



# 8 Ch SD/HD 3G-SDI Over Single Fiber with LOOP OUTPUTS

TECHNICAL DATASHEET

8-channel SD/HD/3G-SDI CWDM transmitter / receiver kit with TX loop-outs and RX dual outputs.



Front panel - original product image

## Model Number

F-8SDI-3G-LOOP-TxRx

Manufacturer: Thor Fiber

**Primary Purpose:** The Thor Fiber F-8SDI-3G-LOOP-TxRx is an 8-channel 3G-SDI fiber optic multiplexer that transports uncompressed SDI signals over one single-mode fiber. The transmitter provides SDI loop outputs for local monitoring, while the receiver provides dual mirrored outputs for each channel, supporting broadcast, live production, and monitoring applications.

## Key Specifications

Spec Category	Extracted Value
Model Number	F-8SDI-3G-LOOP-TxRx
Signal Support	8 channels SD/HD/3G-SDI up to 1080p/60; 4 channels 4K/UHD at 30 fps; 2 channels 4K/UHD at 60 fps
Loop / Output Configuration	Transmitter includes SDI loop-outs; receiver includes dual mirrored SDI outputs
Standards	SMPTE ST 425-3, ST 425-5, 259M, 292, 297, 424M, 305M, 310M, 344M, DVB-ASI
Optical Platform	CWDM optical multiplexing; each SDI signal uses its own laser / optical wavelength
Fiber Connector	ST/PC
Fiber Cable / Distance	Single-mode fiber up to 20 km
Optical Data Rate	Up to 3 Gbps
Optical Budget	15 dB standard; 25 dB long range
Electrical I/O	BNC, 75 ohm; 1.00 V peak-to-peak input level
Mechanical	1RU 19 in. rackmount; 480 x 225 x 88 mm / 19 x 8.86 x 3.46 in
Power / Environment	100-240 VAC auto-switching PSU; operating -10C to +55C; storage -30C to +70C; 0-95% non-condensing humidity

## Core Features

- Loop Outputs: Transmitter provides local SDI loop-outs for monitoring or downstream equipment.
- Dual Receiver Outputs: Receiver provides mirrored outputs for each SDI channel.
- Uncompressed SDI: Carries SD/HD/3G-SDI signals without compression or scaling.
- UHD Support: Supports 4K/UHD workflows up to 60 fps depending on channel count.
- CWDM Multiplexing: Each SDI signal is converted to a different optical wavelength over one fiber.
- Embedded Audio/Data: Supports SDI with or without embedded audio and ancillary data.
- Signal Integrity: Signals are equalized and re-clocked prior to fiber transmission and at receiver output.
- Rackmount Platform: 1RU 19 in. rackmount chassis for professional broadcast and AV installations.

## Product Images



Transmitter and receiver connection images - original uploaded product images

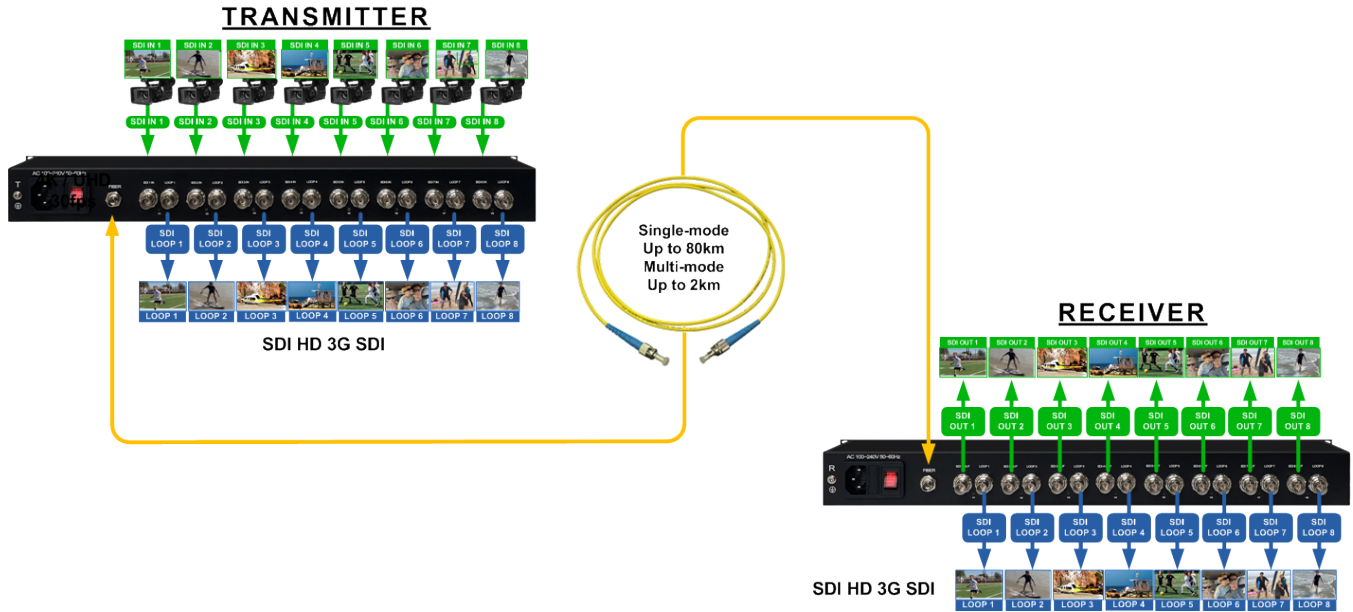
## Target Applications

- Live broadcast production
- Sports and event production
- Studio monitoring and loop-through applications
- OB truck and control room interconnects
- Campus and venue SDI distribution
- Long-distance SDI fiber transport
- 4K/UHD production links
- SDI confidence monitoring

## Additional Product Information

Item	Extracted Value
Warranty	2 year warranty
Working Temperature	-10C to +55C
Storage Temperature	-30C to +70C
Relative Humidity	0 to 95%, non-condensing
Power	100-240 VAC auto-switching PSU; 10-30 W depending on configuration

## Application Drawings



## Model Selection

Model	Description	Distance / Connector
F-8SDI-3G-LOOP-TxRx	8-channel 3G-SDI fiber optic multiplexer with TX loop-outs and RX dual outputs	Up to 20 km, ST/PC
High-Power Version	Longer distance transmitter / receiver version available	Model dependent

## Technical Notes

- All specifications are subject to change without notice.
- Transmission distance depends on optical budget, fiber condition, and selected optics.
- Other connectors, distances, CWDM, DWDM, and custom directional configurations are available by request.