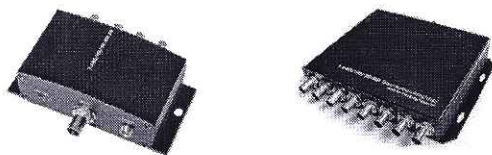# SD/HD/3G-SDI 1 to 4/8 Distribution Amplifier

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

The distribution amplifier could splits a single SDI source data to several video display and simultaneously amplify SDI signal . There is no video signal loss in the switching process. It supports almost all HD video formats which is SMPTE compliant. It can also achieve up to 1080p@60Hz for Full HD video performance perfectly.

In professional application systems, it is specially designed to several digital display terminals to show the same SDI video simultaneously. It is widely applied to surveillance, broadcast TV station, TV media, video conferences, electronic teaching, wired network areas, etc.

Features

- Support SD-SDI (270Mbps), HD-SDI (1.485Gbps) & 3G-SDI (2.97Gbps)
- Full HD video format
- Built-in Cable Equalizer, Re-clocker & Cable Driver
- Max. cable length (Belden 1694A): SD-SDI 400m/1300ft, HD-SDI 200m/600ft, 3G-SDI 140m/450ft
- Excellent SDI signal jitter suppression function
- Power supply and SDI signal format indicator
- Embedded ESD to protect the circuit
- 5V~24V DC

R201212-V2.1

⚠️ 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°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).

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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) SD/HD/3G-SDI Video distribution Amplifier
2. One (1) User Manual
3. One (1) AC Adapter
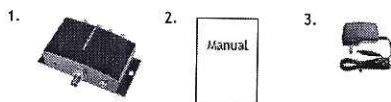
For any returns, please include all components listed above with original packaging in Resalable Condition. Absolutely No Returns will be accepted if any component is missing/damaged.

Parts & Functions

SD/HD/3G-SDI 1 to 4 Distribution Amplifier Left side Layout

SD/HD/3G-SDI 1 to 4 Distribution Amplifier Right side Layout

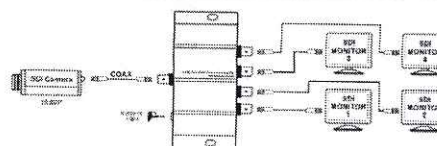SD/HD/3G-SDI 1 to 8 Distribution Amplifier Rear Panel Layout

SD/HD/3G-SDI 1 to 8 Distribution Amplifier Front Panel Layout

Name	Color	Status	Description
SDI	Green	ON	SDI signal is active
		OFF	SDI signal is inactive
POWER	Green	ON	Power on
		OFF	Power off

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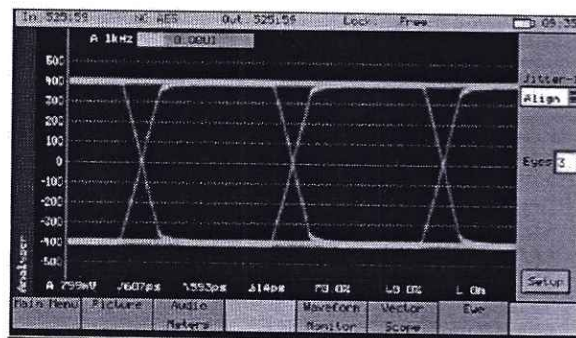
Application Diagram

Hardware Installation

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

Technical Specifications

Model	1 to 4/8 SD/HD distribution amplifier	1 to 4/8 SD/HD/3G-SDI distribution amplifier
Input signal	1x BNC SDI, HD-SDI	1x BNC SDI, HD-SDI, 3G-SDI
Input Signal Type	SD-SDI (270Mbps) HD-SDI (1.485Gbps),	SD-SDI (270Mbps), HD-SDI (1.485Gbps) 3G-SDI(2.97Gbps)
Support Input Format	SD-SDI: 480i, 576i HD-SDI: 720p24/25/30/50/59.94/60 all frame rate; 1080i all frame rate, 1035i all frame rate; 1080p all frame rate 3G-SDI: 1080p all frame rate	
Video Standard	SMPTE 424M, SMPTE 292M and SMPTE 259M ITU-R BT.601，ITU-R BT.1120	
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	
Output signal	4/8x BNC SD-SDI, HD-SDI	4/8x BNC SD-SDI, HD-SDI, 3G-SDI
Re-clocking	Auto Support 270Mbps/1.485Gbps	Auto Support 270Mbps/1.485Gbps/2.97Gb
Power Supply	5V~24V DC, 2A w/ Locking Power Connector	
Power Consumption	10 Watts (max)	
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	92 x 119 x 36 mm / 3.62 x 4.66 x 1.42 inches(1 to 4) 175 x 155 x 30mm / 6.89 x 6.10 x 1.18 inches(1 to 8)	
Weight	170g(1 to 4)/ 480g(1 to 8)	

*Specifications are subject to change without notice

Components Made in USA for this product:

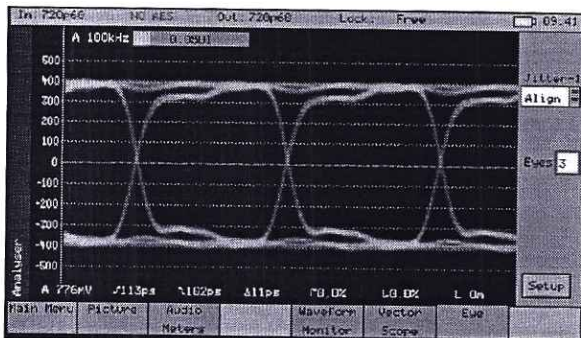| Name of Component	Manufacturer
Multi-Rate SDI Adaptive Cable Equalizer	Gennum
Multi-Rate SDI Automatic Reclocker	Gennum
Multi-Rate Dual Slew-Rate Cable Driver	Mindspeed & Gennum
SDI SPD	Bourns
HDMI ESD Protection	Semtech
Micro Controller Unit	Texas Instruments

Components Made in China 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

Eye Diagram

SD-SDI Mode

HD-SDI Mode

3G-SDI Mode

In order to achieve the Best Quality and Long Range coax cable run of up to 200m / 600ft, you will need:
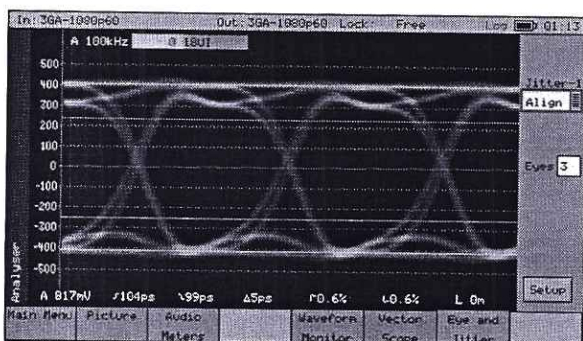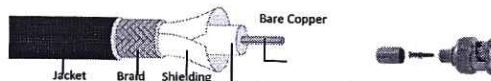
1. **Good Quality Cable:** We suggest using RG6 Belden 1694A Low Loss Serial Digital coax cable because RG6 cables have better grounding than RG59 cables. RG6 is for Digital Signal and RG59 is for Analog Signal.
2. **Good Quality BNC Connectors:** Contact Plating Gold plated pins provide exceptional 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

FC CE RoHS ✓ MADE IN CHINA

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