



Comprehensive[®]
Connectivity Company

CCN-SDI 2HDA

3G SDI to HDMI Converter



Operation Manual

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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/YY	SUMMARY OF CHANGE
VS1	23/02/12	First release
VR2	12/03/12	Add Output Timings
VS3	11/07/12	SDI standards updated

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1. INTRODUCTION

The SDI to HDMI Converter allows SD, HD and 3G-SDI signals to be shown on HDMI display. This means that it is now easier for professionals to distribute and extend their SDI signal while giving the ability to display work on HDMI displays. In addition, the external audio output allows the user to send the audio signal originally embedded in the SDI input to an amplifier or active speakers.

2. APPLICATIONS

- Broadcast video signal conversion to HDMI signal
- 3G-SDI signal conversion to HDMI signal

3. PACKAGE CONTENTS

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

4. SYSTEM REQUIREMENTS

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

5. FEATURES

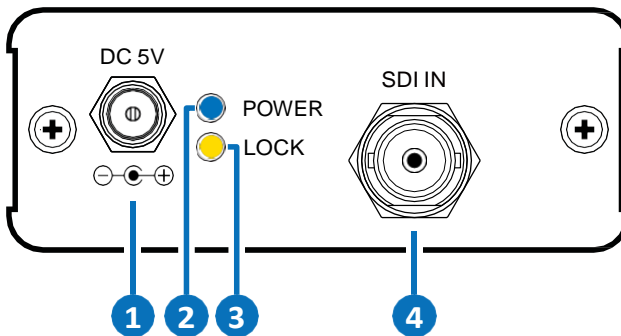
- Shows SDI source on HDMI display
- Supports SD-SDI, HD-SDI and 3G-SDI input signals with auto-detection
- SDI interface operates at bitrates of 2.970 Gbit/s, 2.970/1.001 Gbit/s, 1.485 Gbit/s, 1.485/1.001 Gbit/s and 270 Mb/s
- Converts SDI signal to HDMI:
 1. SD-SDI (SMPTE 259M-C) to 480i/576i
 2. HD-SDI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

2. HD-SDI (SMPTE 292M, at bitrates of 1.485 Gbit/s and 1.485/1.001 Gbit/s)
 3. 3G-SDI (SMPTE 424M/425M-AB, at bitrates of 2.970 Gbit/s and 2.970/1.001 Gbit/s)
- Supports SDI input 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.

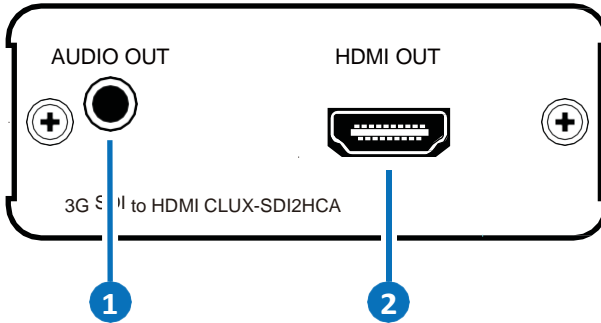
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



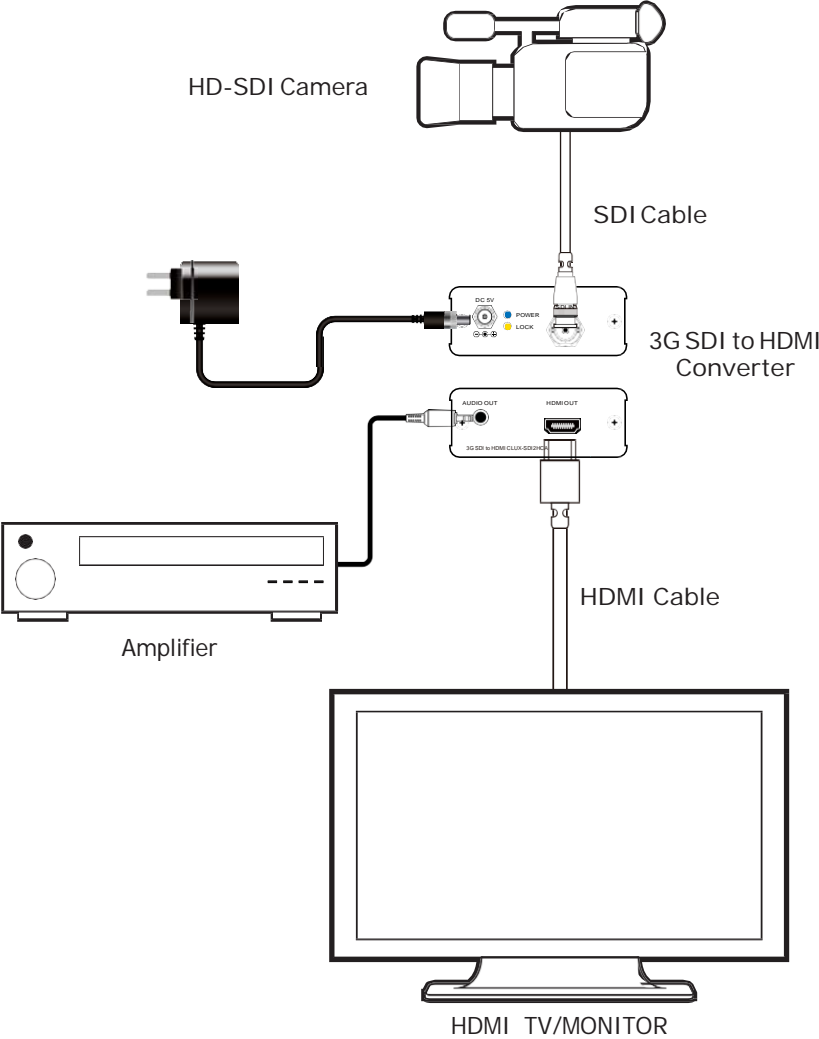
- 1 **DC 5V:** Plug the 5V DC power supply into the unit and connect the adaptor to AC wall outlet.
- 2 **POWER LED:** This blue LED will illuminate when the device is connected to a power supply.
- 3 **LOCK LED:** This yellow LED will illuminate when both input SDI source and output HDMI display has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

6.2 Rear Panel



- 1 AUDIO OUT (3.5mm jack):** Connect to an amplifier or active speakers with 3.5 mm phone jack for external audio output.
- 2 HDMI OUT:** Connect to the HDMI display with a HDMI cable.

7. CONNECTION AND INSTALLATION



8. SPECIFICATIONS

Video Bandwidth	225MHz/6.75 Gbps
Input	1×BNC (SD/HD/3G-SDI)
Output	1×HDMI, 1×3.5mm Phone Jack
SDI Timing Support	SD-SDI: SMPTE 259M-C, 270Mbit/s HD-SDI: SMPTE 292M, 1.485 & 1.485/1.001 Gbit/s 3G-SDI: SMPTE 424M/425M-AB, 2.970 & 2.970/1.001 Gbit/s
HDMI Timing Support	480i/576i, 720p@50/59.94/60 1080i@50/59.94/60 1080p@23.98/24/25/29.97/30/50/59.94/60
Audio Output Support	HDMI: PCM2/5.1/7.1CH 3.5mm Analog: 2 CH
ESD Protection	Human-body Model: ±8kV (Air-gap discharge) ±4kV (Contact discharge)
Power Supply	5V/2.6A DC (US/EU standards, CE/FCC/UL certified)
SDI Cable Distance	3G/HD/SD-SDI up to 100/200/300 meters with BELDEN 1694A cable
Dimensions	78.5mm (W)×124mm (D)×30mm (H)
Weight	202 g
Chassis Material	Aluminum
Silkscreen Color	Silver
Operating Temperature	0°C~40°C/32°F~104°F
Storage Temperature	-20°C~60°C/-4°F~140°F
Relative Humidity	20~90 % RH (non-condensing)
Power Consumption	3.4W

9. ACRONYMS

ACRONYM	COMPLETE TERM
3G	Bandwidth 2.97Gbps \approx 3G
SDI	Serial Digital Interface



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