
| VS2         | 11/07/12        | SDI standards updated    |
| VR3         | 03/08/12        | HDMI supports 480i@59.94 |

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## 1. INTRODUCTION

The HDMI to SDI Converter allows HDMI signals to be shown on SDI display while ensuring high bit rates of 2.970 Gbit/s to give you high resolution signal without any loss. For professionals this means that it is now easier to convert your high def HDMI signal with audio to SDI for long distance transmission and display your work on SDI display. In addition, the external audio input allows the user to insert the sound from a different audio source instead of the HDMI embedded audio, and send to the SDI output.

## 2. APPLICATIONS

- Smart Home/Luxury House
- Smart Building or any Smart AV Installation System
- HDMI signal conversion to 3G-SDI display

## 3. PACKAGE CONTENTS

- HDMI to 3G-SDI Converter
- 5 V/2.6 A DC Power Adaptor
- Operation Manual

## 4. SYSTEM REQUIREMENTS

Input HDMI source equipment with HDMI cable and output SDI monitor with SDI cable.

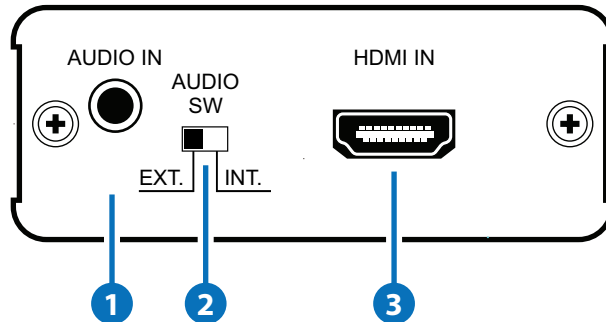
## 5. FEATURES

- Shows HDMI source on SDI display
- SDI interface operates at bitrates of 2.970 Gbit/s, 2.970/1.001 Gbit/s, 1.485 Gbit/s, 1.485/1.001 Gbit/s and 270 Mb/s
- Supports HDMI input timings: 480i@59.94, 576i, 720p@50/59.94/60, 1080i@50/59.94/60, 1080p@23.98/24/25/29.97/30/50/59.94/60
- Converts HDMI signal to SDI:
  1. 480i/576i to SD-SDI (SMPTE 259M-C, at bitrates of 270 Mbit/s)
  2. 720p/1080i to HD-SDI (SMPTE 292M, at bitrates of 1.485 Gbit/s or 1.485/1.001 Gbit/s)
  3. 1080p to 3G-SDI (SMPTE 424M/425M-AB, at bitrates of 2.970 Gbit/s and 2.970/1.001 Gbit/s)
- Supports SDI output distance up to 100 meters (3G-SDI), 200 meters (HD-SDI), or 300 meters (SD-SDI)

**Note:** Tested with Belden 1694A Cable. Operating distances may vary if used with cables of different specifications.

### 6. OPERATION CONTROLS AND FUNCTIONS

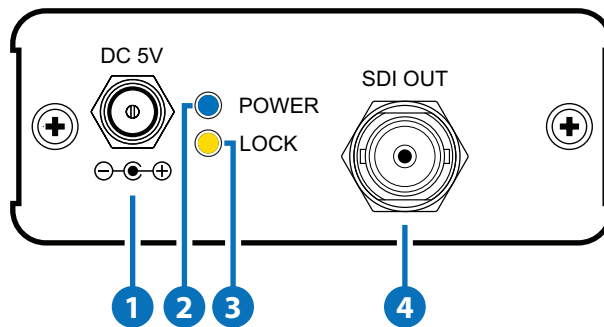
#### 6.1 Front Panel



- 1 **AUDIO IN:** Connect to the audio source equipment (such as DVD player) with 3.5 mm phone jack for audio signal input.
- 2 **AUDIO SW:** This switch allows the user to choose between audio sources. Switch between the external (EXT) audio input (3.5 mm phone jack) or the internal (INT) audio from the HDMI input.
- 3 **HDMI IN:** Connect this port to the HDMI input source such as HD camera or PC with a HDMI cable.

**Note:** When the HDMI input source signal has HDCP content the SDI output will not display any image.

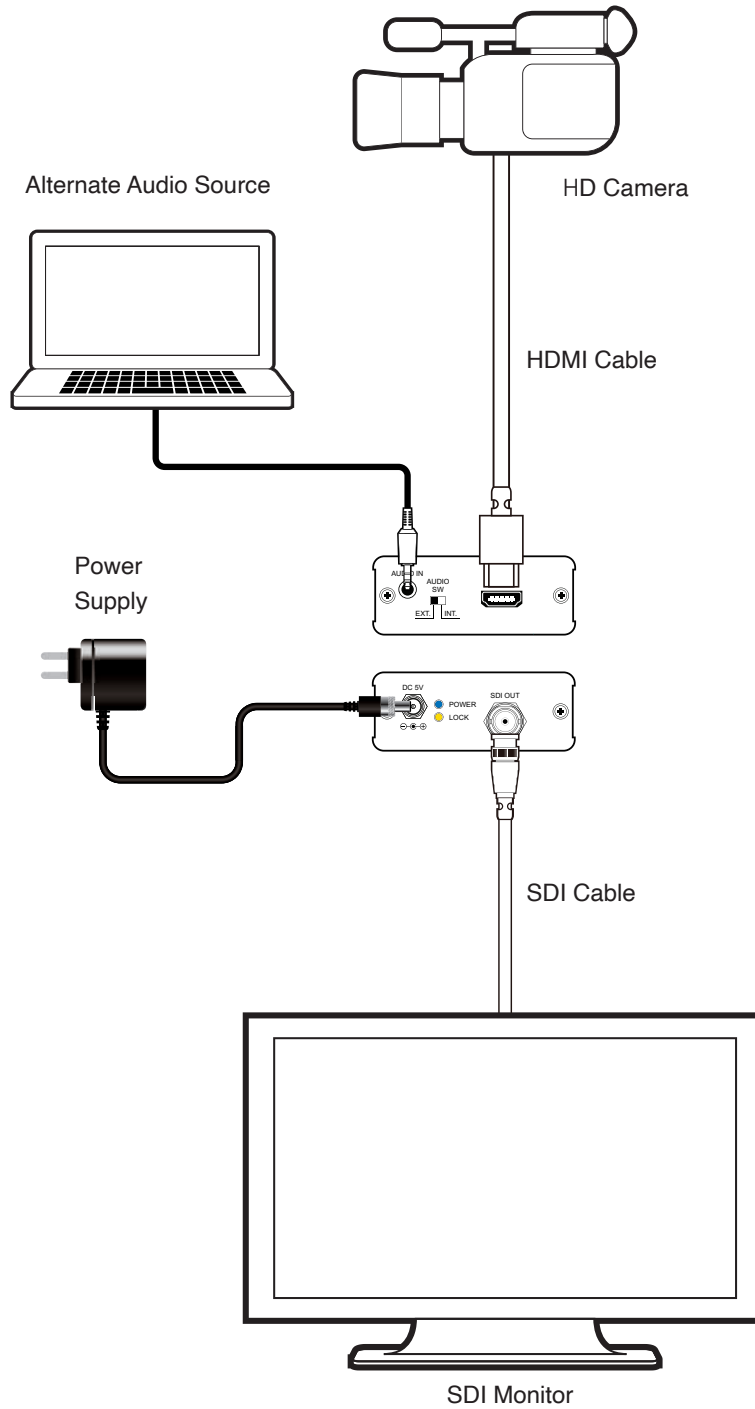
### 6.2 Rear Panel



- 1 **DC 5V:** Plug the 5V DC power supply into the unit and connect the adaptor to AC wall outlet.
- 2 **POWER LED:** This blue LED will illuminate when the device is connected to the power supply.
- 3 **LOCK LED:** This yellow LED will illuminate when both input HDMI source and SDI output display has successfully sent and received the signal.
- 4 **SDI OUT:** Connect to the SDI output display.



**7. CONNECTION AND INSTALLATION**



**8. SPECIFICATIONS**

|                              |   |
|------------------------------|---|
| <b>Video Bandwidth</b>       | 225MHz/6.75Gbps   |
| <b>Input</b>                 | 1xHDMI, 1x3.5 mm Phone Jack   |
| <b>Output</b>                | 1xBNC (SD/HD/3G-SDI)  |
| <b>HDMI Timing Support</b>   | 480i@59.94, 576i, 720p@50/59.94/60<br>1080i@50/59.94/60<br>1080p@23.98/24/25/29.97/30/50/59.94/60   |
| <b>SDI Timing Support</b>    | SD-SDI:<br>SMPTE 259M-C, 270 Mbit/s<br>HD-SDI:<br>SMPTE 292M, 1.485 & 1.485/1.001 Gbit/s<br>3G-SDI:<br>SMPTE 424M/425M-AB, 2.970 & 2.970/1.001 Gbit/s |
| <b>Audio Input Support</b>   | Internal: PCM 2/5.1/7.1 CH<br>External: Analog L/R  |
| <b>ESD Protection</b>        | Human-body Model:<br>±8 kV (Air-gap discharge)<br>±4 kV (Contact discharge)   |
| <b>Power Supply</b>          | 5 V/2.6A DC (US/EU standards, CE/FCC/UL certified)  |
| <b>SDI Cable Distance</b>    | 3G/HD/SD-SDI up to 100/200/300 meters with BELDEN 1694A cable   |
| <b>Dimensions</b>            | 78.5mm (W)×124mm (D)×30mm (H)   |
| <b>Weight</b>                | 198g  |
| <b>Chassis Material</b>      | Aluminum  |
| <b>Silkscreen Color</b>      | Silver  |
| <b>Operating Temperature</b> | 0 °C~40 °C/32 °F~104 °F   |
| <b>Storage Temperature</b>   | -20°C~60°C/-4 °F~140 °F   |
| <b>Relative Humidity</b>     | 20~90 % RH (non-condensing)   |
| <b>Power Consumption</b>     | 5W  |

**Note:** SDI supports SD resolutions of 480i@59.94 and 576i@50 only. If the input source is sending an incompatible resolution, this may cause problems with the image or no image to be displayed. Please ensure that the source device is set to output in a compatible resolution.

**9. ACRONYMS**

| ACRONYM | COMPLETE TERM                   |
|---------|---------------------------------|
| 3G      | <i>Bandwidth 2.97 Gbps≈3G</i>   |
| SDI     | <i>Serial Digital Interface</i> |





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