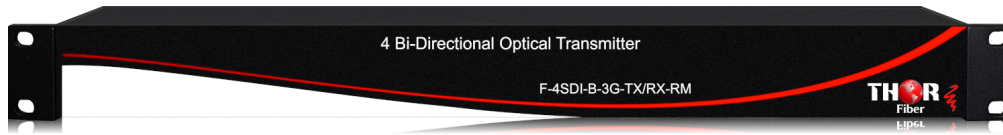




# 4 Channel Bidirectional SD/HD 3G-SDI Over Single Fiber CWDM Uncompressed Rack-Mountable

TECHNICAL DATASHEET

4-channel bidirectional SD/HD/3G-SDI CWDM transmitter / receiver kit in a 1RU 19 in. rackmount chassis.



Front panel - original product image

## Model Number

F-4SDI-B-3G-TxRx-RM

**Manufacturer:** Thor Fiber

**Primary Purpose:** The Thor Fiber F-4SDI-B-3G-TxRx-RM transports four bidirectional SD/HD/3G-SDI video channels over one single-mode fiber. It is a plug-and-play CWDM transmitter and receiver kit for professional broadcast, production, campus, government, and long-distance SDI video transport applications.

## Key Specifications

Spec Category	Extracted Value
Model Number	F-4SDI-B-3G-TxRx-RM
Signal Support	Any serial digital signal up to 3.0 Gbps; SD/HD/3G-SDI and multi-rate digital video transport
Channels	4 bidirectional SDI channels over one single-mode fiber
Optical Platform	CWDM optical transmission with DFB laser module
Fiber Connector	ST/PC standard
Fiber Cable	Single-mode or multi-mode fiber optic cable, as specified on product page
Optical Data Rate	Up to 4.25 Gbps, model specific
Optical Budget	25 dB standard; 35 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; 8-15 lb depending on configuration
Power / Environment	100-240 VAC auto-switching PSU; operating -10C to +55C; storage -30C to +70C; 0-95% non-condensing humidity

## Core Features

- **Bidirectional Transport:** Carries four SD/HD/3G-SDI channels in a bidirectional CWDM fiber configuration.
- **Uncompressed Video:** Supports real-time, loss-free SDI transport with no compression or scaling.
- **Signal Integrity:** Input equalization and reclocking help maintain stable SDI performance on buffered outputs.
- **Protocol Independent:** Automatically adjusts to input signal type regardless of bit rate or protocol up to 3.0 Gbps.
- **Embedded Audio Support:** Passes SDI embedded audio and ancillary data transparently.
- **Status Monitoring:** Real-time LED indicators support input signal detect and optical link troubleshooting.
- **Custom Options:** Additional bidirectional channel layouts and higher-density DWDM/CWDM configurations are available by request.
- **Rackmount Form Factor:** 1RU 19 in. chassis keeps the system clean and easy to install in broadcast racks.

## Product Images



Bidirectional rear panel / chassis image - original product image

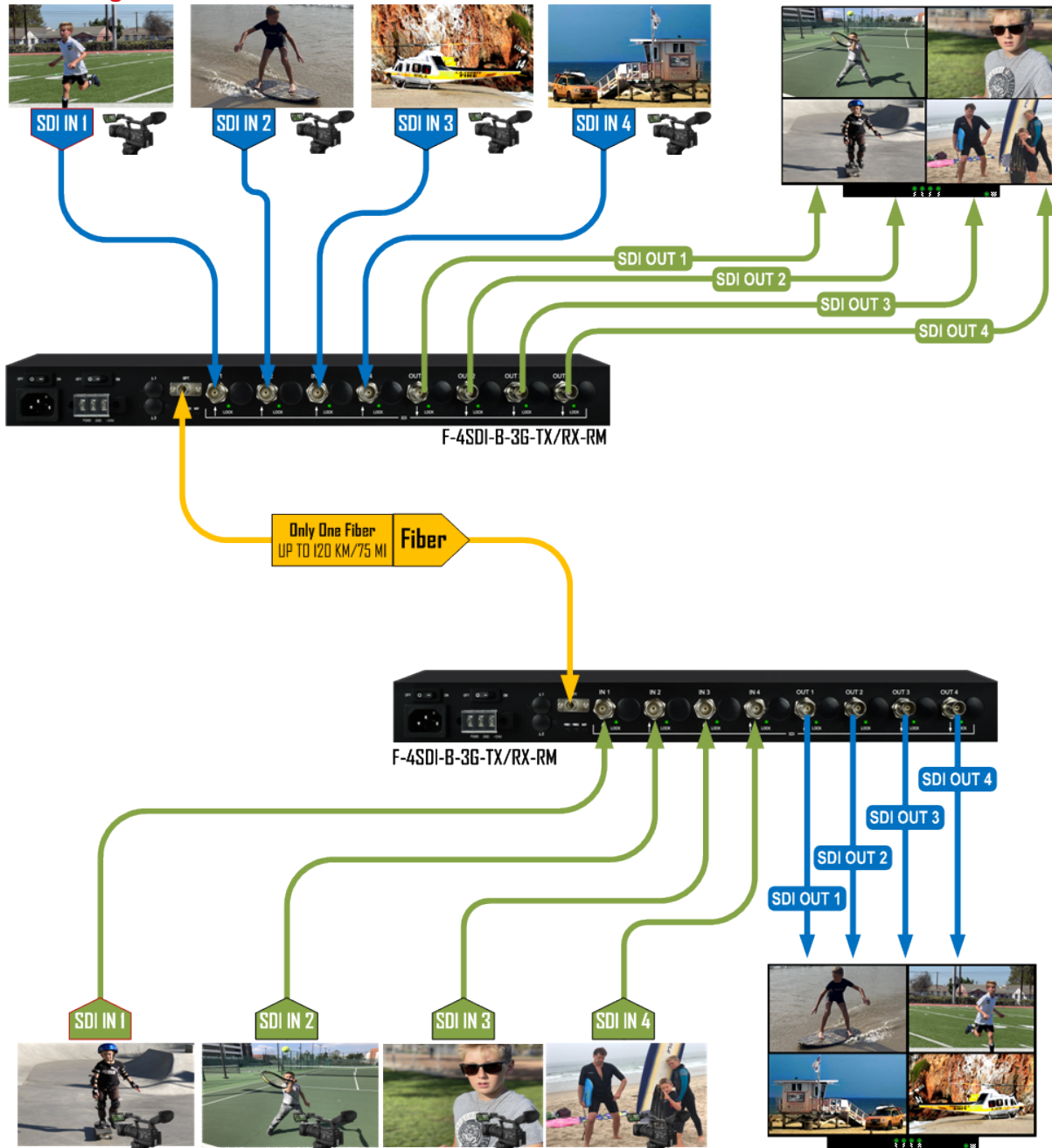
## Target Applications

- Live broadcast production
- Electronic news gathering
- Stadium and arena video transport
- Campus and government video links
- Scientific and research video systems
- Control room to remote rack transport
- Production monitoring and SDI distribution
- Bidirectional SDI links where coax distance is limited

## 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-4SDI-B-3G-Tx-RM	4 bidirectional HD/SD/3G-SDI fiber optic transmitter with CWDM multiplexing	Standard 40 km platform; ST/PC standard
F-4SDI-B-3G-Rx-RM	4 bidirectional HD/SD/3G-SDI fiber optic receiver with CWDM multiplexing	Standard 40 km platform; ST/PC standard
F-4SDI-B-3G-TxRx-RM	Transmitter and receiver kit for 4-channel bidirectional SD/HD/3G-SDI fiber transport	Custom distances/connectors available

## 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.