

User Manual

4CH SD/HD/3G-SDI Repeaters

VCF-002-04R



NOTE: The casing design is subject to change without notice

4 in & 4 out SD/HD/3G-SDI Repeaters with Re-clocking function. These devices receive four SDI inputs at the same time and perfectly duplicates them. Then they re-transmit four channel SDI outputs for real time multi-viewing. They are reliable video devices splitting four SD/HD/3G-SDI video source to SD/ HD/3G-SDI display at the same time and takes four inputs then re-clocks and equalizes the signal and distributes it to four identical outputs.

Features

- SDI Standard: HD-SDI, SD-SDI, 3G-SDI
- Data Rates: 270Mbps/1.485 Gbps/2.97G
- 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 indication of data link
- Pass all ancillary data
- DC 12V, 1A



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 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.

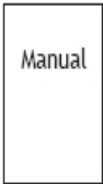
Package Contents

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

1.



2.



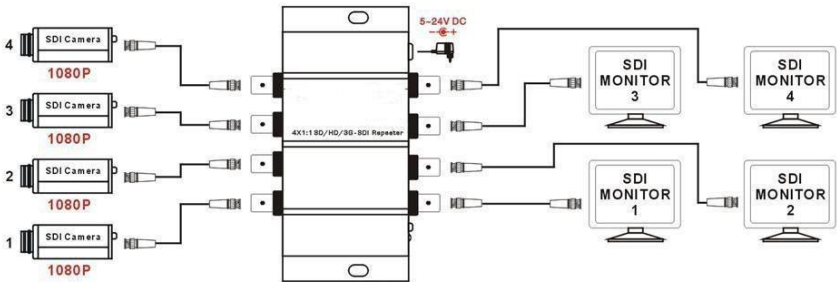
3.



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.

ApplicationDiagram

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



Parts&Functions



Left Side View



Right Side View

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

Hardware Installation

1. To open the box, then checking the quality, model Number and quantity of the equipment 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 four or eight cameras or other devices equipped with HD/SD-SDI/3G-SDI outputs to the VCF-002-04R (HD/SD-SDI/3G-SDI) input.
4. Connect devices equipped with HD/SD-SDI /3G-SDI inputs (e.g. monitors or video processors) to the VCF-002-04R (HD/SD-SDI/3G-SDI) outputs.
5. Plug power adapter cable into power jack.

Technical Specifications

| | |
|------------------------------|---|
| Model | VCF-002-04R |
| Video In | 4 x BNC (75 Ohm, SDI) |
| Video Out | 4 X BNC (75 Ohm, SDI) |
| Video Bandwidth | SD-SDI (270Mbps), HD-SDI (1.485Gbps), 3G-SDI(2.97Gbps) |
| Input Format | SD-SDI: 480i, 576i HD-SDI: 720p @ 23.98 /24/25/ 29.97/ 30/50/59.94/60 1080i @ 50/59.97/60 1080p @ 23.98 /24/25/ 29.97/ 30/50/59.94/60 3G-SDI: 1080P @ 50/59.97/60 |
| SDI Signal Range | 0.8V p-p |
| SDI Impedance | 75 ohms |
| Max. Distance | Belden 1694A SD-SDI 350m / 1300ft ; HD-SDI 200m / 600ft ; 3G-SDI 100m / 450ft |
| Power Supply | 5V~24V DC |
| Operating Temperature | -10°C ~ 60°C / 14°F ~ 140°F |
| Storage Temperature | -30°C ~ 70°C / -22°F ~158°F |

KeyComponents

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 |

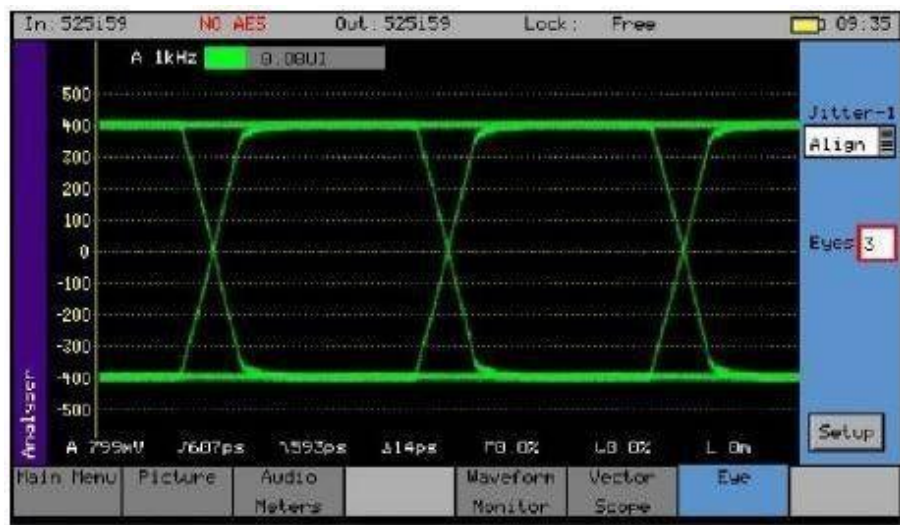
Components Made in China for this product:

| Name of Component | Manufacturer |
|-------------------|--------------|
| DC/DC Converter | Richtek |

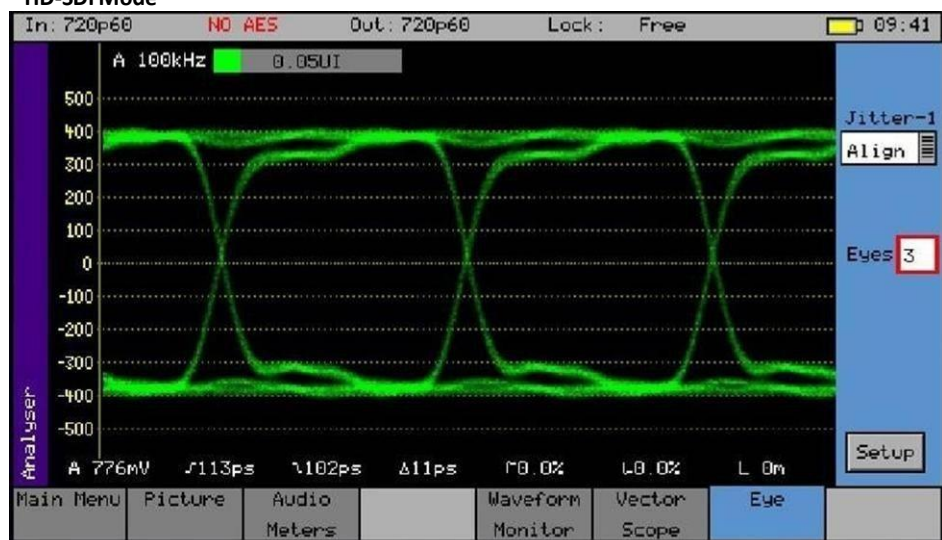
*Key components are listed by the manufacturer and are subject to change without notice

EyeDiagram

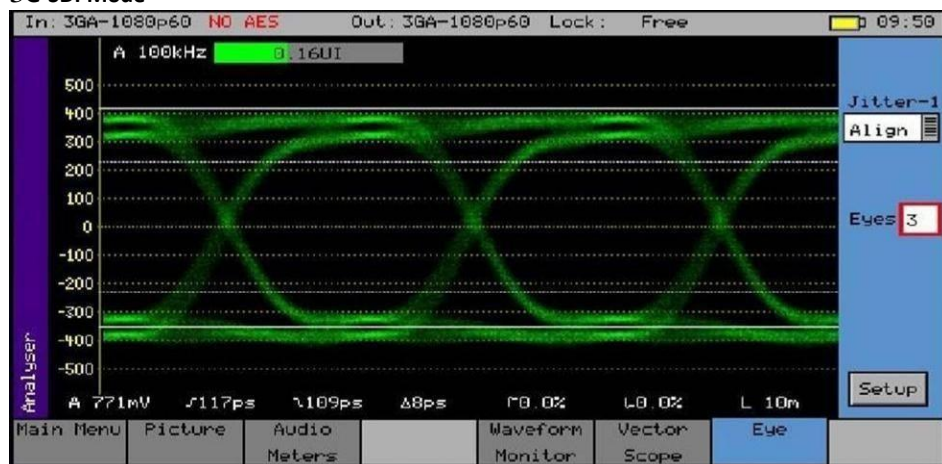
SD-SDI Mode



HD-SDI Mode



3G-SDI Mode

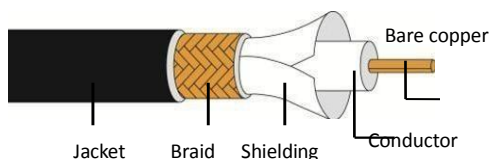




IMPORTANT NOTE: Cable & Connector for SDI HD Camera

In order to achieve the BestQuality and LongRange coax cable run of up to 200m / 600ft, you will need:

1. **Good Quality Cable:** We suggest using RG6 Belden 1694A LowLossSerial 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 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 otherwise.