



16 Channel SD/HD/3G-SDI 4K/UHD Over One Fiber with SDI Loop Out

TECHNICAL DATASHEET



SCAN PRODUCT PAGE

16-channel SD/HD/3G-SDI CWDM transmitter / receiver kit with loop outputs in a 1RU rackmount chassis.



Product image - original uploaded chassis image

Model Number

F-16SDI-3G-TxRx

Manufacturer: Thor Fiber

Primary Purpose: The Thor Fiber F-16SDI-3G-TxRx is a 16-channel CWDM SD/HD/3G-SDI fiber optic transmitter and receiver kit for long-distance video transport over one fiber. It supports 3G-SDI up to 1080p/60 and can be used for 4K/UHD workflows by combining multiple 3G-SDI lines.

Key Specifications

Spec Category	Extracted Value
Model Number	F-16SDI-3G-TxRx
Signal Support	SD-SDI, HD-SDI, 3G-SDI, 4K/UHD workflows, DVB-ASI and SMPTE 259M / 292 / 297 / 424M / 425-3 / 425-5 / 305M / 310M / 344M
Channels	16 SDI channels over one single-mode fiber with loop-out monitoring
Optical Platform	16 CWDM optical multiplexing; each SDI channel converted to its own wavelength
CWDM Wavelengths	1271, 1291, 1311, 1331, 1351, 1371, 1411, 1431 nm and 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611 nm
Fiber Connector	Single ST/PC
Fiber Cable	Single-mode fiber
Optical Data Rate	Up to 4.25 Gbps, model specific
Optical Budget	10 dB / 20 km; 15 dB / 40 km; 20 dB / 80 km; 35 dB / 120 km
Electrical I/O	BNC, 75 ohm; 1.00 V peak-to-peak input level
Resolution Support	Up to 16x 3G-SDI; up to 4x 4K/UHD 60 Hz using 4x 3G-SDI lines; up to 8x 4K/UHD 30 Hz using 2x 3G-SDI lines
Mechanical	1RU 19 in. rackmount; approx. 19 x 11 x 1.75 in; TX 10 lb, RX 10 lb
Power / Environment	100-240 VAC internal universal power supply; 25 W; operating -10C to +55C; storage -30C to +70C; 0-95% non-condensing humidity

Core Features

- High-Density Transport: Sends 16 SD/HD/3G-SDI video channels over one fiber.
- SDI Loop Out: Transmitter loop outputs support local monitoring or retransmission.
- Receiver Loop Out: Receiver provides loop-out capability for additional monitoring or distribution.
- 4K/UHD Support: Supports 4K/UHD workflows using grouped 3G-SDI lines.
- Signal Integrity: SDI signals are equalized and reclocked before optical transmission.
- Embedded Audio Support: Passes embedded audio and ancillary SDI data.
- Pathological Pattern Support: Designed to maintain performance over the link budget and temperature range.
- Rackmount Design: 1RU 19 in. transmitter and receiver chassis with universal AC power.

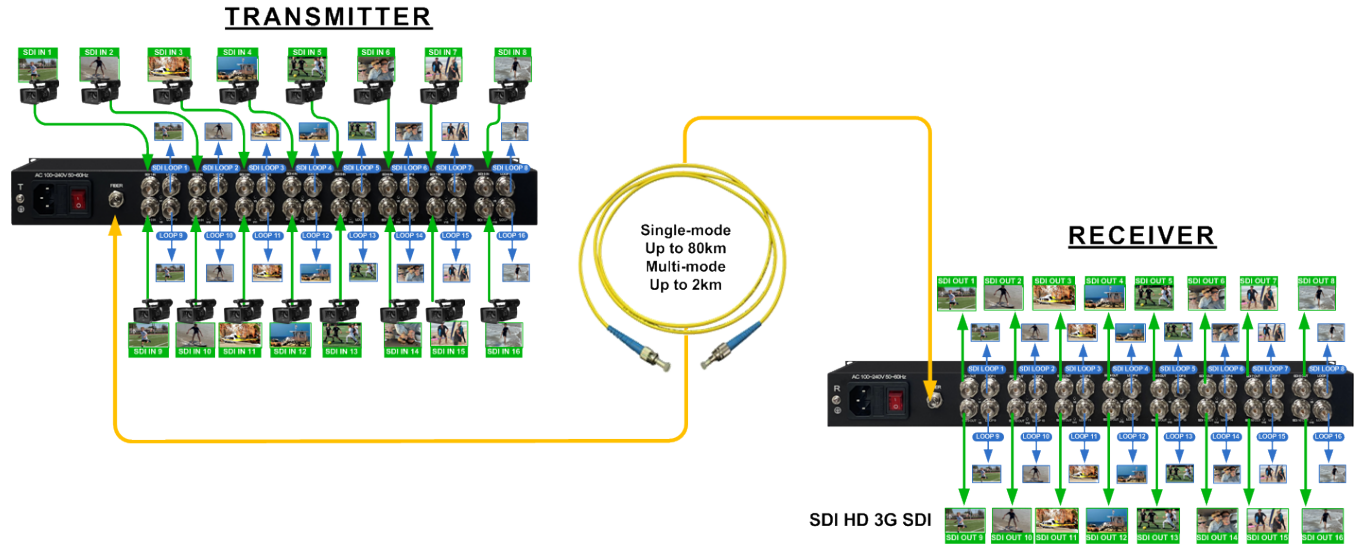
Target Applications

- Live broadcast production
- Sports and venue video transport
- OB trucks and remote production
- Studio-to-control-room links
- 4K/UHD multi-link workflows
- Campus and government video links
- SDI monitoring and retransmission
- Long-distance SDI transport over fiber

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; 25 W

Application Drawing



Model Selection

Model	Description	Distance / Connector
F-16SDI-3G-TxRx	16 channel SD/HD/3G-SDI fiber transmitter and receiver kit with SDI loop out	20 km, ST/PC
F-16SDI-3G-TxRx-40	16 channel SD/HD/3G-SDI fiber transmitter and receiver kit with SDI loop out	40 km, ST/PC
F-16SDI-3G-TxRx-80	16 channel SD/HD/3G-SDI fiber transmitter and receiver kit with SDI loop out	80 km, ST/PC
F-16SDI-3G-TxRx-120	16 channel SD/HD/3G-SDI fiber transmitter and receiver kit with SDI loop out	120 km, ST/PC

Technical Notes

- All specifications are subject to change without notice.
- Transmission distance depends on optical budget, fiber condition, and selected optics.
- Single-mode fiber is recommended for guaranteed performance; multimode operation is application-dependent.
- Other connectors, wavelengths, CWDM, DWDM, and custom directional configurations are available by request.