



HDMI to 3G/HD/SD-SDI Converter



Model #: C-HDM- 3GHDSDDI

3G HD-SD HDMI

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Technical Support



USA OR INTERNATIONAL

PHONE SUPPORT: 1 (866) 508 0269

EMAIL SUPPORT: support@avenview.com

USA Head Office Avenview Corp. 275 Woodward Avenue Kenmore, NY 14217

Section 1: Getting Started

1.1 Important Safeguards

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
- Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
- Repair or attempted repair by anyone not authorized by us.
- Any damage of the product due to shipment.
- Removal or installation of the product.
- Causes external to the product, such as electric power fluctuation or failure.
- Use of supplies or parts not meeting our specifications.
- Normal wear and tear.
- Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 Safety Instructions

The Avenview C-HDM-3GHDSI, HDMI to 3G/HD/SD-SDI Converter has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the C-HDM-3GHDSI should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Do not dismantle the housing or modify the module.
- Dismantling the housing or modifying the module may result in electrical shock or burn.
- Refer all servicing to qualified service personnel.
- Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Have the module checked by a qualified service engineer before using it again.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

1.3 Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

1.4 Introduction

The Avenview C-HDM-3GHDSI provides a professional way to convert HDMI to 3G/HD/SD SDI in real time. The conversion between SDI and HDMI is pure digital and guarantees no loss transformation for both audio and video. Plus, with up to 8 channels audio support, 7.1 channel or 5.1 channel audio becomes available. The C-HDM-3GHDSI also provides 2 low jitter SDI outputs for daisy chain or multiple monitors. With the use of C-HDM-3GHDSI, the most popular uncompressed video interface in the consumer world is readily available for professional SDI equipment.

- Supported 3G formats(SMPTE 425M, Level A):
 - 1080p @50/59.94/60Hz (4:2:2), 1080p @24/25/30Hz (4:4:4), 1080i @50/59.94/60Hz (4:4:4),
 - 720p @24/25/50/59.94/60Hz (4:4:4)
- Supported high-definition (HD) formats:
 - 1080i @50/59.94/60Hz, 1035i @50/59.94/60Hz, 720p @50/59.94/60Hz
- Supported standard-definition (SD) formats: NTSC @59.94Hz, PAL @50Hz
- Auto 3G/HD/SD-SDI detection
- 1 SDI compliant outputs
- External DIP Switch Configuration

1.5 Package Contents

Before you start the installation of the converter, please check the package contents.

- C-HDM-3GHDSI x 1
- Power Adapter (+5VDC, 4A) x 1
- User's Manual x 1
- Rack Mount Ears

1.6 Before Installation

- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.

1.7 Panel Description

1.7.1 Bottom Panel (DIP SWITCH)

A 4-pin DIP switch is used for user interface, and users can access this switch from the bottom of the unit. Output formats, video patterns, SD Pedestal, SD Wide, PAL mode, YPbPr / RGB, SD component or SD composite, YC on/off etc.

PIN #	1	2	3	4
OFF ↑	DVI Mode	Stereo	Audio Group 3 & 4	Update EDID
ON ↓	HDMI	7.1 Channel	Audio Group 1 & 2	Default EDID

1. C-HDM-3DHDSII mainly checks the audio channel in audio group 1&2 or 3&4. Please adjust DIP switch pin 3 for setup.
2. Some HDMI equipped TV may not be able to decipher multiple channel audio, and therefore set DIP switch pin-2 to ON(↓) to get stereo audio work and then check if multiple channel support is available.
3. While DIP Switch pin-4 is set to OFF(↑), 3G Level B will be automatically converted to Level A.
4. C-HDM-3GHDSII supports only audio sample frequency 48kHz.
5. While stereo audio is chosen, CH 1 & 2 of Group 1 or 3 are output.

1.7.2 EDID Learning

To learn EDID follow these steps:

- Turn off C-HDM-3GHDSII and set the Pin 4 of DIP Switch to OFF
- Connect the TV/Monitor through HDMI port to C-HDM-3GHDSII and turn on C-HDM-3GHDSII
- The LED of C-HDM-3GHDSII will dim and light again, which indicates the EDID learning process is finished
- Connect C-HDM-3GHDSII to the HDMI Source through HDMI cable

Section 2: Specifications

Item	Description
Units	C-HDM-3GHDSDI
Unit Description	HDMI to 3G/HD/SD-SDI Converter
SDI Standards	3G-SDI, HD-SDI, SD-SDI
Auto 3G/HD/SD-SDI Detection	Yes
Video Support	3G: 1080p @50/59.94/60Hz (4:2:2), 1080p @24/25/30Hz (4:4:4), 1080i @50/59.94/60Hz (4:4:4), 720p @24/25/50/59.94/60Hz (4:4:4) HD: 720p @50/59.94/60Hz, 1035i @50/59.94/60Hz, 1080i @50/59.94/60Hz, 1080p @24/30Hz SD: NTSC @59.94Hz, PAL @50Hz
Video Bandwidth	2.970Gbps, 2.970/1.001Gbps
Output Signal	3G-SDI: SMPTE 424M/425M HD-SDI: SMPTE 292M, 296M SD-SDI: SMPTE 259M
Input Signal	HDMI
Audio Mode	7.1 / 5.1 / Stereo
Eye Pattern Characteristics	Extra low alignment jitter 0.05µi at HD
Cable Equalization	3G-SDI: up to 60m (200 feet) HD-SDI: up to 150m (500 feet) SD-SDI: up to 300m (1000 feet)
Loop Out	2 equalized and re-clocked SDI Loop Outs
Audio Support	Yes
Output	HDMI x 1
Input	BNC x 2 (SDI)
BNC Connector	3G 75Ω inter-locked socket
HDMI Connector	Type A (19 pin female)
DIP Switch	4 pin (output format / audio format / audio group / 3G level)
Dimensions (L x W x H)	6.3" X 4.3" x 1"
Power Supply	5V 4A DC
Power Consumption	3 Watts (max)

Environmental

Operating Temperature	32° ~ 104°F (0° to 40°C)
Storage Temperature	-4° ~ 140°F (-20° ~ 60°C)
Relative Humidity	20~90% RH (no condensation)

1.1 Supported Resolutions

3G-SDI Output	
1080p @ 60/59.94/50Hz	SMPTE 425M (4:2:2)
1080p @ 30/25/24Hz	SMPTE 425M (4:4:4)
1080i @ 60/59.94/50Hz	SMPTE 425M (4:4:4)
720p @ 60/59.94/50Hz	SMPTE 425M (4:4:4)
HD-SDI Output	
525p @ 59.95Hz	SMPTE 293M, ITU-BIT.1358
625p @ 50Hz	ITU-BT.1358
720p @ 50Hz	SMPTE 296M -3
720p @ 60 / 59.94Hz	SMPTE 296M -1, -2
1080i @ 25Hz	SMPTE 274M -6
1080i @ 30 / 29.97Hz	SMPTE 274M -4, -5
1080p @ 24 / 23.98Hz	SMPTE 274M -10, -11
1080p @ 25Hz	SMPTE 274M -9
1080p @ 30 / 29.97Hz	SMPTE 274M -7, -8
SD-SDI Output	
NTSC	
PAL B, D, G, H, I	



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