HD-SDI Optical Transceiver

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

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 include a transmission and a receiving   . Support to SMPTE292M, SMPTE259M standard, as well as DVB-ASI (EN50083-9) digital TV signal format.

The device would to 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   ..

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

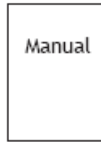1.   2.   3.   4.

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

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 / 29.97Hz / 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	32°F ~ 104°F / 0°C ~ 40°C
Relative Humidity	20~90% RH (Non-condensation)
Dimension	95X84X25MM

*Specifications are subject to change without notice

Key Components

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

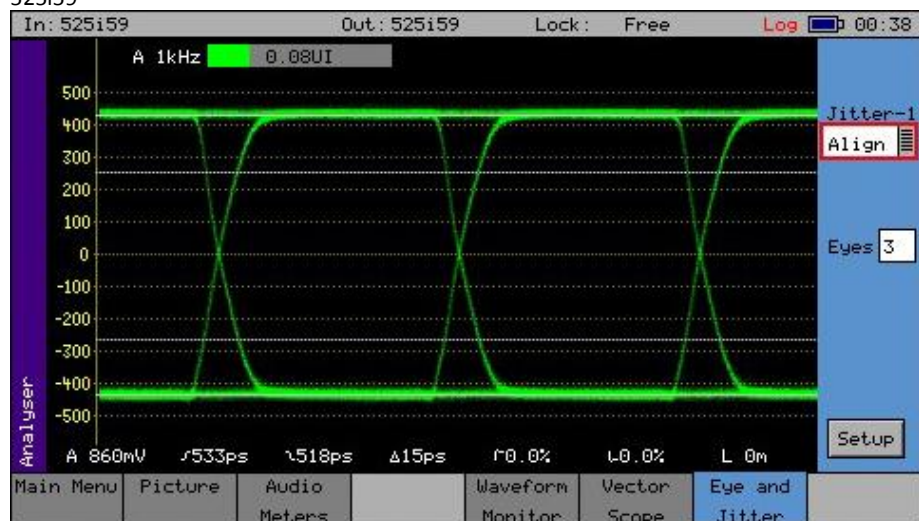**Components Made in China for this product:**

Name of Component	Manufacturer
DC/DC Converter	Richtek

*Key components are listed by the manufacturer and are subject to change without notice
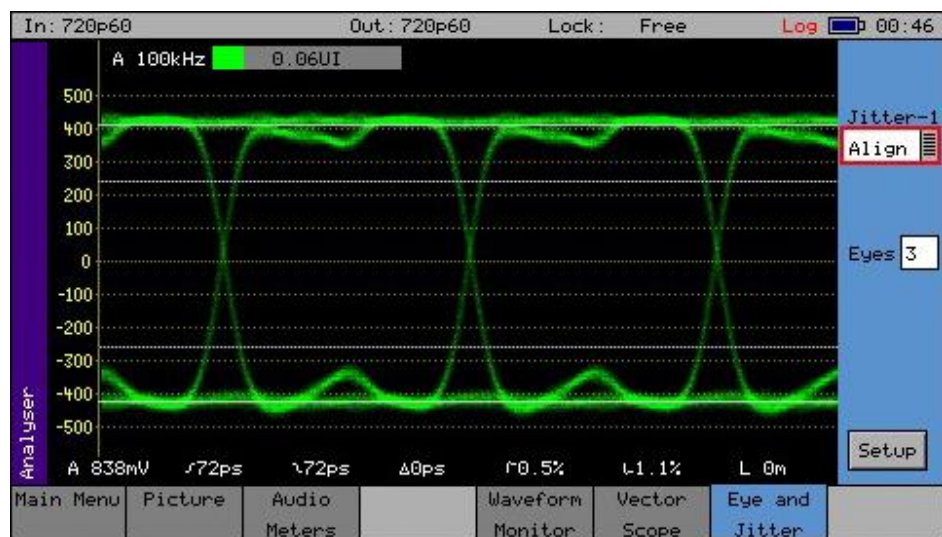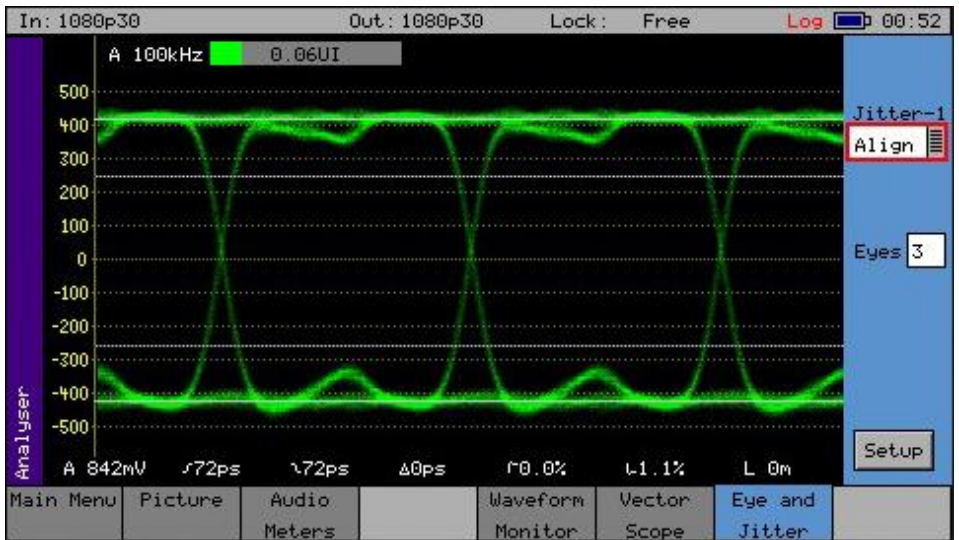
Eye Diagram
SD Mode

525i59
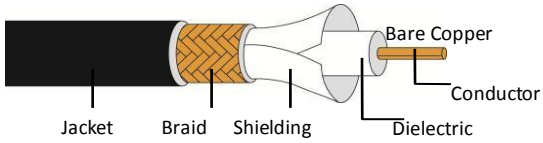

HD Mode

720p60

`1080p30

A 100kHz █ 0.06UI

Jitter-1
Align ▤

Eyes 3

Analyser

A 842mV   ⌐72ps   ⌐72ps   Δ0ps   ⌐0.0%   ⌐1.1%   L 0m

Setup

| Main Menu | Picture | Audio Meters | | Waveform Monitor | Vector Scope | Eye and Jitter | |

In order to achieve the <u>Best Quality</u> and <u>Long Range</u> coax cable run of up to 200m / 600ft, you will need:

1. **Good Quality Cable**: We suggest using RG6 Belden 1694A <u>Low Loss Serial Digital</u> 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.

Bare Copper

Conductor

Jacket   Braid   Shielding   Dielectric

Contact Plating Gold Plated Pin