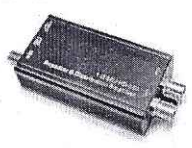


*User Manual*

# SD/HD/3G-SDI 1 to 2 Distribution Amplifier



( SupportSD/HD)



( SupportSD/HD/3G)

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

HD-SDI 1:2 Repeater & Distribution Amplifier is a 1 to 2 repeater and distribution amplifier with Re-clocking function. It receive one SDI input and perfectly duplicates it. Then it re-transmits two SDI outputs for real time multi-viewing. It is a reliable video device splitting a SDI or HD-SDI video source to two HD-SDI or SD-SDI display at the same time and takes one input then re-clocks and equalizes the signal and distributes it to two identical outputs.

### Features

- SDI Standard: HD-SDI, SD-SDI,3G-SDI
- Data Rates: 270Mbps/1.485 Gbps/2.97Gbps
- Signal Type: SMPTE 292M, SMPTE 259M
- Two separately buffered outputs
- Cable equalization (Beldon 1694A) retiming and signal
- Re-clocking function capability – unlimited repeater connection
- Dual color LED indicator of Act and power
- Pass all ancillary data
- 5V~24V DC

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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

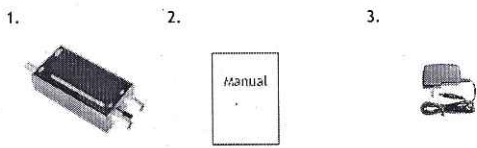
Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

### 6. Servicing

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

### Package Contents

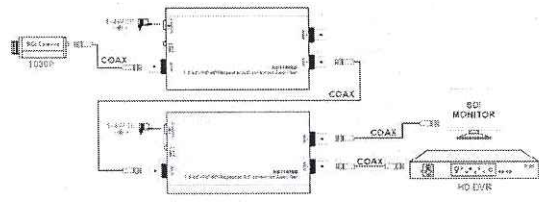
1. One (1) SD/HD/3G-SDI 1 to 2 Distribution Amplifier
2. One (1) User Manual
3. One (1) AC Adapter



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.

### Application Diagram

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



SD/HD 1 to 2 Distribution Amplifier

See page 8 for Important Notes about Cable and Connector for SDI HD Camera

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



**CAUTION**  
RISK OF ELECTRICAL 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.

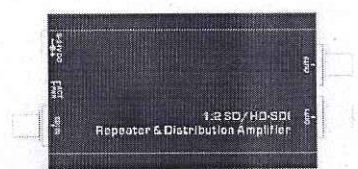


**Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems).**  
This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over 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.

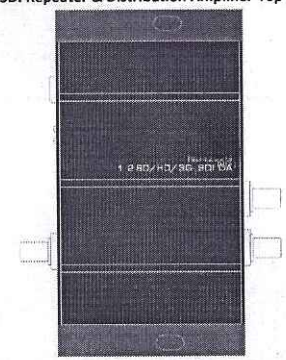
### Caution

- 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).

### Parts & Functions



1:2 SD/HD-SDI Repeater & Distribution Amplifier Top Panel Layout



1:2 SD/HD/3G-SDI Repeater & Distribution Amplifier Top Panel Layout



Left Side View: Right Side View  
1:2 SD/HD/3G-SDI Repeater & Distribution Amplifier Left and Right Panel Layout

Name	Color	Status	Description
ACT(SDI)	Green	ON	SDI signal is active status.
		OFF	SDI signal is inactive status.
PWR	Green	ON	Power source has been connected.
		OFF	Power source hasn't been connected.

## Hardware Installation

1. To open the box, then checking the quality, model no. and quantity of the equipments and accessories according to the picking list, if there were any questions, just feel free to contact us or the local distributors.
2. To check the power supply configuration, if it were DC input, just connects with the correct voltage according to the power supply input requirements. To connect AC/DC Adapter to the alternating current power supply socket.
3. Connect a camera or other devices equipped with HD/SD-SDI outputs to the Repeaters inputs(SDI INPUT).
4. Connect devices equipped with HD/SD-SDI/3G-SDI inputs (e.g. monitors or video processors) to the Repeaters outputs(SDI OUT).
5. Plug power adapter cable into power jack.

## Technical Specifications

Item	SD/HD/3G-SDI 1 to 2 Distribution Amplifier
Re-clocking Function	Yes
SDI Standards	3G-SDI, SD-SDI, HD-SDI
HD/SD-SDI Detection	Auto
Supported Protocols	SMPTE 259M SMPTE 292M SMPTE 344M
Video Bandwidth	2.97Gbps /1.485Gbps/1.001Gbps
Video Support	[3G]1080p50/59.94/60 [HD] 720p50/59.94/60, 1035i50/59.94/60, 1080i50/59.94/60, 1080p24/0 [SD] NTSC@59.94Hz, PAL@50Hz
SDI Signal Type	SMPTE-292M, SMPTE-259M, SMPTE-424M
Output Impedance	75 ohms
Cable Equalization	Belden 1694A SD-SDI 400m / 1300ft ; HD-SDI 200m / 600ft ; 3G-SDI 140m / 450ft
Audio Support	Yes
PCB Stack-up	4-layer board [impedance control -- differential 100 ohms; single 50 ohms]
Input	1x BNC [SDI]
Output	2x BNC [SDI]
BNC Connector	75 ohms inter-locked socket
Eye Pattern Characteristics	Amplitude: Within 800mV $\pm 3\%$ (<10%) Rise overshoot: Less than 2% (<10%) Fall overshoot: Less than 2% (<10%) Long time jitter: 0.195 UI (<1.0 UI) Timing jitter: 0.195 UI (<1.0 UI) Alignment jitter: 0.127 UI (<0.2 UI)
Power Adapter	5V~24V DC
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)

\*Specifications are subject to change without notice

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## Key Components

### Components Made in USA for this product:

Name of Component	Manufacturer
Multi-Rate SDI Adaptive Cable Equalizer	Mindspeed & Gennum
Multi-Rate SDI Automatic Reclocker	Mindspeed & Gennum
Multi-Rate Dual Slew-Rate Cable Driver	Mindspeed & Gennum & National Semiconductor
Data Communication IC	MAXIM

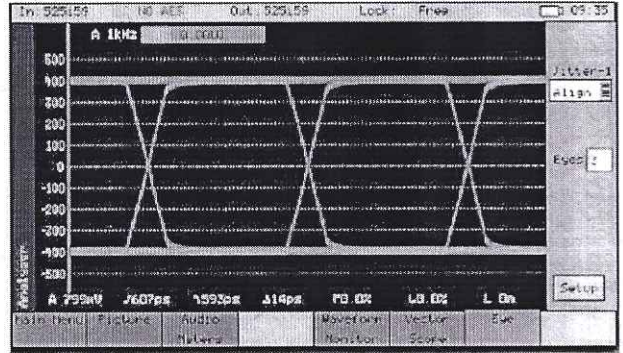
### Components Made in China for this product:

Name of Component	Manufacturer
DC/DC Converter	Richtek

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

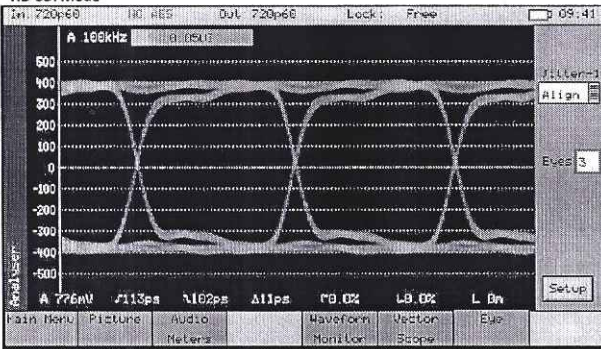
## Eye Diagram

### SD-SDI Mode

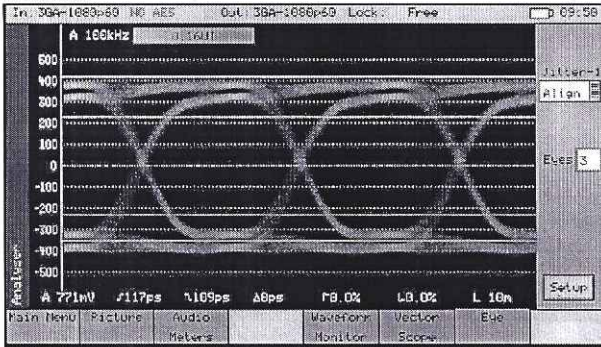


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### HD-SDI Mode



### 3G-SDI Mode

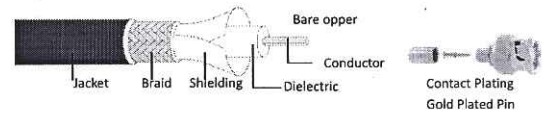


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### IMPORTANT NOTE: Cable & Connector for SDI HD Camera

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 (1) 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 warranty, including merchantability and fitness 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 otherwise.

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