

4 Ch SD/HD 3G-SDI Over Single Fiber CWDM Uncompressed Rack-Mountable

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



Front panel - original product image

Model Number

F-4SDI-3G-TxRx-RM

Manufacturer: Thor Fiber

Primary Purpose: The Thor Fiber F-4SDI-3G-TxRx-RM transports four uncompressed serial digital video signals up to 3G-SDI over one single-mode fiber. The rackmount transmitter and receiver kit is designed for professional broadcast, production, campus, government, and long-distance SDI video transport applications.

Key Specifications

Spec Category	Extracted Value
Model Number	F-4SDI-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 SDI channels over one single-mode fiber
Optical Platform	CWDM optical transmission with DFB laser module
CWDM Wavelengths	1310 nm CWDM band and 1550 nm CWDM band; other wavelengths available by request
Fiber Connector	ST/PC standard
Fiber Cable	Single-mode fiber only
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

- **Uncompressed Transport:** Carries four SD/HD/3G-SDI video signals over fiber 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.
- **Single-Fiber Operation:** Available with internal optics for operation over one optical fiber.
- **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.
- **CWDM Compatibility:** Uses standardized CWDM channels for compatibility with Python-style CWDM systems.
- **Custom Options:** Bi-directional, DWDM and higher-density configurations are available by request.

Product Images



Rear panel / chassis image - original product image

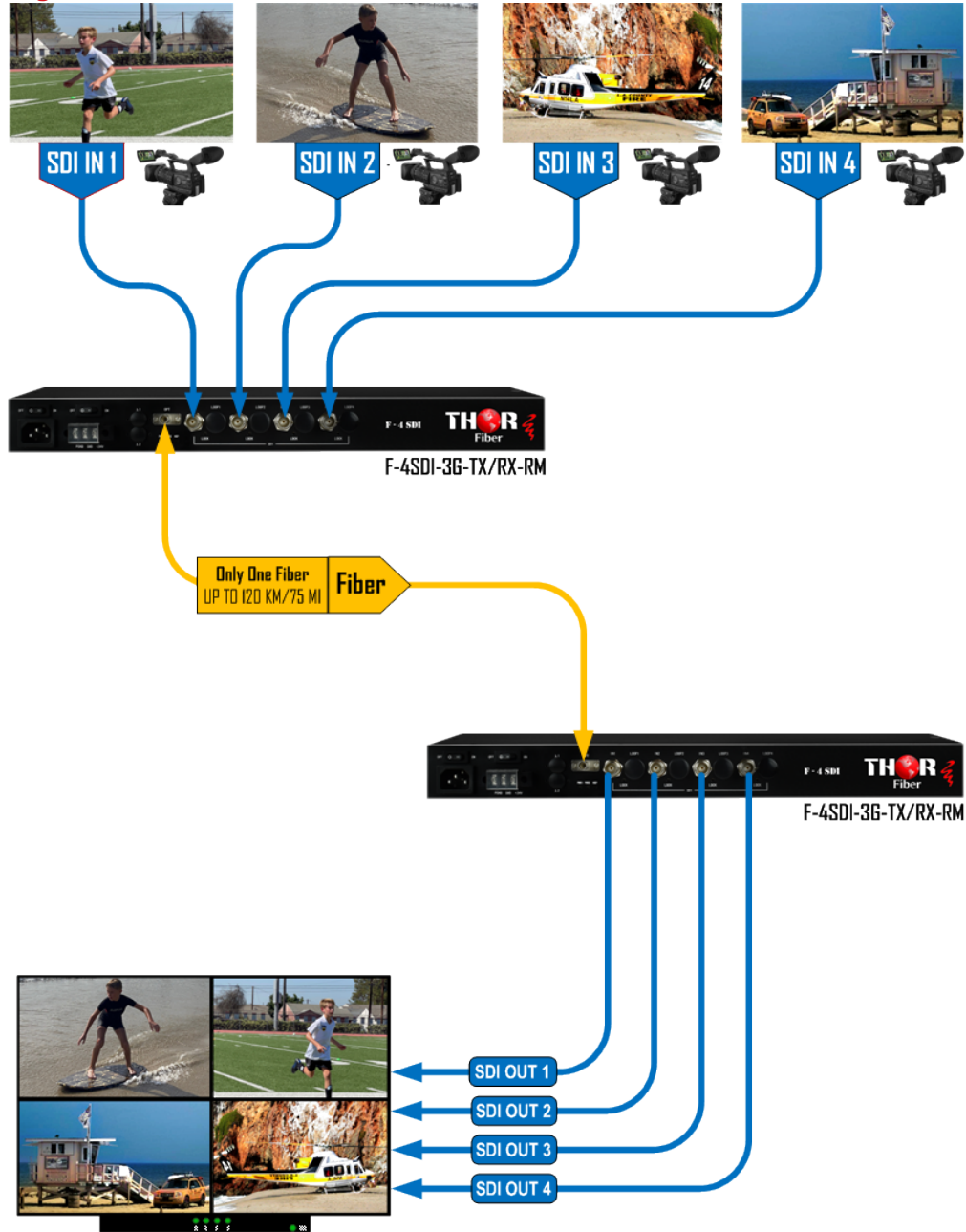
Target Applications

- 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
- Long-distance SDI transport 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-3G-Tx-RM	4 x HD/SD/3G-SDI fiber optic transmitter with CWDM multiplexing	20 km, ST/PC standard
F-4SDI-3G-Rx-RM	4 x HD/SD/3G-SDI fiber optic receiver with CWDM multiplexing	20 km, ST/PC standard
F-4SDI-3G-TxRx-RM	Transmitter and receiver kit for 4-channel 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.