

USER MANUAL

VCF-ECFB01TX&RX

HD-SDI Optical Transceiver



Our SD/HD-SDI optical transceiver is a mini and economical version device. It is a perfect and economic extra long extender to transmit SD/HD-SDI video, embedded audio and RS485 data via fiber-optic cable.

This device includes a transmission and a receiving. Support to SMPTE292M, SMPTE259M standard, as well as DVB-ASI (EN50083-9) digital TV signal format. The device would extend HD-SDI transmission distance via fiber cable up to 20km.

Features

- * Support 1channel HD-SDI video and audio signal
- * SD/HD-SDI input automatic detection, supported data rate from 270M bit/s to 1.485G bit/s
- * Transmission distance is from 0 to 20KM via multimode fiber or single mode fiber(40km/60km to custom)
- * Support SMPTE 292M (1.485Gbps), SMPTE 259M (270Mbps), and DVB-ASI signal
- * Support plug and play function
- * Operation status indicated by LED



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

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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) One Transmitter
- 2. One (1) Receiver
- 3. One (1) User Manual
- 4. One (1) AC Adapter

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4.



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 ..

| Name | Color | Status | Description |
|------|-------|---------|-------------------------------------|
| SDI | Green | Flicker | 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. |

Technical Specifications

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|-------------------------------|--|
| Model | Economical version 1CH SD/HD-SDI fiber extender |
| Input interface | Tx : 1 HD-SDI RX: 1 fiber |
| Output interface | TX: 1 Fiber RX : 2 HD-SDI |
| Optical Type | Single Mode, Single Fiber (Multimode custom) Wavelength : 1310/1550nm for single mode and single fiber |
| Max. Distance | 0m-20Km (40/ 60 km Custom) |
| Connector | FC |
| Transmitted power | -5dbm ~ -10dbm |
| Maximum Receiving Sensitivity | -28dBm |
| Signal Type | SD-SDI(270Mbps)/ HD-SDI(1.485Gbps) |
| Support Input Format | SD: 525i @ 59.94Hz, 625i @ 50Hz HD: 720P @ 25Hz / 29.97 Hz / 30Hz 720P @ 50Hz / 59.94Hz / 60Hz 1080i @ 50Hz / 59.94Hz / 60Hz 1080P@23.98Hz/24Hz/25Hz/29Hz/30Hz |
| Video Standard | SMPTE 292M and SMPTE 259M |
| DATA comm. method | RS-485/Half duplex |
| Power Supply | DC12,1A |
| Power Consumption | 3~5 Watts |
| Operating Temperature | 0°C~40°C/32°F~104°F |
| Relative Humidity | 20~90% RH (Non-condensation) |
| Dimension | 95X84X25MM |

*Specifications are subject to change without notice

Key Components

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Components Made in USA for this product:

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

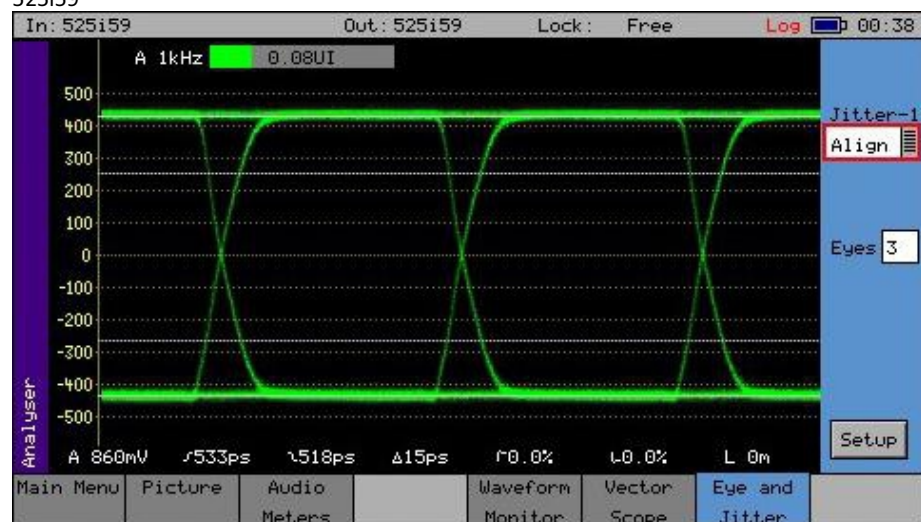
Components Made in China for this product:

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

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

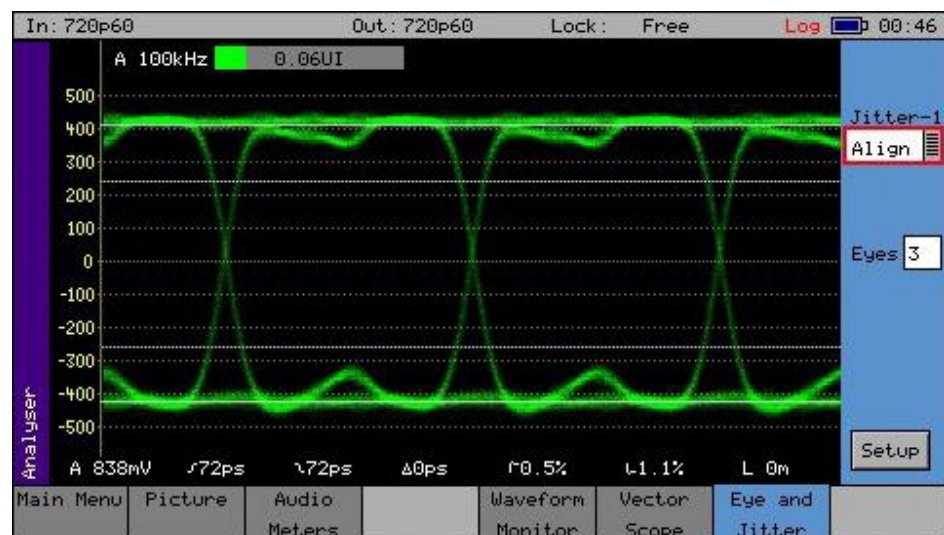
SD Mode

525i59

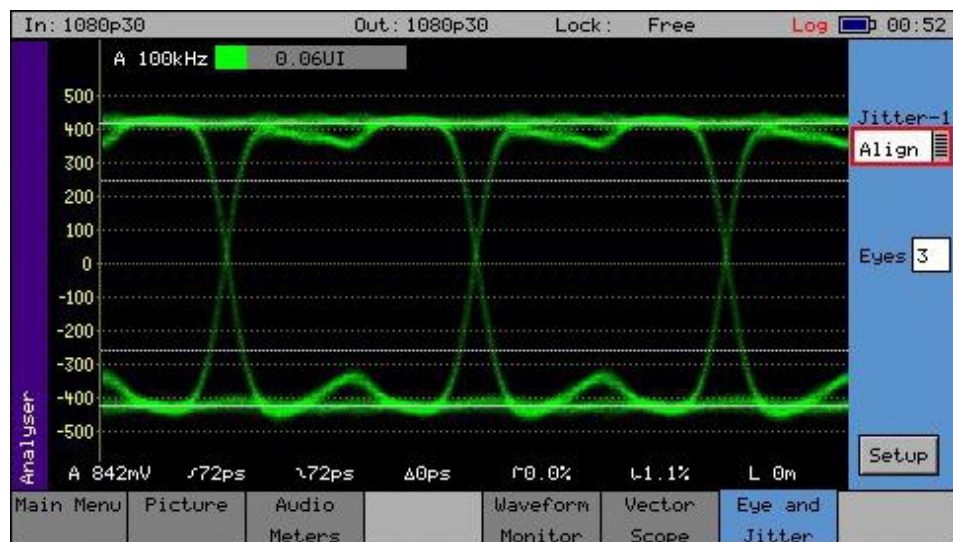


HD Mode

720P60



1080P30

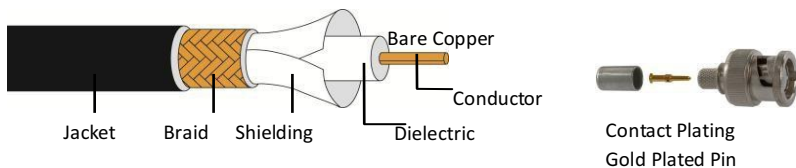




NOTE: Cable & Connector for HD-SDI camera

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 (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 a ny 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.