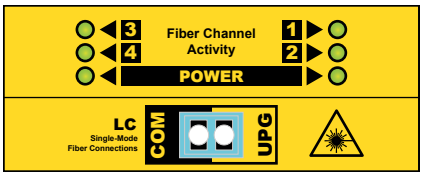
yellobrik®

OTR 1A42

8K Fiber Transmission System 1350nm-1410nm





Features

- Support for 4 independent 12G/6G/3G/1.5G/270M channels
- Transport 8k (uncompressed) signals up to 10km* (6.2miles)
- Each channel supports resolutions up to 2160p/60Hz
- Each channel is individually reclocked
- Embedded audio / metadata support for each channel
- Upgrade Port (UPG) for additional channels
- LED indicators for channel activity and power
- Kit includes transmitter, receiver and power supplies
- Optional 19" Rack tray to mount up to 4 modules

Description

The OTR 1A42 is a self contained fiber transmission kit for the transport of four discreet 12G-SDI signals (or 8k/48G 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.

Each SDI channel is fully independent. For 8k use, the signal is split over four separate 12G-SDI links (48G) and supports full 8k 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/s, 1.5Gbit/s, 3Gbit/s, 6Gbit/s and 12Gbit/s.

The **Upgrade (UPG) port** allows an OTR 1A41, OBD 1514 E or OBD 1510 D module to be connected, enabling the transmission of four additional SDI channels, 1Gigabit Ethernet or Serial data over the single fiber link.

LED Status indicators are provided for channel presence and power. The optional "RFR 1018" 19inch rack mount tray can be purchased to accommodate up to four OTR modules.

Note: The system is designed for closed-loop, point-to-point operation and must not be connected to an external CWDM system. The modules require single-mode fiber; multi-mode fiber is not supported.

Technical Specifications

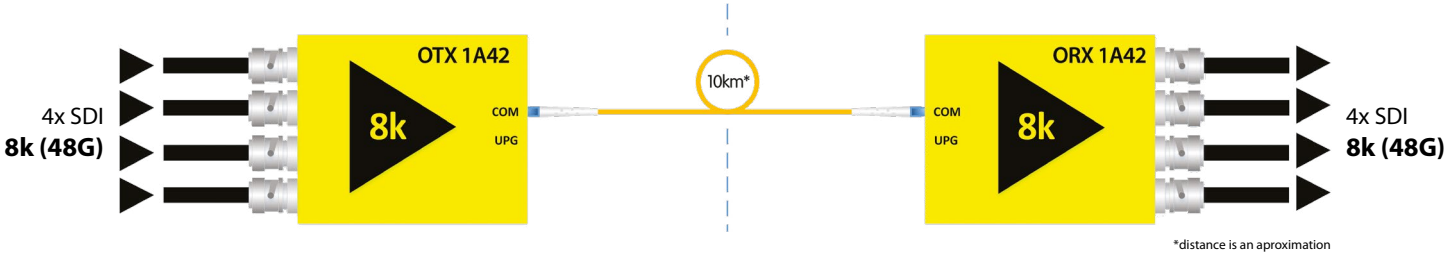
SDI Video	4x 12G-SDI inputs on 75 Ohm BNC connections (OTX 1A42) 4x 12G-SDI outputs on 75 Ohm BNC connections (ORX 1A42)				
	SMPTE 259M-2008 , SMPTE 292-1:2012, SMPTE 292-2:2011 SMPTE 424M-2006 , SMPTE ST-2081, SMPTE ST-2082				
	Multi-standard / Multi-format operation auto-detect.				
	Multi-rate reclocking: 270Mbit/s - 1.5Gbit/s - 3Gbit/s - 12Gbit/s				
	Electrical Return Loss:	to 1.5GHz >15dB	to 3GHz >10dB	to 6GHz >7dB	to 12GHz >4dB
	Automatic cable EQ	270Mbit/s	1.5Gbit/s,	3Gbit/s	12Gbit/s
		250m	190m	140m	80m
		Belden 1694A		Belden 4794R	
Fiber I/O	1x Fiber I/O port (COM port) 1x Fiber expansion port (UPG port) Singlemode LC/PC connections				
	SMPTE 297M - 2006				
	Internal CWDM Multiplexing				
	Wavelengths	1350nm, 1370nm, 1390nm, 1410nm			
	Optical budget	10.6dB			
	Max. Distance*	10km (6.2 miles)			
	Fiber activity LEDs for each channel				
Power	+12V DC - (Supports input range 9 - 17V DC)				
	OTX 1A42: 5.4W | ORX 1A42: 4.4W				
	2x Power LEDs on side per module				
Physical (per module)	Size (incl. connectors)	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 1A42	EAN# 4250479328624			
Includes	2 Modules, 2 Power Supplies				

*Distance is an approximation. Actual distances achieved can be longer or shorter depending on the type of cable. Determine link losses and perform optical budget calculations to ensure correct operation.

Application Examples

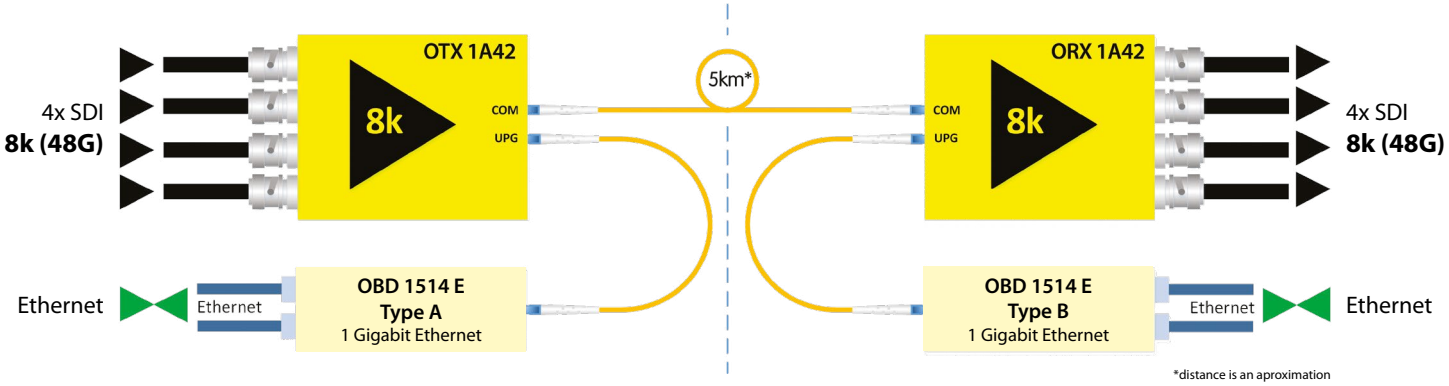
4x 12G-SDI (8k/48G) Fiber Transport

This basic configuration is used for transporting up to four discreet 12G-SDI signals (SD/HD/3G/6G/12G) or it can be used for transporting an 8k (48G) signal over fiber.



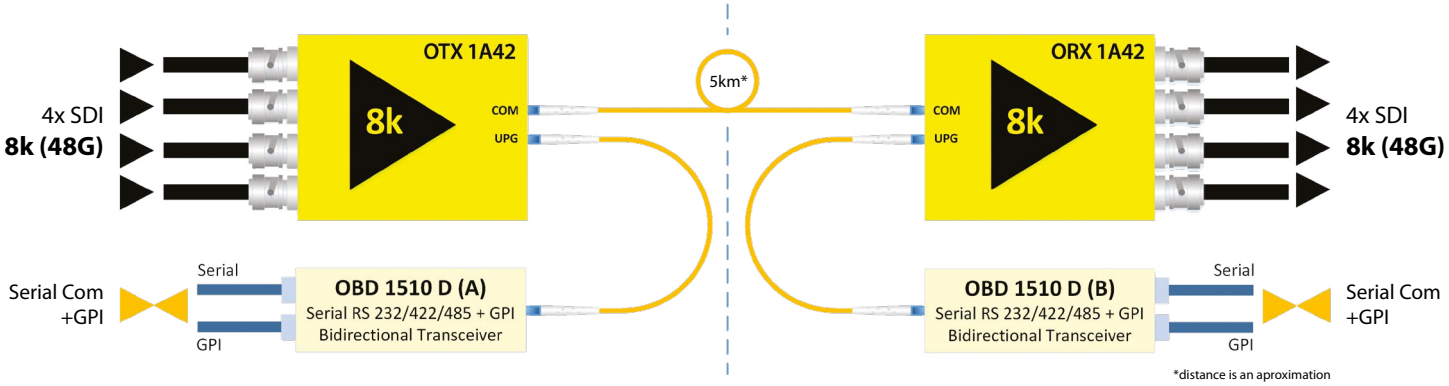
4x 12G-SDI (8k/48G) Fiber Transport + Ethernet

This configuration transports four discreet 12G-SDI signals (SD/HD/3G/6G/12G) or 8k (48G) and also adds bidirectional Ethernet from the OBD 1514 E into the same fiber link using the UPG expansion port. Note: Total distance is reduced to 5km when used in this configuration.



4x 12G-SDI (8k/48G) Fiber Transport + Serial RS 232 + GPI

This configuration transports four discreet 12G-SDI signals (SD/HD/3G/6G/12G) or 8k (48G) and also adds bidirectional Serial data (RS232/422/485) + GPI from the OBD 1510 D into the same fiber link using the UPG expansion port. Note: Total distance is reduced to 5km when used in this configuration.



8x 12G-SDI (16K/96G) Uncompressed Fiber Transport and 8K Bidirectional Fiber Transport

Connecting the OTR 1A41 to the expansion port adds up to four 12G-SDI channels, enabling the transmission of uncompressed 96 Gbit/s over a single fiber link. Alternatively, it can also supports bi-directional uncompressed 8K (48G) transport over a single fiber link. Refer to the OTR 1A41 product information for configuration diagrams.

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OTR 1A42

Optional Accessories

Rack Frames

This yellobrik kit can be placed in a rack frame along others to build increasingly complex systems in a compact and easily accessible form factor.

The RFR 1018 is a passive (non powered) mounting tray for up to four individual OTR 1A41, OTR 1A42, OTR 1441, or OTR 1442 modules (e.g. OTX 1441, ORX 1441, etc.). The included mounting studs help securing the modules to the rack frame and to each other.



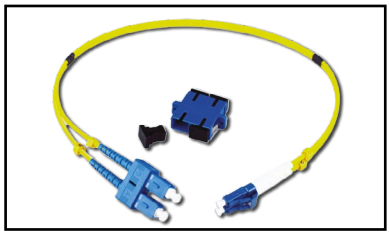
RFR 1018
19" Rack frame to mount up to 4 modules.

Fiber Adapter Cables

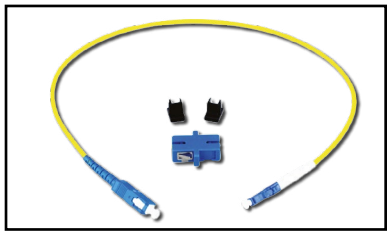
While some of our products offer LC, ST and SC fiber connectors, most SFPs in our product range offer LC fiber connectors.

To still allow the necessary flexibility in a professional setting we offer patch cables to convert LC to ST or SC fiber connections. These patch cables' insertion less and return loss are manually checked for each individual cable to allow for maximum precision when calculating the optical budget

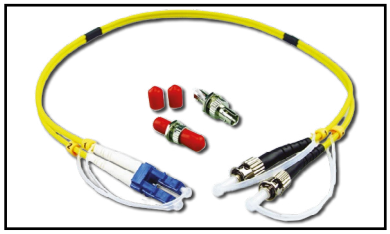
Besides the selection here we offer LC/FC and LC/LC patch cables.



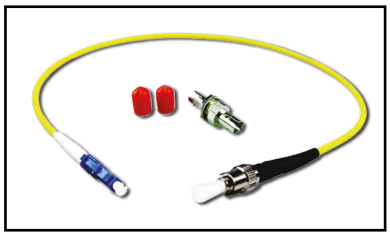
LC/SC Dup: LC/SC Duplex adapter cable



LC/SC Sim: LC/SC Simplex adapter cable



LC/ST Dup: LC/ST Duplex adapter cable



LC/ST Sim: LC/ST Simplex adapter cable

Power Adapter Options

The power requirements of this yellobrik allow for the usage of P-Tap or XLR connection based power sources.

Note: This does not replace the included power supply.



P-TAP 1000
Use with a standard battery P-TAP power source.



XLR 1000
Use with a standard 4 pin XLR camera battery power source.