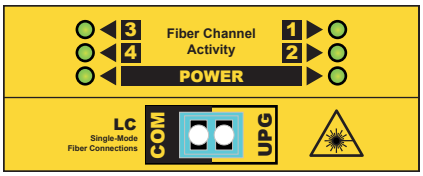
yellobrik®

OTR 1442

LYNX | Centraal™ ✓ yelloGUI ✓

4K Fiber Transmission System 1350-1410nm





Features

- 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 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 (max) 4 modules

Description

The OTR 1442 is a self contained fiber transmission kit for the transport of 4 discreet 3G-SDI (or a single 12G-SDI signal spread across 3G-SDI) signals 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 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/s, 1.5Gbit/s and 3Gbit/s.

The **Upgrade (UPG) port** allows an OTR 1441, 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

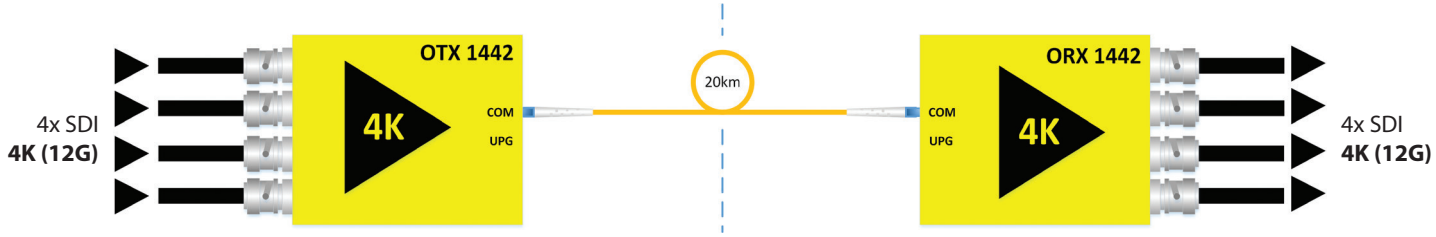
SDI Video	4x 3G-SDI inputs [OTX 1442] on 75 Ohm BNC connections 4x 3G-SDI outputs [ORX 1442] on 75 Ohm BNC connections			
	SMPTE 259M-2008 , SMPTE 292-1:2012, SMPTE 292-2:2011 SMPTE 424M-2006 , DVB ASI			
	Multi-standard / Multi-format operation auto-detect.			
	Multi-rate reclocking: 270Mbit/s - 1.5Gbit/s - 3Gbit/s			
	Electrical Return Loss		to 1.5GHz >15dB	to 3GHz >10dB
	Automatic Cable EQ	270Mbit/s	1.5Gbit/s	3Gbit/s
		250m	190m	140m
		Belden 1694A cable		
Fiber I/O	1x Fiber I/O port (COM port) 1x Fiber expansion port (UPG port) Singlemode LC/PC connection			
	SMPTE 297M - 2006			
	Internal CWDM Multiplexing			
	Wavelengths	1350nm, 1370nm, 1390nm, 1410nm		
	Optical budget	10.6dB		
	Max. distance*	20km (12 miles)		
	4 Fiber activity LEDs, one for each channel			
Power	+12V DC nominal. ORX1442 = 3.8W, OTX 1442 = 4.1W Supports external power input from 7 - 24V DC			
	2x Power LEDs on side per module			
Physical (per module)	Size (incl connectors)	170mm x 99.7mm x 40.5mm (6.7" x 3.9" x 1.6")		
	Weight	600g (21.1oz)		
Ambient	5 - 40ºC (41 - 104ºF) 90% Humidity (non condensing)			
Model #	OTR 1442	EAN# 4250479324374		
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

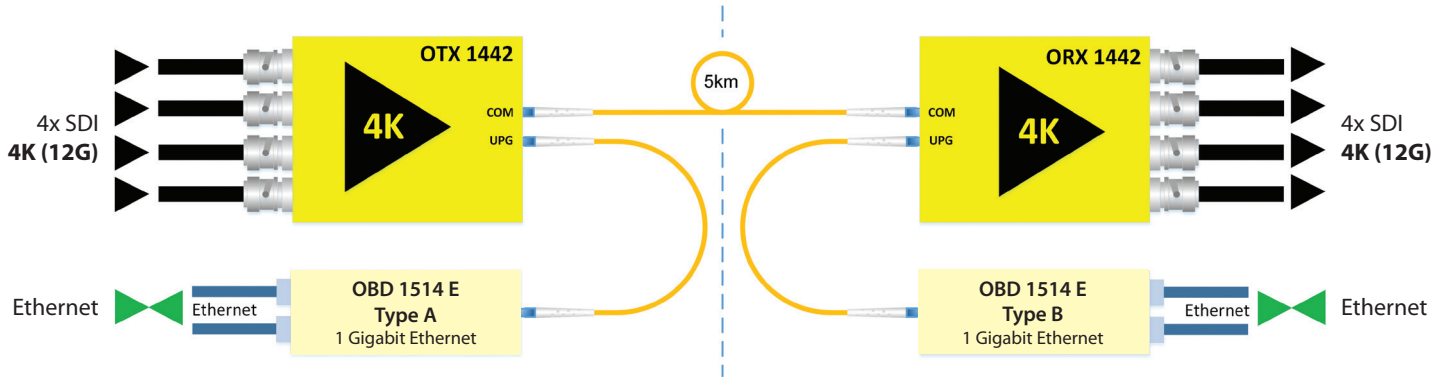
4x SDI (4K 12G) Fiber Transport

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.



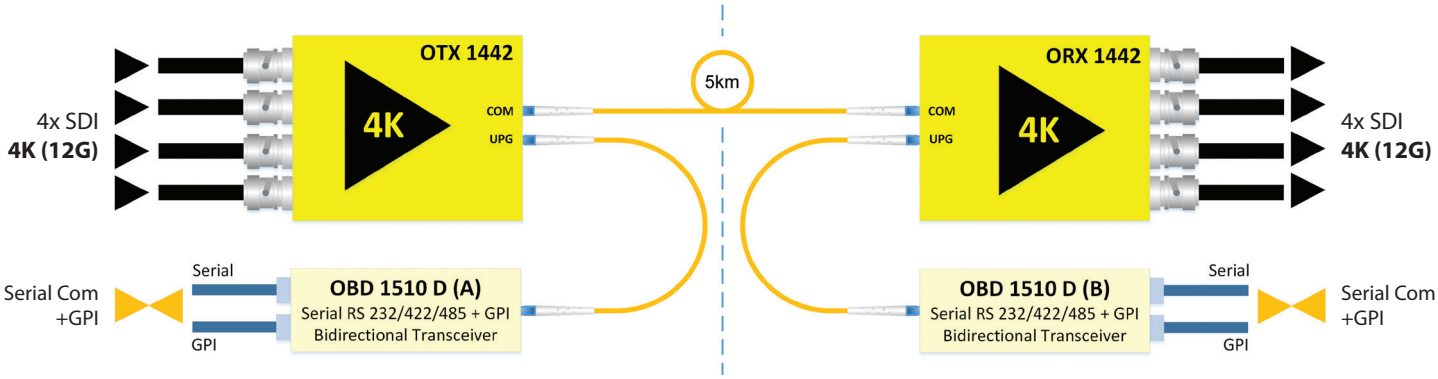
4x SDI (4K 12G) Fiber Transport + Ethernet

This configuration transports 4 discreet SDI signals (SD/HD/3G) or 4K (12G) 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 SDI (4K 12G) Fiber Transport + Serial RS 232 + GPI

This configuration transports 4 discreet SDI signals (SD/HD/3G) or 4K (12G) 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 SDI (up to 8K 24G) Fiber Transport and 4K Bidirectional Fiber Transport

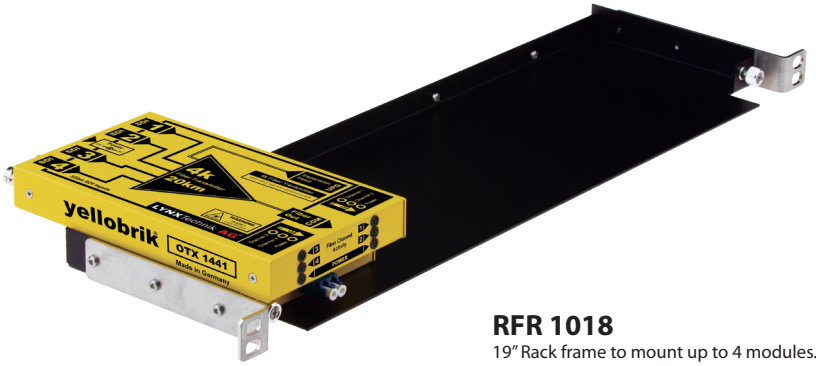
Connecting the OTR 1441 to the expansion port adds up to four 12G-SDI channels, enabling the transmission of uncompressed 96 Gbit/s over a single fiber link. Alternatively, it can also supports bi-directional uncompressed 8K (48G) transport over a single fiber link. Refer to the OTR 1441 product information for configuration diagrams.

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.



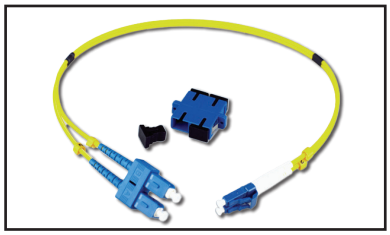
RFR 1018
19" Rack frame to mount up to 4 modules.

Fiber Adapter Cables

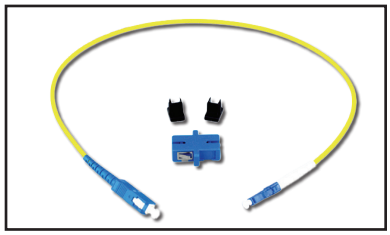
While some of our products offer LC, ST and SC fiber connectors, most SFPs in our product range offer LC fiber connectors.

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

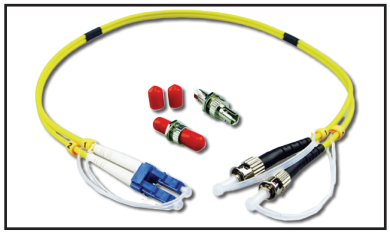
Besides the selection here we offer LC/FC and LC/LC patch cables.



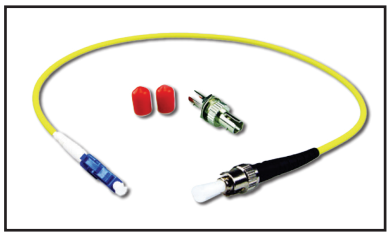
LC/SC Dup: LC/SC Duplex adapter cable



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.