



(4K/UHD) at 30 and 60 fps over one Fiber

TECHNICAL DATASHEET



4-channel 3G/HD/SD-SDI or DVB-ASI fiber system with 4K/UHD 30/60 fps support.



Front / rear product image - original uploaded product image

Model Number

F-4SDI-3G-CWDM-TX/RX

Manufacturer: Thor Fiber

Primary Purpose: The Thor Fiber F-4SDI-3G-CWDM-TX/RX transports 4-channel 3G/HD/SD-SDI or DVB-ASI over one fiber with 4K/UHD support. It can carry one 4K/UHD signal at 60 fps using all four 3G-SDI inputs, two 4K/UHD signals at 30 fps using two pairs of inputs, or four independent HD/SD/3G-SDI channels over the same fiber path.

Key Specifications

Spec Category	Extracted Value
Model Number	F-4SDI-3G-CWDM-TX/RX
Primary Signal Support	4 channels of 3G/HD/SD-SDI or DVB-ASI over one fiber
4K / UHD Support	Up to 60 fps using all 4 inputs; up to 30 fps using 2 inputs
Transport Modes	1 x 4K/UHD at 60 fps, 2 x 4K/UHD at 30 fps, or 4 x HD/SD/3G-SDI channels
Supported 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 a dedicated laser / wavelength
Fiber Type	Single-mode fiber only; multimode support shown for short links in supplied application drawings
Optical Data Rate	Up to 4.25 Gbps, model specific
Optical Budget	25 dB standard; 35 dB long range; high-power versions available
Fiber Connector	SC/APC standard; ST or ST/APC by request
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

- 4K/UHD over Fiber: Supports 4K/UHD resolutions up to 60 fps over a single fiber link.
- Flexible Channel Use: Supports 1 x 4K/UHD at 60 fps, 2 x 4K/UHD at 30 fps, or 4 x 3G/HD/SD-SDI channels.
- CWDM Multiplexing: Each SDI signal is converted to a different optical wavelength and combined over fiber.
- Signal Integrity: Equalized and re-clocked before fiber transmission and at the receiver outputs.
- Embedded Audio Support: Passes 3G/HD/SD-SDI inputs with or without embedded audio and data.
- Pathological Pattern Support: Supports pathological patterns over the full link budget and operating range.
- Receiver Outputs: Receiver features four re-clocked SDI outputs for clean signal delivery.
- Rackmount Options: Available in compact and 19 inch rackmount configurations.

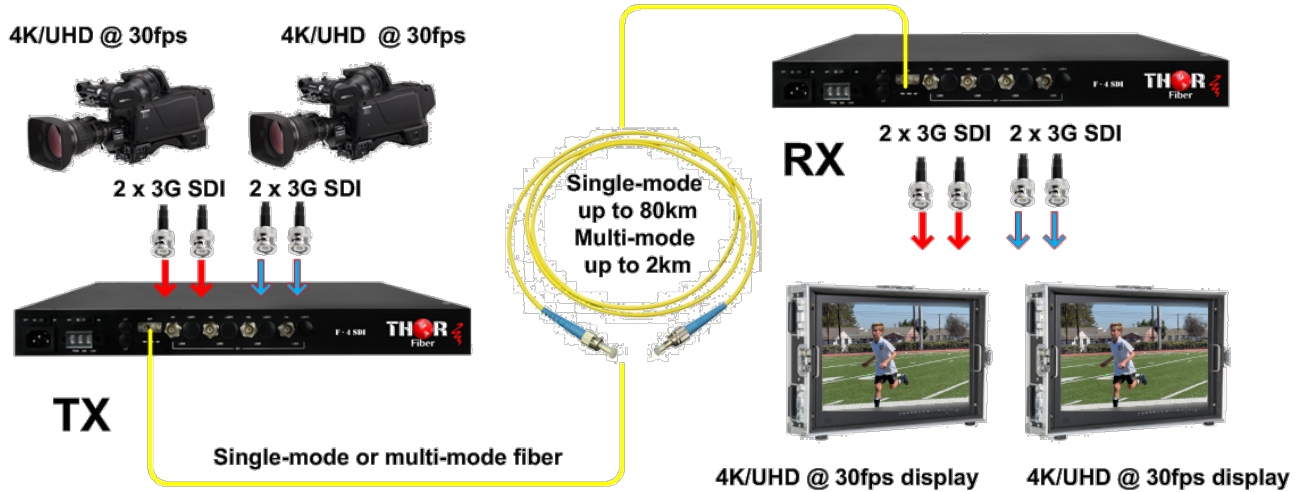
Target Applications

- 4K/UHD production links
- Broadcast studio fiber transport
- Live event and sports production
- Control room to remote rack transport
- Camera-to-monitor fiber extension
- Campus and venue video distribution
- DVB-ASI or multi-rate digital transport
- Long-distance SDI transport where coax distance is limited

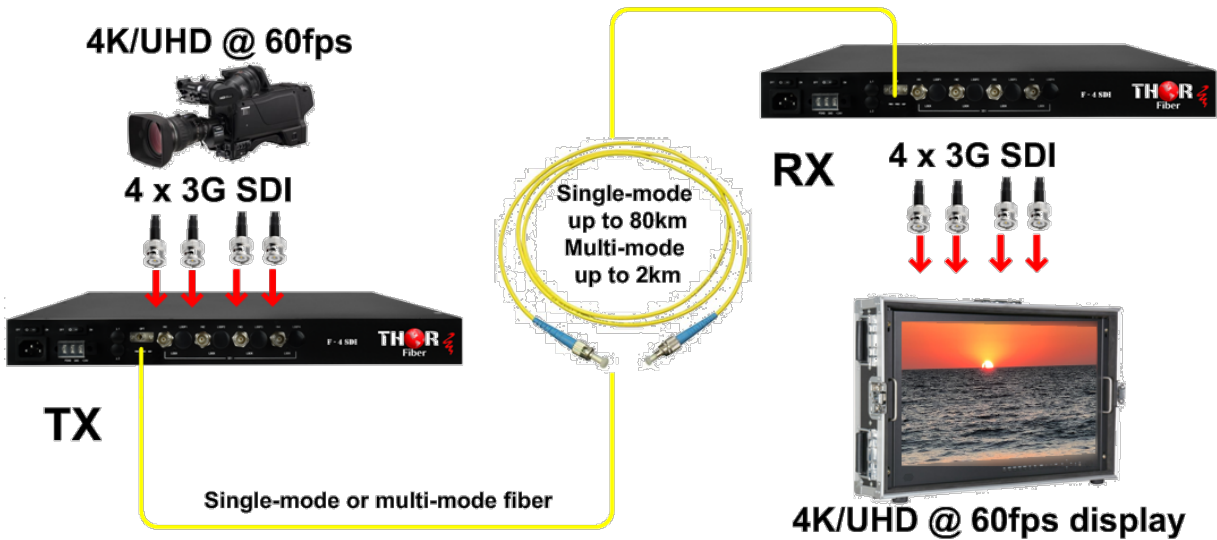
Additional Product Information

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 Drawing - 2 x 4K/UHD at 30 fps over one fiber
2X 4K/UHD @ 30fps over one fiber



Application Drawing - 4K/UHD at 60 fps over one fiber
4K/UHD @ 60fps over one fiber



Model / Configuration Summary

Model	Description	Notes
F-4SDI-3G-CWDM-TX/RX	4-channel 3G/HD/SD-SDI or DVB-ASI over one fiber with 4K/UHD support	1 x 4K/UHD at 60 fps, 2 x 4K/UHD at 30 fps, or 4 x 3G-SDI
Standard Distance Version	Standard optical budget configuration	25 dB optical budget
High Power / Long Distance Version	Higher optical budget option for longer distance applications	35 dB optical budget

Technical Notes

- All specifications are subject to change without notice.
- Transmission distance depends on optical budget, fiber type, fiber condition and selected optics.
- Other connectors, wavelengths, CWDM, DWDM, compact chassis, and 19 inch rackmount configurations are available by request.
- QR code links directly to the product page for latest manuals and documentation.