User Manual

SD/HD/3G-SDI to HDMI Converter

HD-SD-HDMI

NOTE: The casing design is subject to change without notice.

This device converts a single channel SDI signal to different kinds of HD Multimedia HDMI signal/VGA/S-Video/CVBS signal. It integrates SDI Cable equalizer and reclocker to enhance video performance and stability. Simultaneously, it also separates and converts the audio signals of SDI, embedding it to HDMI signal or output to analog audio DACs.

Features ..

- Support SDI input format: 480i, 576i, 720p50/60, 1080p24/25/30, 1080i 50/60, 1080p50/60.
- Support SMPTE 425M (A level and B level), SMPTE424M, SMPTE292M, SMPTE259M-C.
- Carry 1 channel SDI signal loop out.
- Max. cable length (Belden 1694A): SD-SDI 400m/1300ft, HD-SDI 200m/600ft, 3G-SDI 140m/450ft
- Automatically embed SDI audio signal to HDMI signal.
- User selectable output format (HDMI, VGA, S-Video, CVBS)
- 5V~24V DC

<table>
<tr><td>⚠️</td><td><i>Please read the <u>Manual</u> before attempting to use this product.</i>
<i>Specifications and appearance are subject to change without notice.</i></td></tr>
</table>

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN!**

**TO REDUCE THE RISK OF ELECTRICAL SHOCK,
DO NOT OPEN COVERS (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL.**

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems).

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

⚠️ Caution ..

1. Handle this product with care

Avoid any shock or bumping of the product. Improper handling could damage the product. Do not handle the unit with wet hands. Provide proper ventilation and air circulation and do not use near water.

2. Requires a proper operating environment

This product is not waterproof and is designed for indoor use. The allowable temperature range for operation of this product is between -0°C~40°C / 32°F~104°F.

3. Check the power source voltage

The power source voltage should be within the specified range. (Product must meet the specifications).

4. Objects and liquid entry

Never push objects of any kind into this product as this may touch dangerous voltage points of short out parts that could result in a fire or electric shock. Never spill any kind of liquid on the product.

5. Cleaning

Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

6. Servicing

Do not attempt to service this product by yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all service to qualified servicing personnel.

Package Contents   ..

1.   One (1) SDI to HDMI Converter
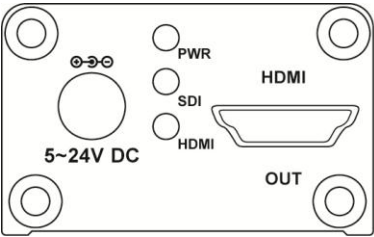2.   One (1) User Manual

1.

2.
Manual

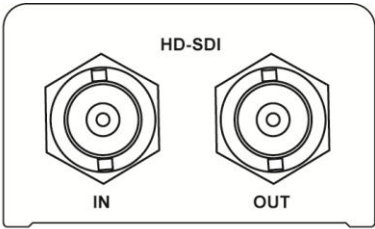*5V~24V DC Power Adapter not included*

For any returns, please include all components listed above with original packaging in **Resalable Condition**. **Absolutely No Returns** will be accepted if any component is missing/damaged.

Parts & Functions   ..
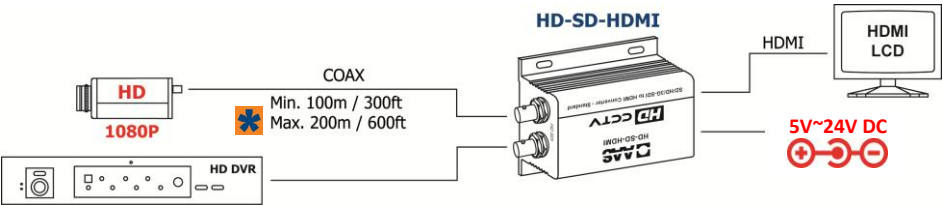
Right Side View:

Left Side View:

Name	Color	Status	Description
HDMI	Green	ON	HDMI hot plug detected (HDMI cable connected)
		OFF	No HDMI hot plug detected
SDI	Green	ON	SDI signal is active
		OFF	SDI signal is inactive
POWER	Green	ON	Power on
		OFF	Power off

Application Diagram ..

* The distance depends on the quality of the SDI signal from the HD camera source and also the Coax Cable & Connector

* *See page 7 for Important Notes about Cable and Connector for SDI HD Camera*

Hardware Installation ..

1. Check the power supply configuration and connect the correct voltage according to the power supply input requirements.
2. Use the standard HDMI cable and connect the HDMI source to HDMI input port.
3. Use SDI coaxial cable and connect the SDI output port with the display equipment.
4. Turn on the power switch.

Technical Specifications

Model	HD-SD-HDMI
Input Interface	1x BNC SDI
Input Signal Type	SD-SDI (270Mbps), HD-SDI (1.485Gbps), 3G-SDI (2.97Gbps)
Support Input Format	480i, 576i, 720p@50/60, 1080i@50/60, 1080p@24/25/30, 1080p@50/60
SDI Signal Range	0.8V p-p
SDI Impedance	75 ohms
SDI Coupling Type	AC Coupling
Max. Input Coax Length	Belden 1694A SD-SDI 400m / 1300ft ; HD-SDI 200m / 600ft ; 3G-SDI 140m / 450ft
SDI Loop Out Interface	1x BNC SDI
HDMI/DVI Output Interface	1x HDMI
Frequency Bandwidth	165MHz/ up to standard with HDCP :HDMI 1.3
Support Output Format	480i,576i,720p@50/60,1080i@50/60,1080p@24/25/30, 1080p50/60
HDMI/DVI Output Format	DIP switch control
HDMI/DVI Color Space Switch	Auto
VGA Output Resolution	VESA compiliance standards
Power Supply	5V~24V DC w/ Locking Power Connector
Power Consumption	10 Watts (max)
Operating Temperature	32°F ~ 104°F / 0°C ~ 40°C
Storage Temperature	-4°F ~140°F / -20°C ~ 60°C
Relative Humidity	20~90% RH (Non-condensation)
Dimension	4.72" x 2.24" x 1.42" / 120 x 57 x 36mm

*Specifications are subject to change without notice

Key Components

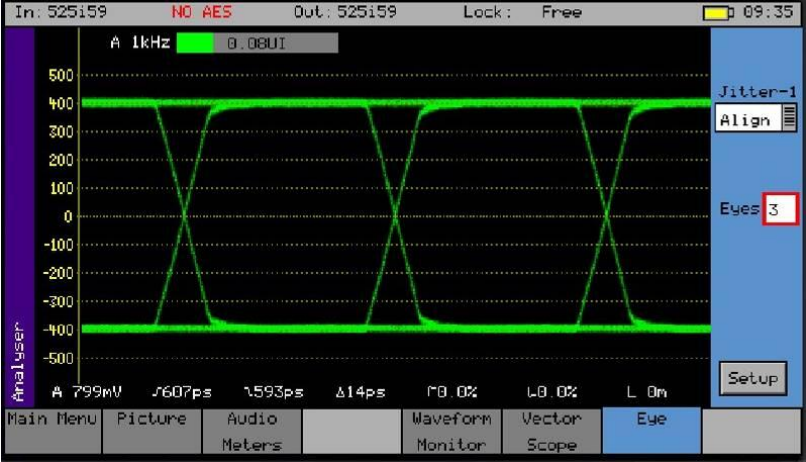**Components Made in USA for this product:**

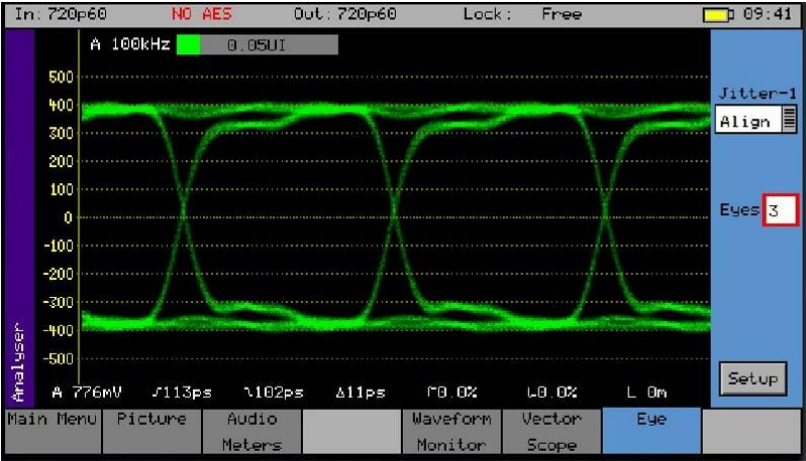| Name of Component	Manufacturer
Multi-Rate SDI Adaptive Cable Equalizer	Gennum
Multi-Rate SDI Automatic Reclocker	Gennum
Multi-Rate Dual Slew-Rate Cable Driver	Mindspeed & Gennum
SDI SPD	Bourns
HDMI ESD Protection	Semtech

Components Made in Taiwan for this product:

Name of Component	Manufacturer
DC/DC Converter	Richtek

*Key components are listed by the manufacturer and are subject to change without notice
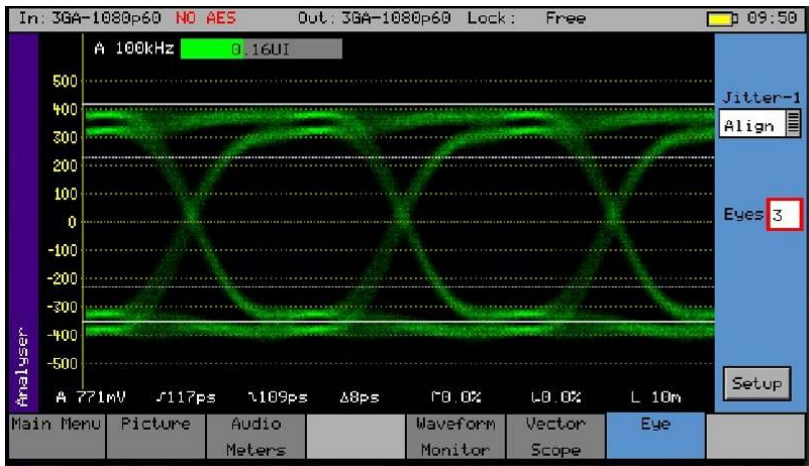
SD-SDI Mode

HD-SDI Mode

3G-SDI Mode

✱ **IMPORTANT NOTE: Cable & Connector for SDI HD Camera**

In order to achieve the <u>Best Quality</u> and <u>Long Range</u> coax cable run of up to 200m / 600ft, you will need:

1. **Good Quality Cable**: We suggest using RG6 Belden 1694A <u>Low Loss Serial Digital</u> coax cable because RG6 cables have better grounding than RG59 cables. RG6 is for Digital Signal and RG59 is for Analog Signal.

2. **Good Quality BNC Connectors**: Contact Plating Gold plated pins provide exceptional conductivity.

3. **Good Quality Installation**: Do not over cut the braid because it will affect the grounding. The image will have lines and noise.