

CV-503M

HDMI to 3G/HD/SD-SDI Converter

User Manual



3G HD-SDI



rev: 140509
Made in Taiwan



Safety and Notice

The **CV-503M 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 equipments, the **CV-503M** should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

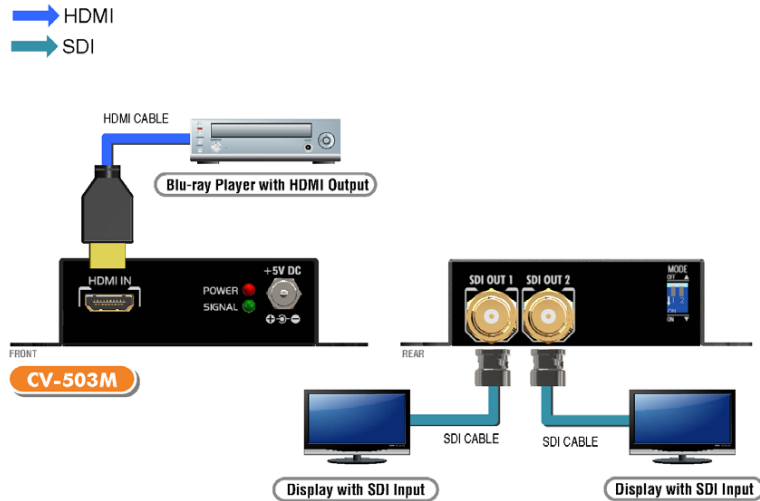


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INTRODUCTION

The **CV-503M HDMI to 3G/HD/SD-SDI Converter** 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 CV-503M also provides 2 low jitter SDI outputs for daisy chain or multiple monitors. With the use of CV-503M, the most popular uncompressed video interface in the consumer world is readily available for professional SDI equipments!



FEATURES

- Supported high-definition (HD) formats:
NTSC 525@59.94, PAL 625@50, 720p@50, 720p@59.94, 720p@60, 1080i@50, 1080i@59.94, 1080i@60, 1080p@23.97, 1080p@24, 1080p@25, 1080p@29.97, 1080p@30, 1080p@50, 1080p@59.94, 1080p@60
Bit Rate: 2.97 Gbps, 2.967 Gbps, 1.485 Gbps, 1.4835 Gbps, 270 Mbps
- Auto 3G/HD/SD-SDI detection
- Support HDMI Deep Color
- Two SDI compliant outputs
- External DIP Switch Configuration

PACKAGE CONTENTS

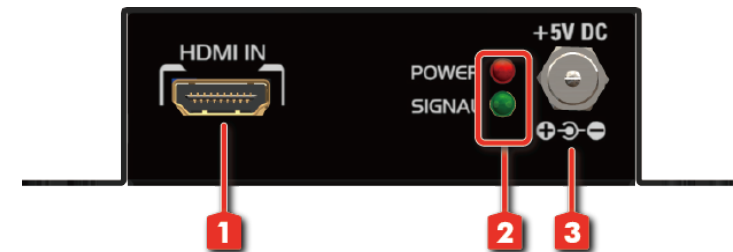
- 1x CV-503M
- 1x 5V/2A power adapter
- 1x User Manual

SPECIFICATIONS

Model Name	CV-503M
Technical	
SDI standards	3G-SDI & HD-SDI & SD-SDI
Auto 3G/HD/SD-SDI detection	Yes
Video bandwidth	[2.97Gbps & 2.975/1.001Gbps]
Video support	[3G] 1080p50/59.94/60 (4:2:2) [HD] – 720p @50/59.94/60Hz, 1080i @50/59.94/60Hz, 1080p @23.98/24/25/29.97/30Hz [SD] – NTSC @59.94Hz, PAL @50Hz
Input signal	HDMI
Output signal	SDI
Output impedance	75Ω
Synchronization mode	Internal synchronization or external synchronization
Eye pattern characteristics	Extra low alignment jitter 0.05UI at HD
Cable equalization	[3G-SDI] up to 90m (300ft) [HD-SDI] up to 150m (500ft) [SD-SDI] up to 300m (1000ft)
Audio support	Yes
PCB stack-up	6-layer board [impedance control — differential 100Ω; single 50Ω]
Input	1x HDMI
Output	2x BNC [SDI]
BNC connector	75Ω inter-locked socket
HDMI connector	Type A [19-pin female]
DIP switch	2-pin [for EDID use]
Mechanical	
Housing	Metal enclosure
Dimensions [L x W x H]	Model 79 x 84 x 27mm [3.1" x 3.3" x 1.2"]
	Package 140 x 200 x 75mm [5.5" x 7.9" x 3"]
	Carton 420 x 400 x 300mm [1'8" x 1'4" x 11.8"]
Weight	Model [TX] – 250g [8.8oz]
	Package 780g [1.7 lbs]
Fixedness	Inter-locked power supply
Power supply	5V 2A DC
Power consumption	3 Watts [max]
Operation temperature	0~40°C [32~104°F]
Storage temperature	-20~60°C [-4~140°F]
Relative humidity	20~90% RH [no condensation]

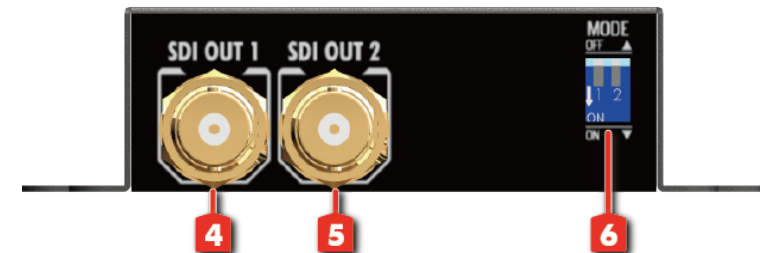
3G-SDI Output	
1080p @ 50/ 59.94 / 60Hz	SMPTE 424M, SMPTE 425M
HD-SDI Output	
720p @ 50Hz	SMPTE 296M -3
720p @ 60 / 59.94Hz	SMPTE 296M -1, -2
1080i @ 50Hz	SMPTE 274M -6
1080i @ 60 / 59.94Hz	SMPTE 274M -4, -5
1080p @ 24 / 23.98Hz	SMPTE 274M -10, -11
1080p @ 25Hz	SMPTE 274M -9
1080p @ 30 / 29.97Hz	SMPTE 274M -7, -8
SD-SDI Output	
NTSC	
PAL B,D,G,H,I	

Front Panel



- HDMI IN:** Connects to a HDMI source with a HDMI male-male cable
- Signal LED:**
 - <green> Both power and signal active.
 - <red> Only power active.
- +5V DC:** Connect to a 5V DC power supply

Rear Panel



- SDI OUT 1:** 3G/HD/SD-SDI output #1
- SDI OUT 2:** 3G/HD/SD-SDI output #2
- DIP switch:** Setup the RS-232 mode for serial communication channel

DIP SWITCH

A 2-pin DIP switch is used for user interface, and users can access this switch from the bottom of the unit.

Pin#1	Pin#2	EDID feature
OFF [↑]	OFF [↑]	3G/HD/SD-SDI with multi-channel audio except DTS-HD & Dolby True HD
OFF [↑]	ON [↓]	3G/HD/SD-SDI With stereo PCM audio
ON [↓]	OFF [↑]	HD/SD-SDI With stereo PCM audio
ON [↓]	ON [↓]	EDID Learning Mode

EDID LEARNING

1. Please make sure the Pin#1-Pin#2 of DIP switch is at On-On [↓-↓].
2. Connect the HDMI display to the HDMI port of TX.
3. Power on TX.
4. After LED turns to light, the EDID Learning procedure is completed.
5. Please DO NOT change the DIP switch, otherwise the built-in EDID Learning information will be lost.

WARRANTY

The SELLER warrants the **CV-503M HDMI to 3G/HD/SD-SDI Converter** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surges.

Unit 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 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

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

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables are limited to a 30 day warranty and cable must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the CV-503M features and specifications is subject to change without further notice.**