4K Fiber Transmission System

- Support for 4 independent 3G/HD/SD-SDI channels
- Transport 4K (uncompressed) up to 20km (12 miles)
- Each channel supports resolutions up to 1080p/60Hz
- Each channel individually reclocked
- Embedded audio / metadata support for each channel
- Integrated expansion port to add more channels
- LED indicators for channel activity and power
- Kit includes transmitter, receiver and power supplies
- Optional 19" Rack tray to mount (max) 4 modules

The OTR 1441 is a self contained fiber transmission kit for the transport of 4 discreet SDI signals (or 4K / 12G uncompressed) over a single fiber link. The kit includes the fiber transmitter, fiber receiver and power supplies. This is an ideal solution for the transmission of multiple uncompressed SDI streams, or 4K up to 20km with zero losses.

Each SDI channel is fully independent. For 4K use the signal is split over 4 separate 3G SDI links (12G) and supports full 4K resolution at 60fps. The system can also be used for any combination of SDI signals, with a mix of formats and bit-rates if required. Each channel will automatically detect and reclock SDI bit rates of 270Mbit, 1.48Gbit and 2.97Gbit.

An expansion port is included for the connection of the OTR 1442 to add 4 more SDI channels (dual 4K) over a single fiber.

LED Indicators are provided for channel presence and power. An optional 19" Rack tray mount is available which can accommodate up to 4 modules (RFR 1018).

Technical Specifications

SDI I/O
- 4 x multi-format 3G/HD/SD-SDI inputs (OTX 1441)
- 4 x multi-format 3G/HD/SD-SDI outputs (ORX 1441)
- 75 Ω BNC connections
- SMPTE 424M-2006, DVB ASI
- Multi-standard / Multi-format operation auto-detect.
- Multi-rate reclocking: 270Mbit / 1.48Gbit / 2.97Gbit
- Return Loss: > 15dB to 1.5Gbit and > 10dB to 2.97Gbit
- Automatic Cable EQ (Belden 1694A cable)
- 340m@270Mbit, 150m@1.48Gbit, 120m@3Gbit

Fiber I/O
- 1 x Fiber optic I/O port (COM port)
- 1 x Fiber optic expansion port (UPG port)
- LC/PC connections - Single Mode
- SMPTE 297M - 2006
- Internal CWDM Multiplexing
- Wavelengths: 1270nm, 1290nm, 1310nm, 1330nm
- Optical budget: 10.6dB
- Maximum distance (typical): 20km (12 miles)
- Fiber activity LEDs for each channel

Power
- +12VDC nominal. ORX1441 = 4.4W, OTX 1441 = 5.4W
- Supports external power input from 9 - 17 VDC
- 2 x Power LEDs provided

Physical
- 170 x 99.7 x 40.5mm (6.7” x 3.9” x 1.6”)
- Weight: 600g (21.1oz)

Ambient
- 5 - 40°C (41 - 104°F)
- 90% Humidity (non condensing)

Model #
- OTR 1441 LC - (EAN# 4250479321151)

Includes
- OTX 1441 - 4K Fiber Transmitter module
- ORX 1441 - 4K Fiber Receiver module
- 2 x 12VDC [brick] power supplies

Note. Internal CWDM optical multiplexing is utilized within the modules. This kit should be considered a self contained point to point solution and should not be integrated into external CWDM systems. An expansion port is included on each module which can be used to add additional SDI channels from the OTR 1442.
Applications

4 x SDI (4K 12G) Fiber Transport
This basic configuration is used for transporting up to 4 discreet SDI signals (SD/HD/3G) or it can be used for transporting a 4K (12G) signal over fiber.

8 x SDI (Dual 4K) Unidirectional Fiber Transport
This configuration uses the UPG port to add more channels into the link from the OTR 1442. This system be used to transport 8 discreet SDI signals (SD/HD/3G) or it can be used for transporting two unidirectional 4K signals over a single fiber.

4 x SDI (4K 12G) Bidirectional Fiber Transport
This configuration uses the UPG port to add more channels into the link from the OTR 1442. This shows a bidirectional application sending and receiving 4 discreet (SD/HD/3G) SDI channels, or sending and receiving 4K over a single fiber.