

## User Manual

# SD/HD-SDI 1 to 2 Distribution Amplifier VCF-1002DA-P



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

Our SD/HD/3G-SDI Distribution Amplifier is a 1 in, 2 out distribution and extender with Re-clocking and cable equalizer and cable driver function.

It is a reliable video splitting device which split one channel SD/HD-SDI/3G-SDI video source to two displays simultaneously and extend HD-SDI signal up to 180meter via Belden 1964a coax cable .

## Features

---

SDI Standard: SD-SDI, HD-SDI,3G-SDI

Data Rates: 270Mbps/1.485/2.97 Gbps

Signal Type: SMPTE 292M, SMPTE 259M  
SMPTE 424

Two separately buffered outputs

Cable equalization (Belden 1694A) retiming and signal

Re-clocking function capability – unlimited repeater connection

Dual color LED indication of input lock and rate

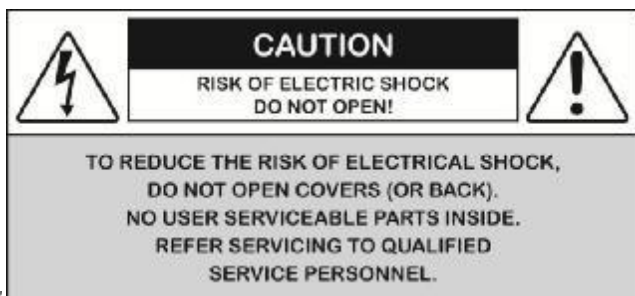
Pass all ancillary data

DC 5V,1A

---

**Please read the Manual before attempting to use this product.**

*Specifications and appearance are subject to change without notice.*



**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**

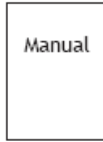
---

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

1.



2.



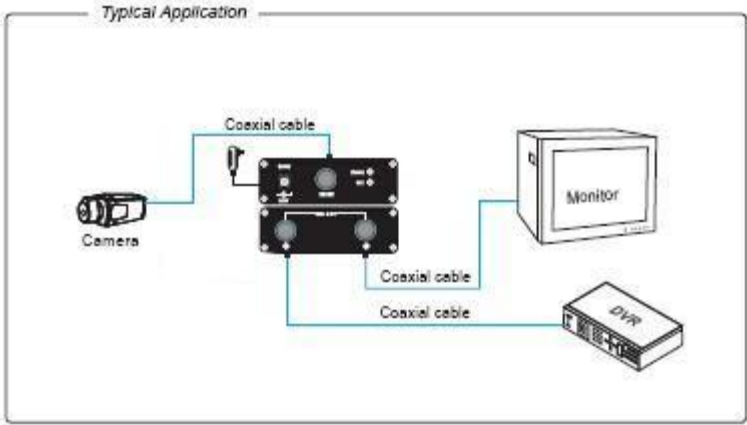
3.



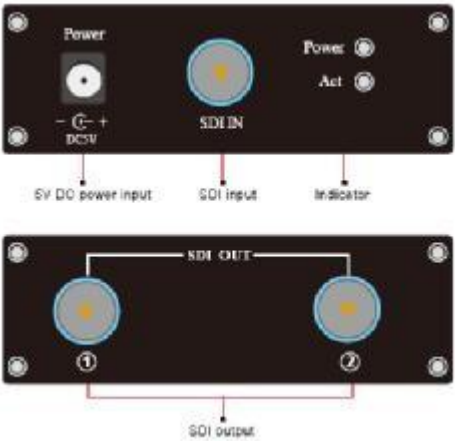
For any returns, please include all components listed above with original packaging in **Resalable Condition**. **Absolutely No Returns** will be accepted if any component is missing/damaged.

# Application Diagram

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



# Parts & Functions



| 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 SDI source with SDI outputs like SDI camera to our device's input port
4. Connect the display or other equipment with SDI inputs (e.g. monitors or video processors) to our device's output port.
5. Power on

## Technical Specifications

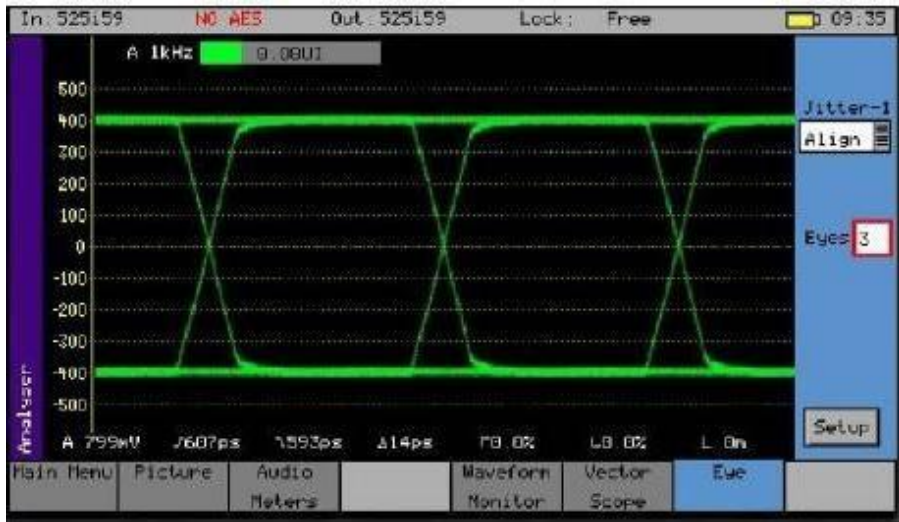
..

|  |   |
|--|---|
| <b>Model</b>                               | <b>SD/HD-SDI distribution amplifier</b>   |
| <b>SDI Standards</b>                       | SD-SDI, HD-SDI,3G-SDI   |
| <b>Data Rates</b>                          | 270 / 1483 / 1485/2.97  |
| <b>Video Support</b>                       | [HD] 720p50/59.94/60, 1080i50/59.94/60, 1080p24/30 [SD] 480i/P, 576i/P  |
| <b>SDI Signal Type</b>                     | SMPTE-292M, SMPTE-259M,,SMPTE-424M  |
| <b>Output Impedance</b>                    | 75 ohms   |
| <b>Cable Equalization<br/>Cable driver</b> | 3G-SDI up to 60 Meters<br>HD-SDI up to 180 Meters<br>SD-SDI up to 350 Meters  |
| <b>RP-918 Pathological<br/>Patterns</b>    | Immune  |
| <b>PCB Stack-up</b>                        | 4-layer board<br>[impedance control -- differential 100 ohms;<br>single 50 ohms]  |
| <b>Input</b>                               | 1x BNC [SDI]  |
| <b>Output</b>                              | 2x BNC [SDI]  |
| <b>BNC Connector</b>                       | 75 ohms inter-locked socket   |
| <b>Eye Pattern<br/>Characteristics</b>     | Amplitude: Within 800mV $\pm 3\%$ (<10%)<br>Rise overshoot: Less than 2% (<10%)<br>Fall overshoot: Less than 2% (<10%)<br>Long time jitter: 0.195 UI (<1.0 UI)<br>Timing jitter: 0.195 UI (<1.0 UI)<br>Alignment jitter: 0.127 UI (<0.2 UI) |
| <b>Power Adapter</b>                       | DC 12V ,1A  |
| <b>Power Consumption</b>                   | 2~4 Watts   |
| <b>Relative Humidity</b>                   | 20~95% RH (no condensation)   |
| <b>Dimension</b>                           | 119*73*36mm   |

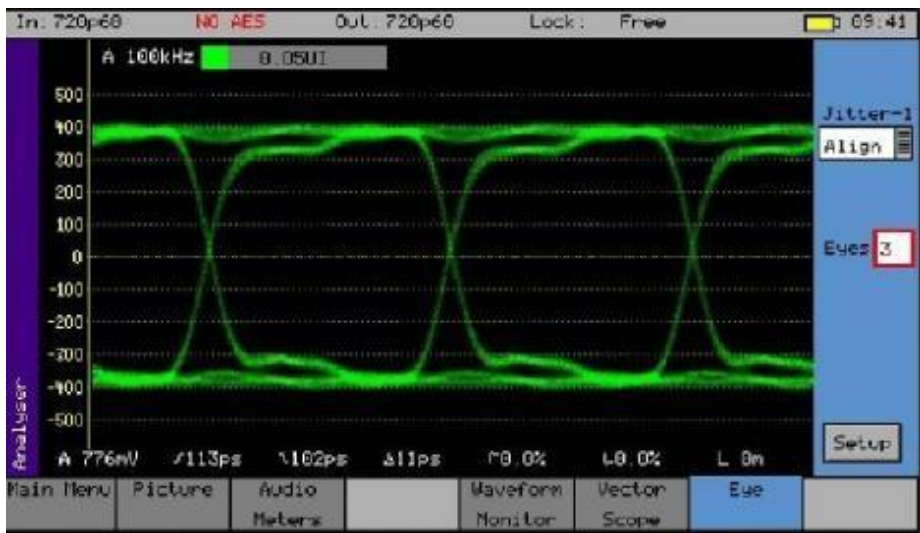
\*Specifications are subject to change without notice

## Eye Diagram

..



## HD-SDI Mode

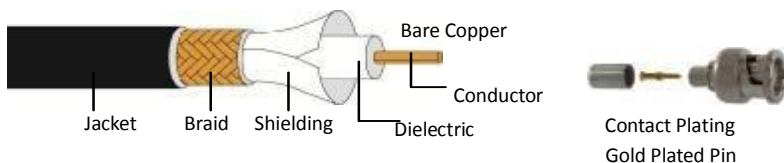




### IMPORTANT NOTE: Cable & Connector for SDI HD Camera

In order to achieve the Best Quality and Long Range coax cable run upto 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

..

### IMITED 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 here is disclaimed liability for labor for removal of this product or reinstallation. **This warranty is voided if his product is installed improperly or in an improper environment, overloaded, misused, opened, bused, 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 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.