



# SDI Fiber Extender for SD/HD/3G and 4K 12G SDI with Return RS485 Data

Compact 12G / 6G / 3G / HD / SD-SDI fiber optic transmitter and receiver kit with RS485 return data.



Transmitter / receiver kit - original product image



Connector-side view - original product image

## Model Number

F-12G-SDI-D-TxRx

**Manufacturer:** Thor Fiber

**Primary Purpose:** Thor Fiber F-12G-SDI-D-TxRx transports one SD/HD/3G/6G/12G-SDI signal over fiber with transparent, loss-free transmission and embedded audio preservation. The system includes one SDI input with loop-out on the transmitter, dual SDI outputs on the receiver, and return RS485 data support for control applications.

## Key Specifications

Spec Category	Extracted Value
Model Number	F-12G-SDI-D-TxRx
Video Format Support	SD-SDI, HD-SDI, 3G-SDI, 6G-SDI, 12G-SDI; DVB-ASI standard support
Video Input / Output	TX: 1 independent 12G-SDI input with 1 SDI loop output; RX: dual SDI outputs
Optical Interface	SFP LC/PC optical module included; 1310nm, 20km long-haul
Bit Rate	12Gb/s, 6Gb/s, 2.97Gb/s, 1.485Gb/s, and 270Mb/s auto adaptation
Reclocking	270 Mbps, 1.483/1.485 Gbps, 2.967/2.970 Gbps, 5.934/5.940 Gbps, 11.868/11.880 Gbps auto select
Connector / Impedance	BNC for SDI; LC connector via SFP; 75 Ohm impedance
Output Level	800mVp-p +/-10%
Power	DC 12V; input voltage range 11V to 13V; AC adapter input 90-264V at 50-60Hz
Power Consumption	Transmitter: 3.6W +/-10%; Receiver: 2.6W +/-10%
Mechanical / Environment	93.0mm x 45.0mm x 29.2mm; working temperature -40C to +85C; relative humidity <=95%, no condensation

## Core Features

- Compact Design: Casing size is 93.0mm x 45.0mm x 29.2mm.
- Auto-Adaptive SDI Transport: Supports unidirectional 12G / 6G / 3G / HD / SD-SDI transparent transmission.
- PAL/NTSC Auto Detection: Automatically detects PAL and NTSC formats.
- SDI Reclocking and Equalization: Transmitter includes cable equalizer and re-clocker for SDI input.
- Loop-Out and Dual Output: Transmitter provides one SDI loop output; receiver provides dual SDI outputs.
- SMPTE Compliance: Supports SMPTE ST297, ST2081, ST2082, 424M, 292M, 344M, 259M, and DVB-ASI.
- 12G Optical Module Included: 1310nm 20km SFP LC/PC optical module is included.
- Return RS485 Data: Product version includes return RS485 data for control applications.
- Wide Temperature Range: Designed for operation from -40C to +85C.

## Additional Product Information

Item	Extracted Value
Warranty	2 Yrs
Optional Model	F-12G-SDI-TX/RX without return RS485 data
Optional Cable	LC/ST cable option listed on product page
BNC Protection	15kV electrostatic protection for indoor applications
Storage Temperature	-40C to +85C
Relative Humidity	<=95%, no condensation

## Product Images

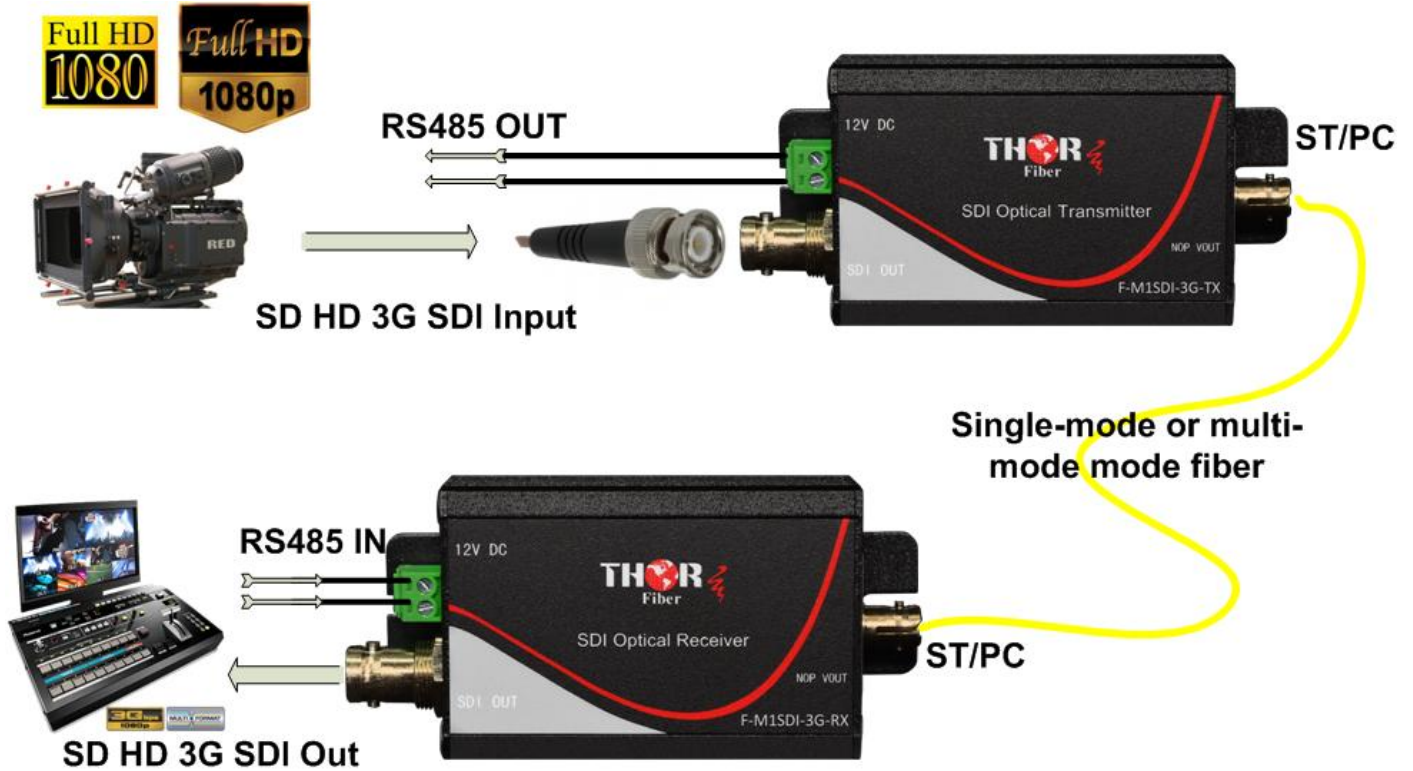


Transmitter and receiver connector view



Transmitter / receiver kit with accessories

## Application Drawings



## Target Applications

- 4K / 8K ultra-high-definition TV production
- Camera-to-fiber extension
- Control applications requiring RS485 return data
- Live broadcast and event production
- Production and post-production workflows
- Long-distance SDI fiber extension
- Concerts and sports broadcast transport
- Broadcast-grade embedded audio SDI transport

## Supported Video Standards

Standard Type	Extracted Value
SD Video	525i/59.94 NTSC; 625i/50 PAL
HD Video	720p/50 / 59.94 / 60; 1080p/23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60; 1080i/50 / 59.94 / 60
2K Video	2K DCI 23.98p / 24p / 25p; 2K DCI 23.98PsF / 24PsF / 25PsF
Ultra HD / 4K	2160p/23.98 / 24 / 25 / 29.97 / 30; 4K DCI 23.98p / 24p / 25p