



User Manual

HDMI & VGA & AV to SD/HD/3G-SDI Converter



NOTE: The casing design is subject to change without notice

Our HDMI & VGA & AV to SD/HD/3G-SDI Converter is used to convert HDMI or VGA OR AV video source to SD/HD/3G-SDI signal. It integrates SDI Cable equalizer and re-clocker to enhance video performance and stability. Simultaneously, it also Integrates and converts the audio signals of CABS or VGA, then embed it to SDI signal .It supports multiple resolution up to 1920x1080@60HZ to ensure high compatibility with wide brands of PC and HDTV. It provides cheaper solution of connecting HDTV and PC and AV(CVBS) to HD- SDI devices.

Features

- Support all type SDI resolution
- SMPTE 425M (A level and B level), SMPTE424M, SMPTE292M, SMPTE259M-C.
- Carry 2 channel SDI signal out.
- Automatically detect the HDMI EDID information adaptive HDMI best mode
- Support all formats asymmetric conversion
- The signal lost blue screen warning
- VGA output format would support all standard VGA resolutions
- Automatically embed SDI audio signal to HDMI signal.
- User selectable one signal source as output signal (HDMI and VGA and AV)



Please read the Manual before attempting to use this product. Specifications and appearance are subject to change without notice.



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 $-0^{\circ}\text{C}\sim 40^{\circ}\text{C}$ / $32^{\circ}\text{F}\sim 104^{\circ}\text{F}$.

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.

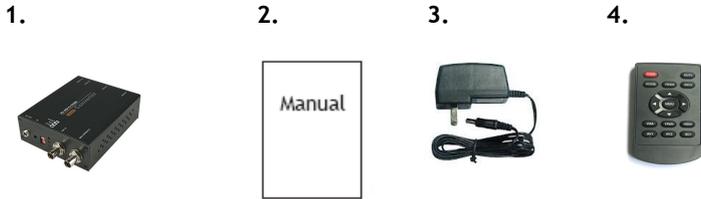
6. Servicing

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.

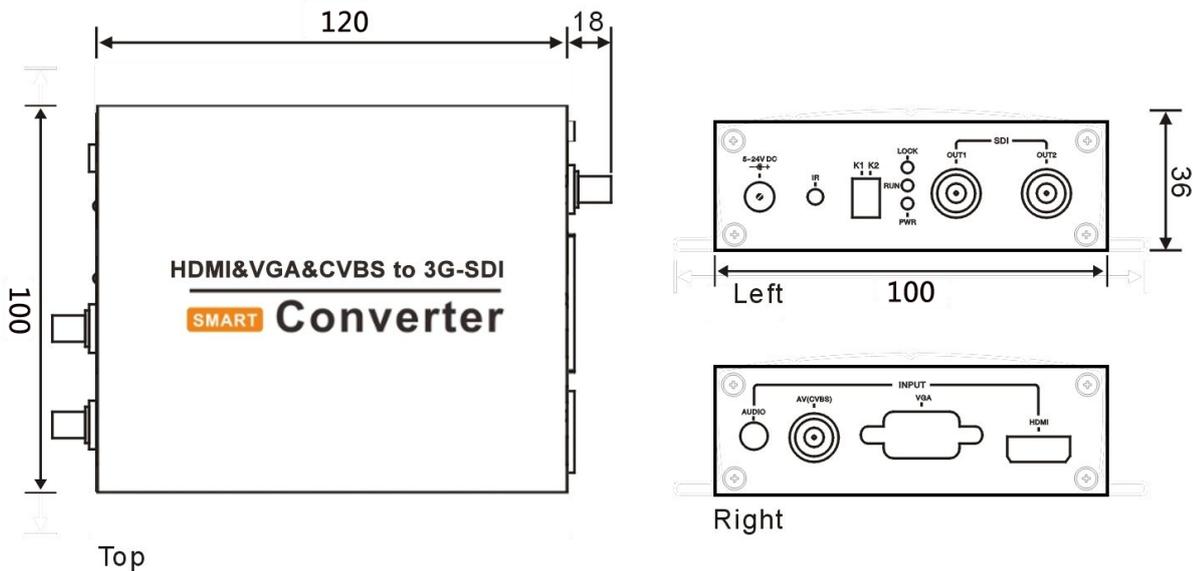
Package Contents

1. One (1) HDMI & VGA & AV to SD/HD/3G-SDI Converter
2. One (1) User Manual\
3. One (1) AC Adapter
4. One(1) IR remote controller



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 panel :

1. 5-24V DC : suggest DC 12V,1A Power plug in
2. IR: Infrared control
3. K1/K2 dip Switch : Set HDMI &VGA output mode
4. LED indicator : PWR/RUN/LOCK (PWR/output /input)
5. SDI OUT 1 and OUT2

Left panel :

6. Audio : audio source input
7. AV input
8. VGA input
9. HDMI input

Note : You only could choice HDMI as output source or VGA as output source or AV as output source by OSD menu operation by IR control
SDI OUT 1 and SDI OUT2 would be output the same image from one same video source.

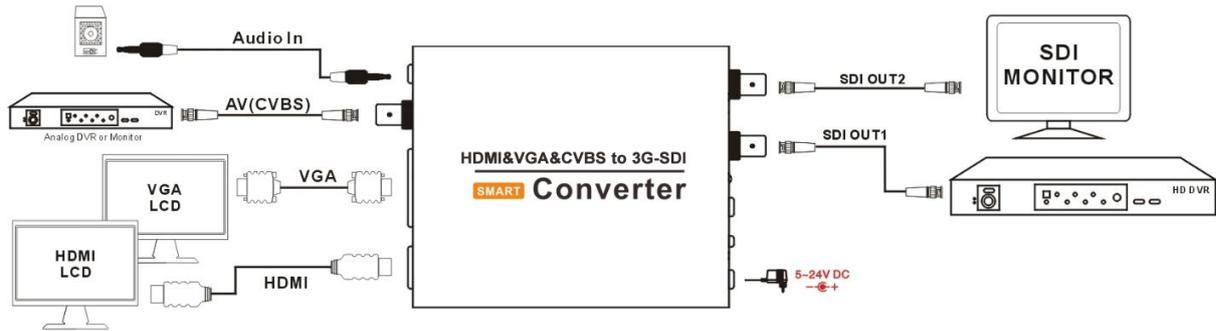
Led indicator :

LED	Color	Status	Description
RUN	Flicking	ON	SDI signal is output
		OFF	No SDI signal output
LOCK	Green	ON	There are input signal to be connected

		OFF	There are not input signal to be connected
POWER	Red	Flickering	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



Hardware Installation

1. Check the power supply configuration and connect the correct voltage according to the power supply input requirements (recommended power supply DC 12,1A)
2. Connect the AV, VGA, HDMI source to input ports of our converter by standard VGA, HDMI ,AV coaxial cable
3. Connect the SDI output port of our converter to SDI-input device e.f SDI monitor by quality coax cable e.f Belden 1694A or 75-5 coax cable to get reasonable transmission distance.
4. Turn on the power

Note: This device only support to output one kind signals nor three kinds even if it could input three kinds signals and choice from three kinds input signal

K1/k2 DIP Switch function

K1	K2	SDI output
OFF	OFF	Fit input
ON	OFF	720p 30hz
OFF	ON	720P 60hz
ON	ON	1080P 30HZ

Specifications

Model	HDMI &VGA& AV to SD/HD/3G-SDI Converter
HDMI Input	1x HDMI
VGA Input	1x VGA
AV (CVBS) Input	1 x BNC -F
Audio input	1X3.5mm audio socket
HDMI format	480i/p , 576i/p ,720p50/60, 1080p25/30,1080i 50/60, 1080p50/60

VGA format	All standard resolutions :640*480@60Hz、 800*600@60Hz、 1024*768@60Hz、 1280*720@60Hz、 1280*768@60Hz、 1280*800@60Hz、 1280*1024@60Hz, 1360*768@60Hz、 1440*900@60hz , 1600*1200@60Hz、 1920*1080@60Hz、 1920*1200@60Hz
AV Format	PAL and NTSC
HD-SDI Out Interface	2x BNC SDI, 75 Ohm
Input Signal Type	SD-SDI (270Mbps), HD-SDI (1.485Gbps), 3G-SDI (2.97Gbps)
Support Output Format/HD-SDI	SD: 525i @ 59.94Hz, 625i @ 50Hz HD: 720p @ 23.98Hz / 24Hz / 25Hz / 29.97Hz / 30Hz 720p @ 50Hz / 59.94Hz / 60Hz 1080i @ 50Hz / 59.94Hz / 60Hz 1080p @ 23.98Hz / 24Hz / 25Hz / 29.97Hz / 30Hz 3G: 1080p @ 50Hz / 59.94Hz / 60Hz
SDI Signal Range	0.8V p-p
Max. Output Coax Length	Belden 1694A SD-SDI 400m / 1300ft ; HD-SDI 200m / 600ft ; 3G-SDI 140m / 450ft
Frequency Bandwidth	340 MHz/ up to standard with HDCP :HDMI 1.3
Power Supply	5V~24V DC
Power Consumption	3~6 Watts
Operating Temperature	-10°C ~ 60°C / 14°F ~ 140°F
Storage Temperature	-30°C ~ 70°C / -22°F ~158°F
Relative Humidity	20~90% RH (Non-condensation)
Dimension	158 x 120x 36 mm / 6.22 x 4.72 x 1.42 inches
Weight	300g

Key Components

Components Made in USA for this product:

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

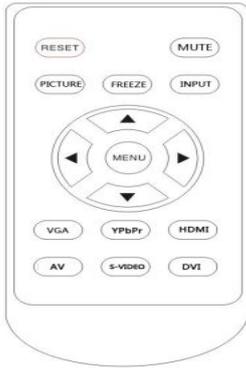
Components Made in Taiwan for this product:

Name of Component	Manufacturer
<i>DC/DC Converter</i>	<i>Richtek</i>

*Key components are listed by the manufacturer and are subject to change without notice

IR Remote Control

IR remote controller is used to force HD-SDI output format or HDMI or VGA or AV as input source by OSD menu



A. Firstly press red button 'Power' to start management interface

As Secondly press 'power' to restore default set of our device

B. Then press 'Menu' to show main OSD menu on monitor

It will show manual functions e.f Video source , Audio Source , SDI output , Picture mode, Appearance ,Language , Restore default .

User could force output format :

- 480i/50
- 576i/60
- 480p/60
- 576p/50
- 720p@50/60
- 1080i @50/60
- 1080p @ 25/30/50/60

To execute by UP ▲ , Down ▼ , Left ◀ ,right ▶ to control the menu direction.

And press the key of 'Menu' to enter or ensure

C : PICTURE: Menu to select output

F:HDMI : Select HDMI signal as input source

D: FREEZE : Display current input signal

G:VGA : Select VGA signal as input source

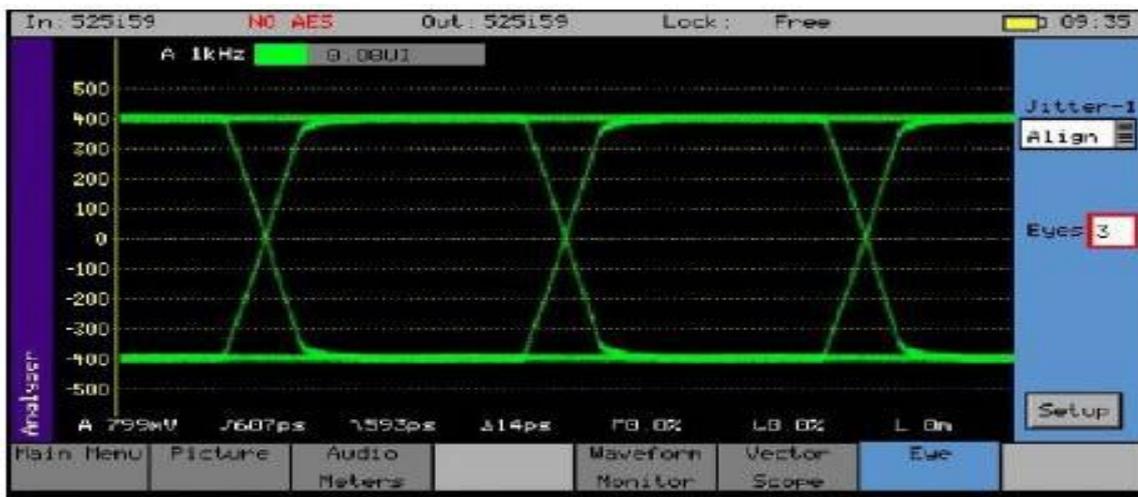
E:INPUT : Show input source

H: AV : Select AV signal as input source

Eye Diagram ..

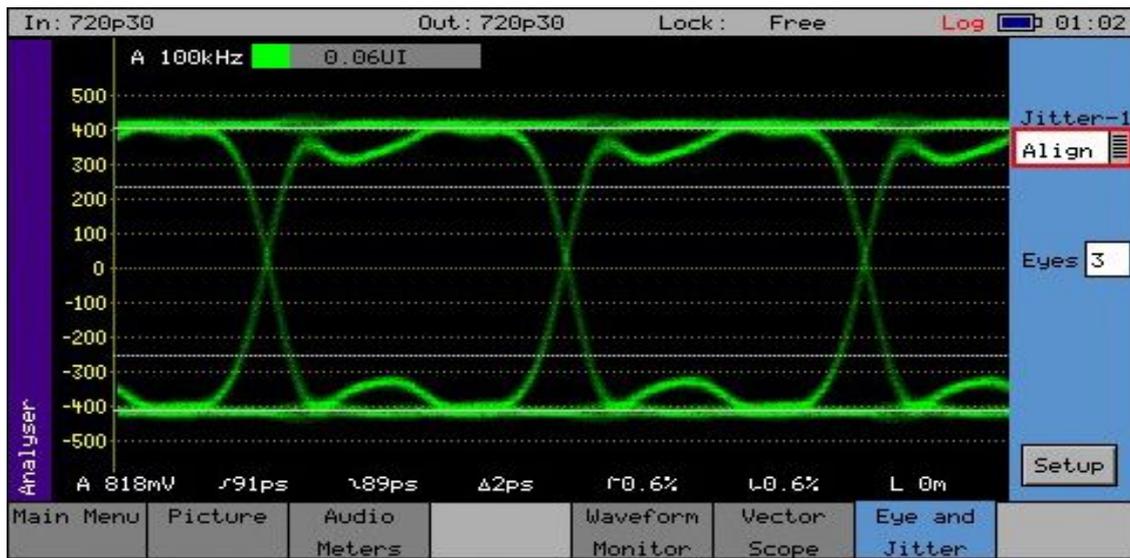
SD Mode

525i59

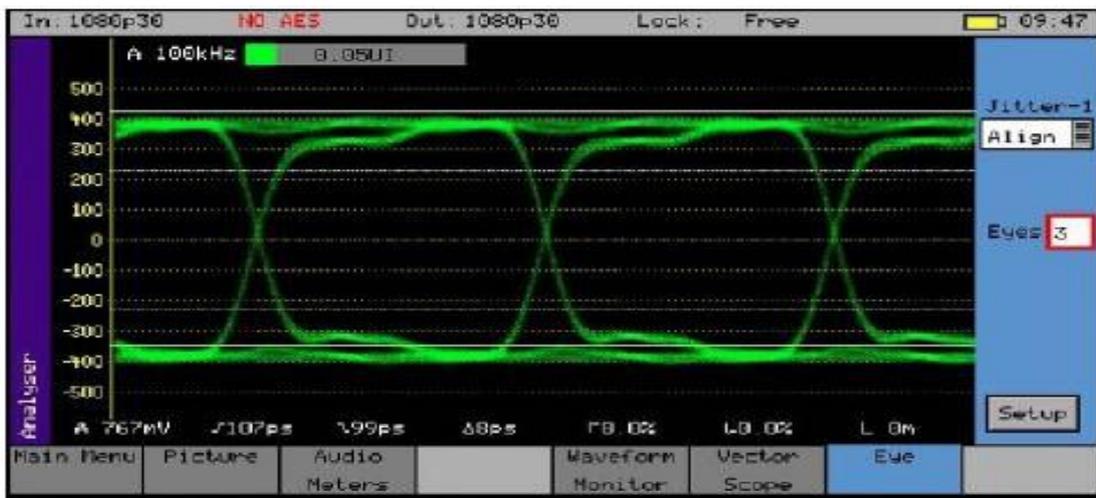


HD-SDI Mode

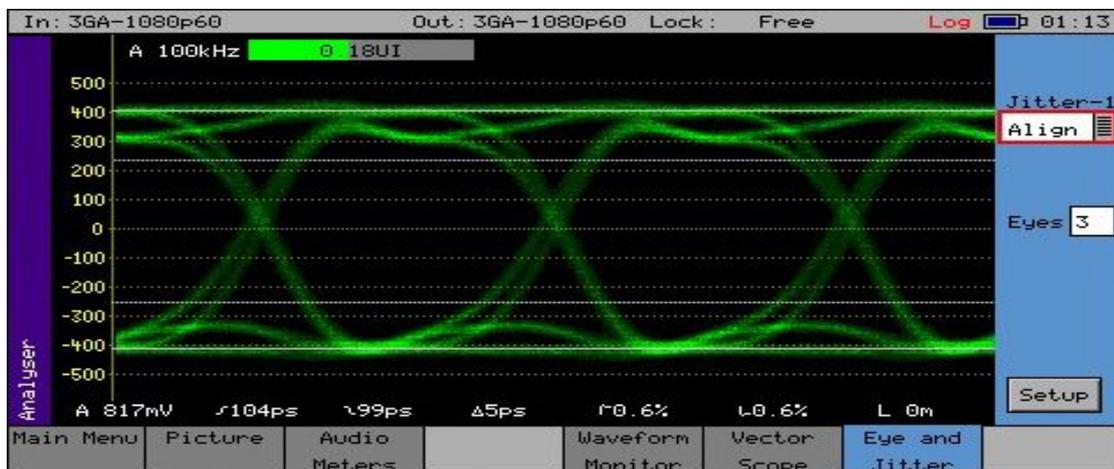
720P 30



1080P 30



3GA-1080p60

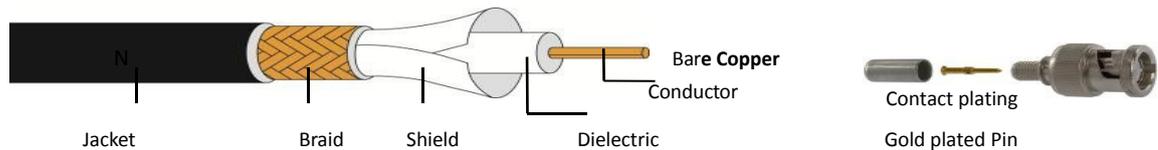




IMPORTANT NOTE: Cable & Connector for HD-SDI Camera

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

1. **Good Quality Cable:** We suggest using RG6 Belden 1694A Low Loss Serial Digital 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.



Limited Warranty

LIMITED ONE (1) YEAR WARRANTY AND EXCLUSIONS

Manufacturer warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Manufacturer is free of defects in materials and workmanship under normal and proper use for one (1) year from the purchase date. Manufacturer's only obligation is to correct such defects by repair or replacement, at its option, if within such one year period the product is returned prepaid, with proof of purchase date, and a description of the problem. This warrant excludes and there is disclaimed liability for labor for removal of this product or reinstallation. **This warranty is voided if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other implied warranties of any kind, including merchantability and fitness or a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warrant, including merchantability and fitness of or a particular purpose, is limited to one (1) year.**

Manufacturer is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, loss sales or profits or delay or failure to perform this warranty obligation. The remedies, provided therein are the exclusive remedies under this warranty, whether based on contract, tort or others.