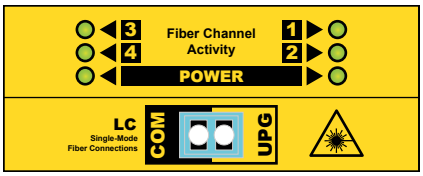
# yellobrik®

# OTR 1441

## 4K Fiber Transmission System 1270-1330nm




## 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 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 1441 is a self-contained fiber transmission kit for the transport of 4 discreet 3G-SDI signals (or a single 12G-SDI signal spread across 3G-SDI) 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 four 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 1442 module to be connected, enabling the transmission of four additional 3G-SDI channels 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

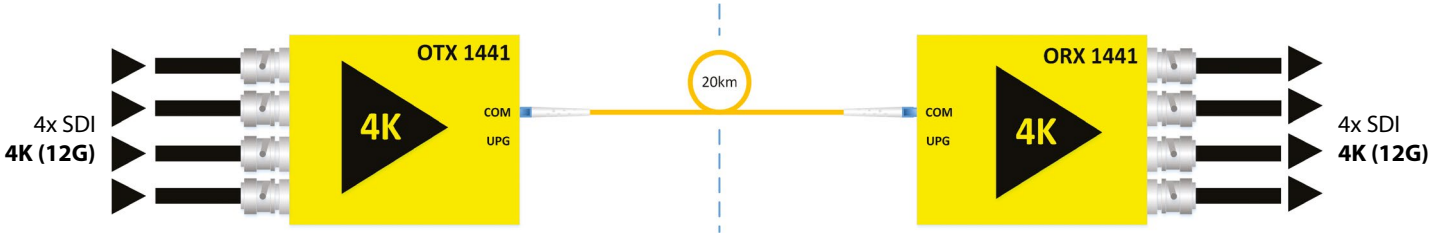
| | | | | |
|---|---|---|---|---|
| **SDI Video** | 4x 3G-SDI inputs [OTX 1441] on 75 Ohm BNC connections<br>4x 3G-SDI outputs [ORX 1441] on 75 Ohm BNC connections | | | |
| | SMPTE 259M-2008 , SMPTE 292-1:2012, SMPTE 292-2:2011<br>SMPTE 424M-2006 , DVB ASI | | | |
| | Multi-standard / Multi-format operation auto-detect.<br>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 | |
| **Fiber I/O** | 1x Fiber I/O port (COM port)<br>1x Fiber expansion port (UPG port)<br>Singlemode LC/PC connections | | | |
| | SMPTE 297M - 2006 | | | |
| | Internal CWDM Multiplexing | | | |
| | Wavelengths: | 1270nm, 1290nm, 1310nm, 1330nm | | |
| | Optical budget: | 10.6dB | | |
| | Max. distance* | 20km (12 miles) | | |
| | Fiber activity LEDs for each channel | | | |
| **Power** | +12V DC nominal. (Supports power from 7 - 24V DC)<br>OTX 1441: 4.1W / ORX 1441: 3.8W | | | |
| | 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 - 40ºC (41 - 104ºF) 90% Humidity (non condensing) | | | |
| **Model #** | OTR 1441 | EAN# 4250479321151 | | |
| **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

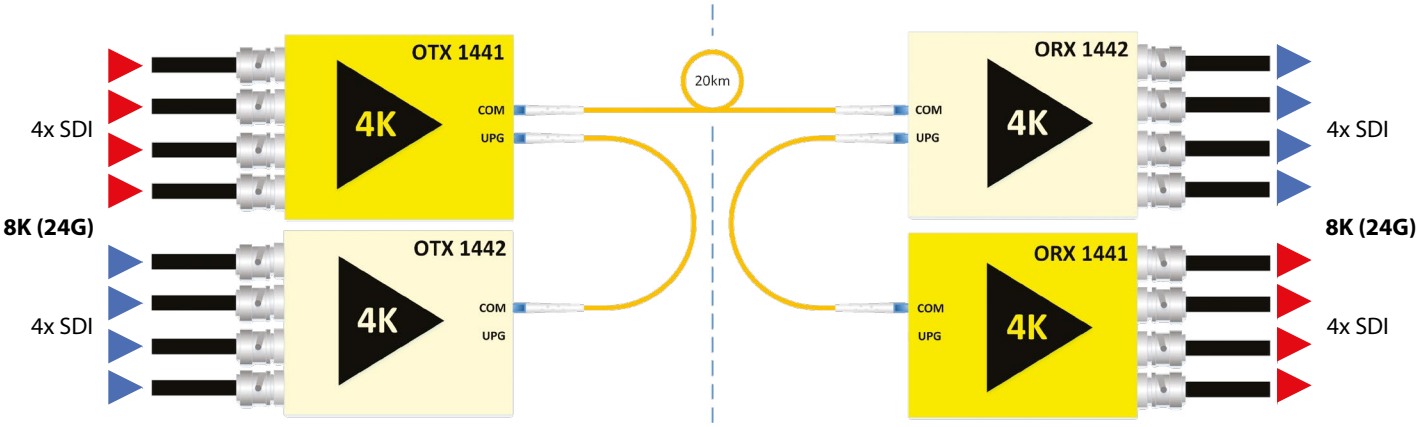
### 4x 3G-SDI (4K 12G) Fiber Transport

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.



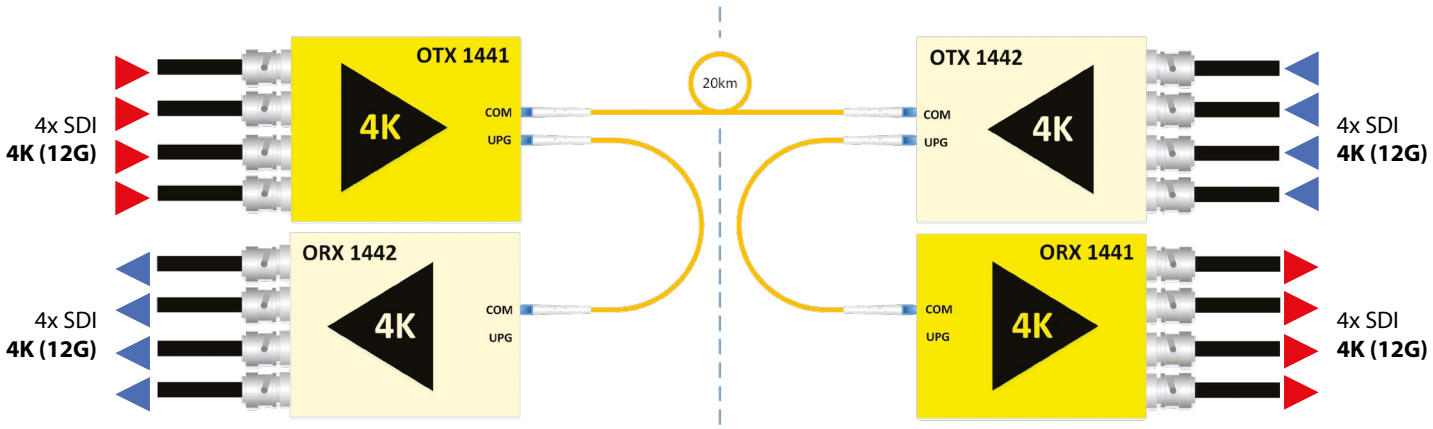

### 8x 3G-SDI (8K 24G) Fiber Transport

This configuration uses the UPG port to add more channels into the link from the OTR 1442. This can be used to transport 8 discreet SDI signals (SD/HD/3G) or it can be used for transporting a single 8K (24G) signal over a single fiber.




### 4 x 3G-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 SDI channels, or sending and receiving 4K (12G) over a single fiber.




*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.

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**OTR 1441**

## 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.



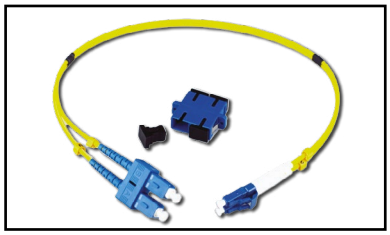

**RFR 1018**
19" Rack frame to mount up to 4 modules.

### Fiber Adapter Cables

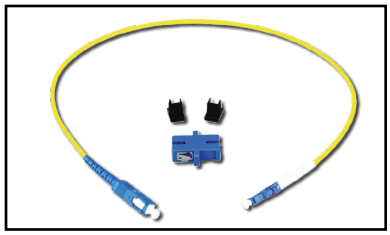
While some of our products offer LC, ST and SC fiber connectors, most SFPs in our product range offer LC fiber connectors.

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

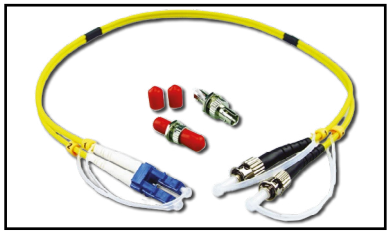
Besides the selection here we offer LC/FC and LC/LC patch cables.



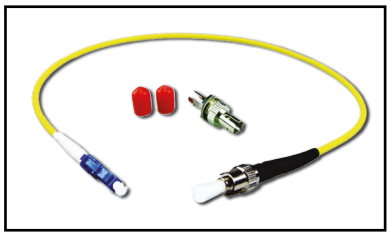
**LC/SC Dup:** LC/SC Duplex adapter cable



**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.