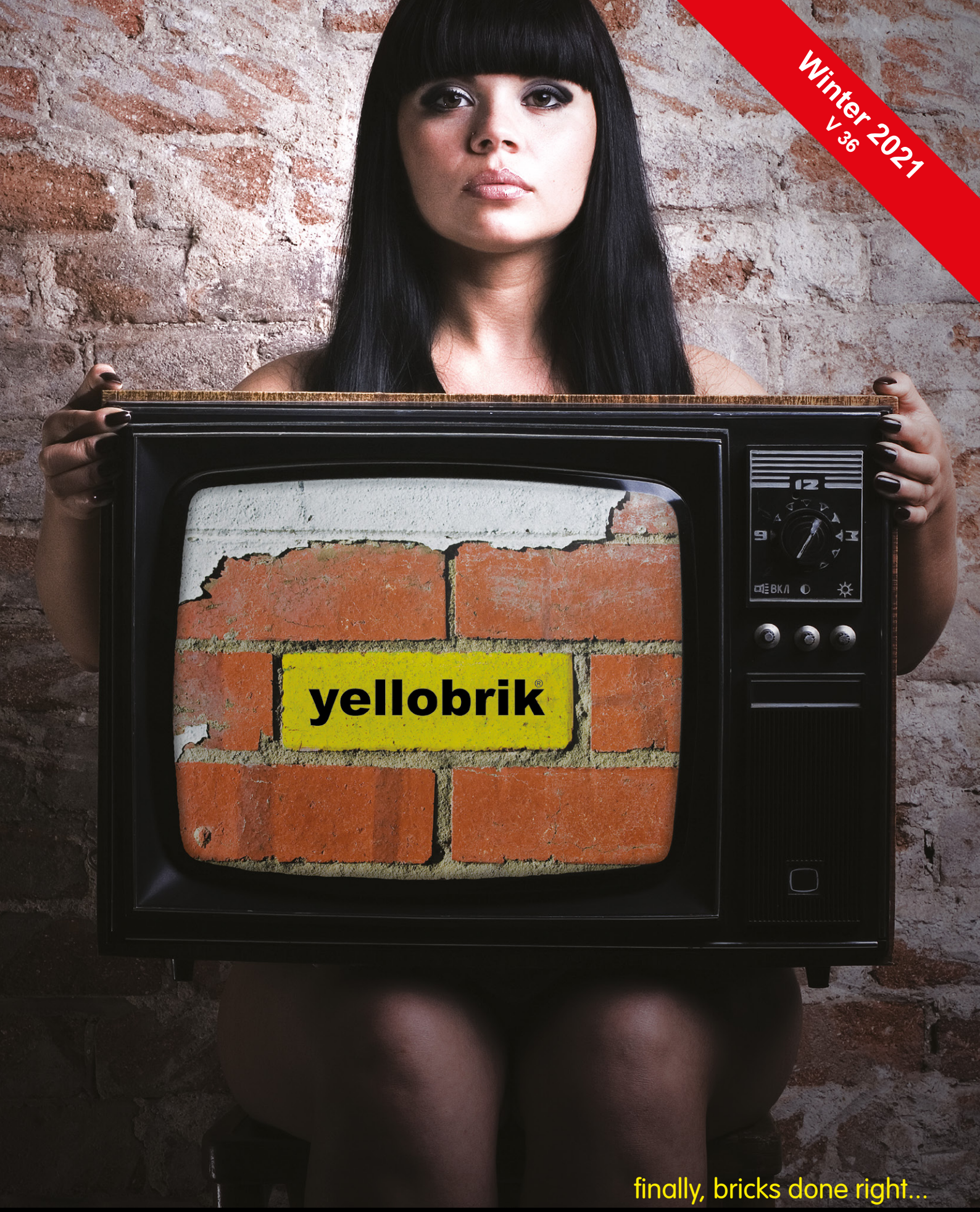

LYNXTechnik **AG** | Broadcast Television Equipment

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yellobrik® | finally, bricks done right...

There are lots of small interface "brick" style products available, and we looked at them all. After carefully studying the pro's and cons, we started the development of a complete new family of bricks, different and more feature rich than the rest - yellobriks.

We all know how annoying and frustrating it can be when changing a connection or setting parameters when the product manual isn't readily available. We have adopted a new basic mantra for the development of each new yellobrik device...
"No manual needed"

We clearly identify all connections and signal flow, and everything you need to know is printed right on the module. All controls are easily accessible and clearly labeled, with no need to remove covers, move links or figure out complex dip switch settings.

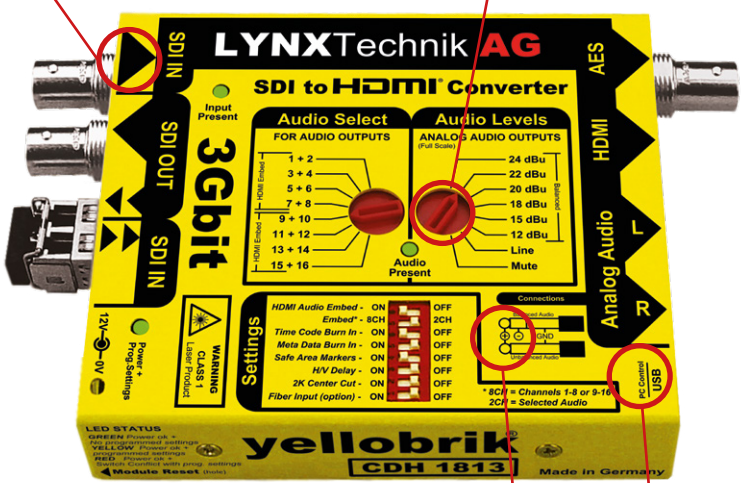
Even though yellobriks are low cost utility products, reliability and technical performance are key to their functionality. Yellobriks are the most stable and technically proficient bricks available and are backed by excellent after sales service and support.

We include all the accessories needed: The module, universal AC plug power supply, AC plug adapters plus a USB cable, audio adapters and HDMI cables if required. All of these accessories are included in the price.

We provide a free of charge PC or MAC desktop application - yelloGUI, which can be used to access extended feature sets and settings within select yellobriks.

Some yellobriks are field upgradeable. When we release new firmware the updates are always free of charge. Simply connect your module to the latest yelloGUI with a USB cable and click. Nothing could be easier.

Our innovative 1RU rack mounting chassis lets you move from simple "throw down" solutions to a tidy & organized system installed in a 19" rack frame with central and redundant power protection.



*on applicable modules

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yellobrik®

PEC 1864

3Gbit SDI/HDMI H.264 Streamer and Recorder

- Support for SDI video input up to 3Gbit/s
- Support for HDMI video input up to WUXGA
- H.264 or MJPEG encoding
- Supported streaming formats
  - RTMP -Does not support **RTMPS** streaming protocol
  - RTP/RTSP
  - TS over UDP or RTP
  - HLS (HTTP Live)
- Unicast or Multicast
- Stream and record at the same time; record to MicroSD or USB
- Independent encoder for streaming and recording
- Independent scaler for streaming and recording
- Logo Insertion and Custom Image if input missing
- Resizable and freely positionable text overlays
- Mobile friendly Web UI for configuration

The PEC 1864 is a versatile, compact SDI/HDMI H.264 streamer and recorder designed for a wide range of applications in the broadcast, film and pro A/V industry. The module can be configured to stream, record or to do both simultaneously. The streamer and recorder have independent encoders allowing for separate configuration of streaming and recording. Each encoder includes an up/down/cross converter, region of interest scaler and a text overlay feature.

Two channels of audio are deembedded from the video input. In addition, the PEC 1864 has a line audio input and either one of these audio sources can be used for the streamer and/or recorder.

Users can insert a logo into the video signal stream, which can be positioned freely. Also a custom image can be shown if the input is missing. It supports resizable and freely positionable text overlays.

The PEC 1864 supports a wide range of streaming standards as well as unicast and multicast operations. Whether you are streaming live to a Content Delivery Network using RTMP, viewing the stream on one or more computers using RTP/RTSP unicast or multicast, or streaming to a dedicated decoder or multicast address using TS over UDP or RTP, the PEC 1864 is a powerful device ideal for a diverse set of applications.

The PEC 1864 is suitable for live event streaming, webcasts, corporate or enterprise streaming, presentation and conferencing, AV system monitoring, house of worship proceedings streaming and many more.

A mobile device friendly Web UI allows for a simple configuration from a PC, Mac, tablet or smartphone.

Note: *For legal reasons*, HDMI capture devices from LYNX Technik AG are designed not to capture, convert or transmit video or audio from HDCP *copy-protected sources (e.g. Satellite receivers, Cable receivers, etc.).*

Technical Specifications

Video Inputs	1 x 75 Ohm BNC SDI input; 1 x HDMI 1.4a, Type A connector
Video Formats SDI and HDMI	SMPTE 424M (3G HDTV), SMPTE 292M (1.5G HDTV), SMPTE 259M (SDTV) • 1080p 50/59/60Hz (Level A) • 720p 23/24/25/29/30/50/59/60Hz • 1080i50/59/60Hz • 1080p23/24/25/29/30Hz • 1080psF23/24/25Hz • 525, 625
Video Formats HDMI only	• WUXGA (1920x1200) • WXGA (1280x768) • XGA (1024x768) • SVGA (800x600) • VGA (640x480)
Video Encoder	H.264 according to MPEG-4 AVC Part 10; ISO/IEC 14496-10 • High, Main and Baseline profile support • 2.0, 3.0, 3.1, 4.0, 4.1 and 4.2 level support • Bit Rate: 200kbps to 16.000kbps MJPEG compliant to ISO/IEC IS 10918-1 | ITU-T Recommendation T.81
Audio I/O	2x 3.5mm stereo jack (black) • Unbalanced analog line audio input - black jack • green jack (not active - not used)
Audio Encoder	MPEG-4 AAC LC according to ISO/IEC 14496-3 • Bit Rate: 32 kbps to 256 kbps • 2 channel stereo from video or external audio input
Protocols	• RTMP, RTP/RTSP, TS over UDP, TS over RTP, HLS • Unicast and Multicast support Note: *PEC 1864 does not support RTMPS*
Recording Medium	1x MicroSD card slot • Micro SDHC (SD2.0) - Speed Class 10 or higher recommended • Supported formatting FAT32, NTFS 3.1, exFAT 1x Mini-USB Type "B" socket • USB 2.0 • Supported formatting FAT32, NTFS 3.1, exFAT
Recording Format	• .mp4 ; .ts; .mov Note: Max recoding time for .mov and .mp4 is 4hours
Network	10/100/1000 Ethernet (RJ-45)
Power	+12VDC @ 3.2W nominal - (supports 5 - 14VDC input range)
Physical	Size: 124mm x 90mm x 22mm (4.88" x 3.54" x 0.86") including connectors Weight: 230g (8.11oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	PEC 1864 - (EAN# 4250479325005)
Includes	Module, AC power supply, mini USB cable, Ethernet cable

Specifications subject to change

Power Adapter Options

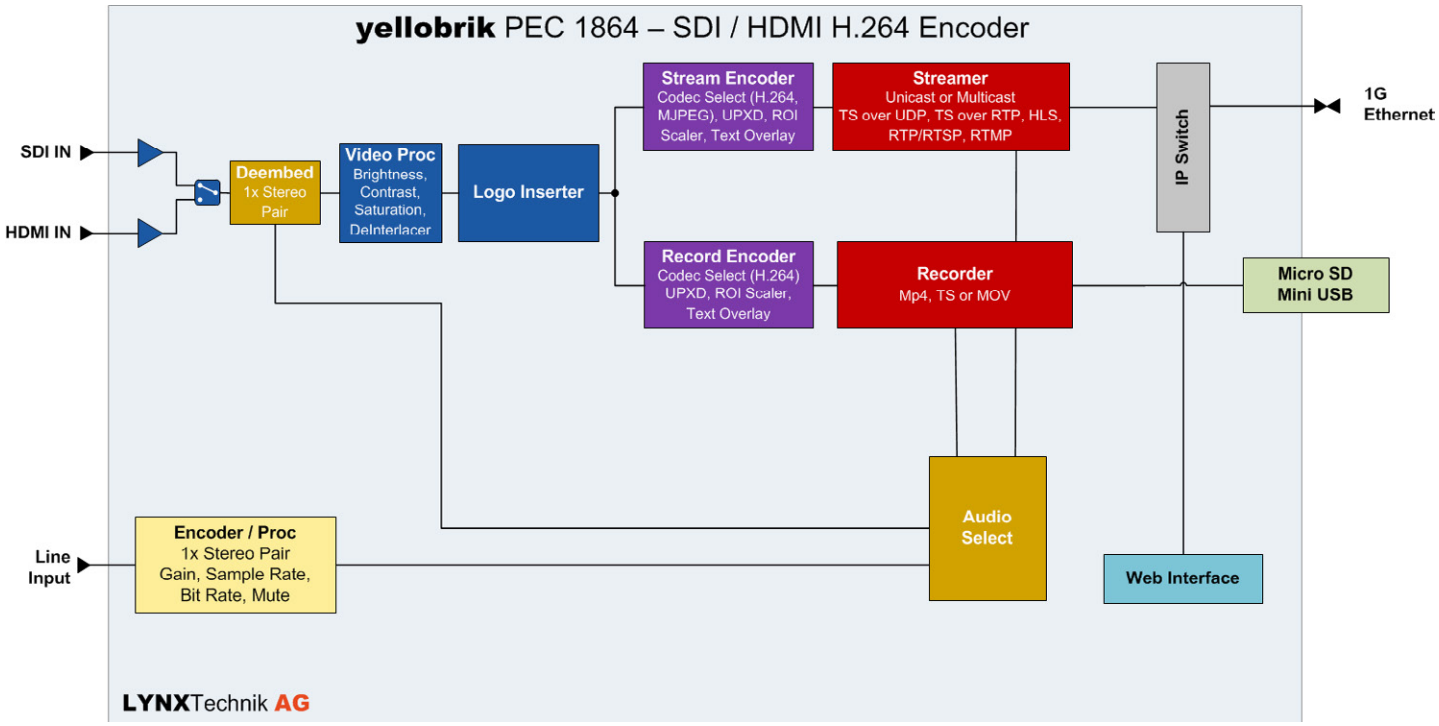
The kit **INCLUDES** AC power supply. The power adapters below are optional.

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.

Functional Digram

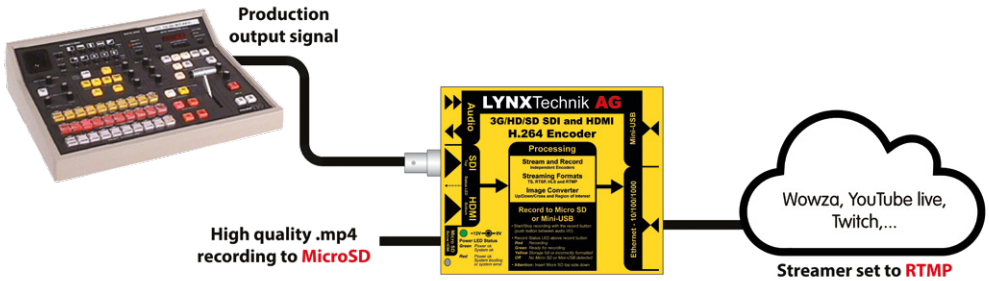
The PEC 1864 functionality is shown below in the diagram.



Applications

The features of the PEC 1864 make it an ideal solution for a wide range of different applications. Below are a couple of examples:

Stream live to a Content Delivery Network (CDN) and make a backup recording at the same time



Multicast a video feed into a network

yellobrik®

PMV 1841

yelloGUI compatible

3G/HD/SD Quad Split Multiviewer

- 4 x SDI inputs and 1 x HDMI output
- Support for SDI 3G (level A + B)/HD/SD formats (auto-detect)
- Full Screen, Quad Split and 4K (12G) monitoring modes
- Integrated local control and on screen menus
- Multiple on screen monitoring tools for each input:
  - *> Waveform Monitor*
  - *> Vectorscope*
  - *> Auto Level Meters (upto 16 Channels)*
  - *> IMD (text ID)*
  - *> Safe Area /4:3 Extraction / Center Cross markers*
  - *> Video Standard*
  - *> Time Code*
  - *> Audio and Video Alarms*
- Integrated test signal generator
- 4K (12G) monitoring mode (down converted HD HDMI output)
- yelloGUI compatible for PC/MAC control

The PMV 1841 is a compact quad split multiviewer ideal for applications needing basic quad split multiview capability into an HDMI monitor. Four SDI inputs are supported with a single HDMI output. The module has three basic modes of operation:

1. Quad Split - All four inputs are arranged into a fixed quad display. Each input can have the monitoring tools (or on screen overlays) individually configured.

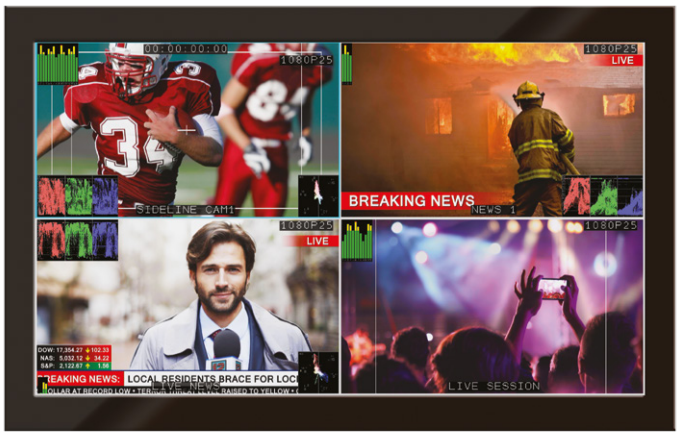
2. Full Screen - One of the four inputs is displayed full screen with the user configured monitoring tools. In this mode 2 channels embedded audio from the selected SDI input is embedded into the HDMI output.

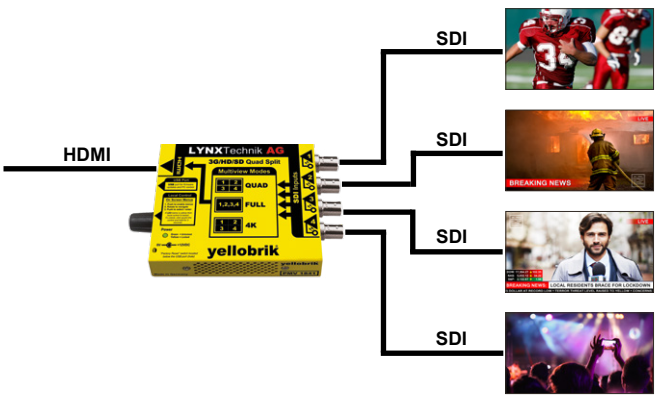
3. 4K Monitoring - The module can be used to monitor 4K (12G) signals. The four SDI inputs are "stitched" together to make a full frame for monitoring. The 4K image is down converted to HD for display (4K monitor not required).
Note: There are no on screen monitoring tools available in 4K mode

The module is simple to set up and configure using the integrated local control and on screen menu system. All settings are automatically stored in flash RAM. A USB port is provided for firmware updates and also PC/MAC control using the yelloGUI application.

Technical Specifications

SDI Inputs	4 x SDI inputs on 75Ω BNC connectors (LED for signal present)
	SMPTE 424M, SMPTE 292M, SMPTE 259M 3G Level A & B-DL according to SMPTE ST 425-1 with image formats 1280 x 720 and 1920 x 1080 For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Cable EQ: 340m@270Mbits / 150m@1.5Gbits / 120m@3Gbits
HDMI Output	1 x HDMI output (Type A Connector)
	HDMI standard: 1.4a
	2 channels of embedded audio is passed for "full screen" selected input
Local Control	On screen menu system accessed using rotary push encoder
USB	Mini "Type B" USB port for firmware updates and yelloGUI control
Power	+12VDC @ 4.9W nominal - (supports 7 - 24VDC input range)
Physical	Size: 138mm x 90mm x 22mm (5.13" x 3.54" x 0.86") - including connectors Weight: 230g (8.11oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	PMV 1841 - (EAN# 4250479323506)
Includes	Module, AC power supply, HDMI cable, mini USB cable





On Screen Monitoring Tools

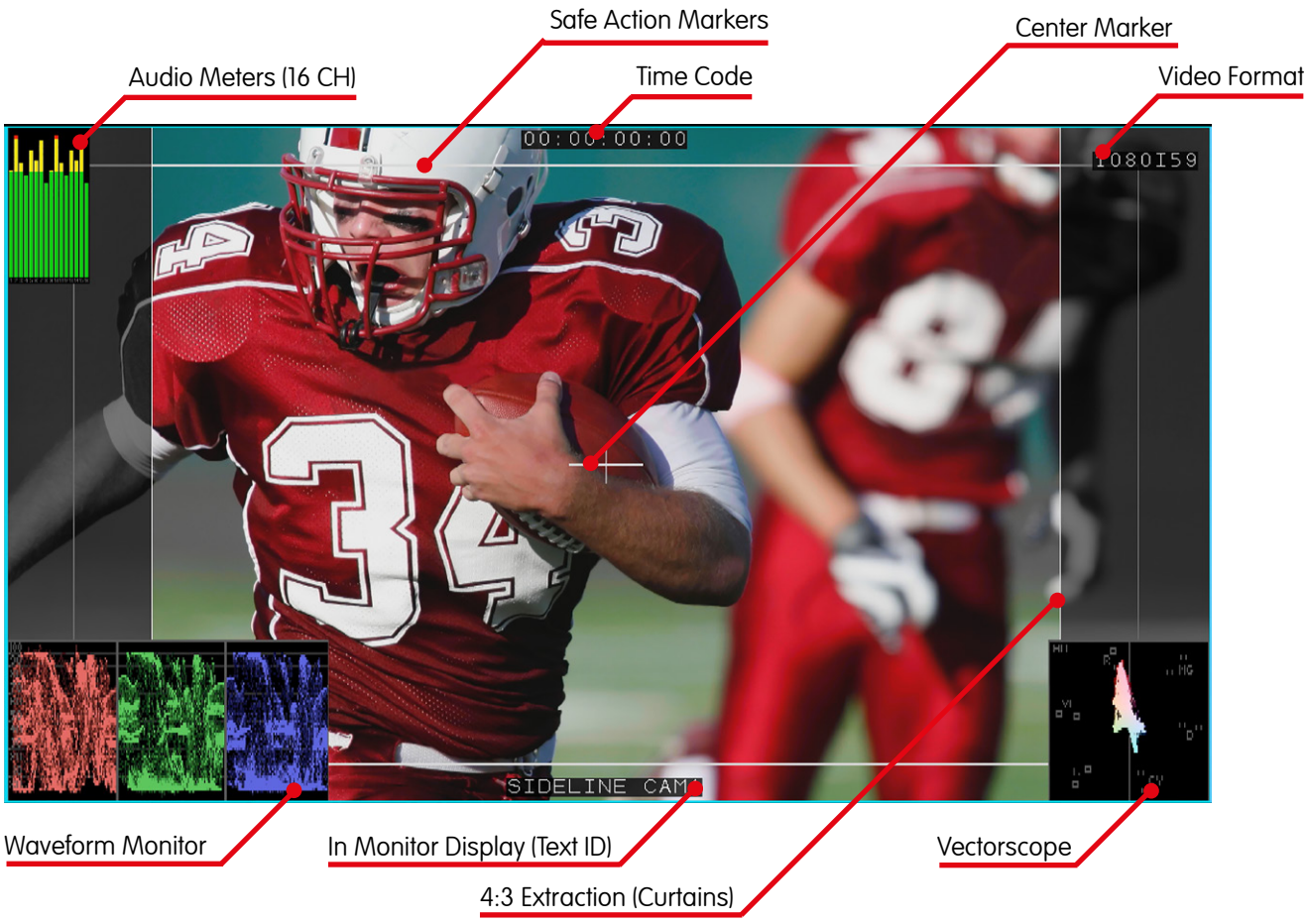
The extensive on screen monitoring tools are what really sets the PMV 1841 apart from the rest. Despite the very compact size and low price, we have included many high end monitoring tools typically only found in larger multiviewer systems. These include:

- *Waveform Monitor*
- *Vectorscope*
- *Auto Level Meters (upto 16 Channels)*
- *IMD - In Monitor Display (text ID)*
- *Safe Area Markers*
- *4:3 Extraction Markers*
- *Center Cross Marker*
- *Video Standard*
- *Time Code*
- *Audio and Video Alarms*

Each of the four inputs can be individually configured to meet specific monitoring requirements for the application, and all of the on screen tools are easily controlled using the integrated menu system and rotary push encoder.

The on screen menu system is intuitive and simple to use and all settings are automatically stored in flash RAM.

The module is also fully compatible with the yelloGUI software and the module can also be fully controlled and configured via the USB port using a PC or MAC.



Note: The above screen capture is from a full screen image and shows all of the possible screen overlays. Some can be configured in terms of size and screen position. The video and audio alarms are not shown, and will appear as text on the screen when an alarm condition is triggered.
[Video alarms will trigger on "*Black*" and "*No Signal*" (video missing). Audio Alarms will trigger on "*Silence*" and " *No Signal*" Audio Missing]

Specifications subject to change

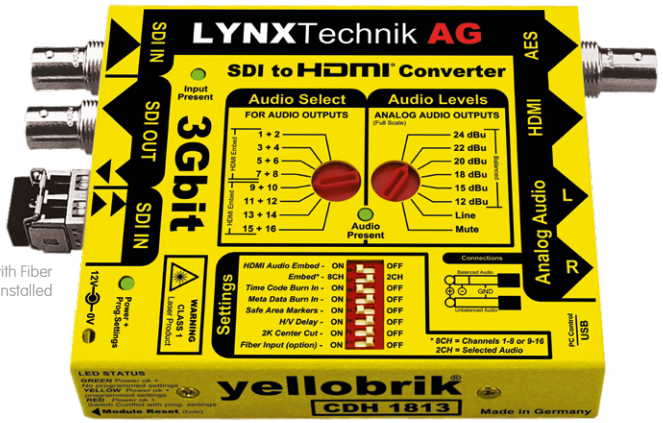
yellobrik®

CDH 1813

yelloGUI compatible

SDI to HDMI® Converter

- Support for SDI video inputs up to 3Gbit/s (1080P)
- Supports HDR and WCG indication at HDMI output
- Automated detection of input signal color range via VPID information
- 3G SDI Level A and Level B support
- Support for single link 3D formats
- Automatic input standard and format detection
- Fiber input and output options
- HDMI video output with embedded audio
- Analog and AES audio outputs
- Selectable timecode burn in and Metadata burn in
- 16 channel on screen audio meters
- H/V delay and safe area markers
- yelloGUI compatible: Gain access to additional features



Shown with Fiber SFP Option Installed

The CDH 1813 is a versatile, compact SDI to HDMI converter designed to combat a host of monitoring and display applications in broadcast, post production and pro A/V markets. Convert any SDI video signal, including 3D formats into an HDMI signal for monitoring and display. Fiber connectivity options add SDI fiber transmission and/or SDI fiber reception using the integrated fiber SFP socket.

Two channels of audio can be de-embedded providing digital AES and analog audio outputs. Analog audio outputs have selectable full scale range presets. The two selected audio channels can also be embedded into the HDMI output. Alternatively 8 channels selected from the input signal (channels 1-8 or 9-16) can be embedded into the HDMI output. Various burn in features make the CDH 1813 a true monitoring tool. Individually selectable timecode burn in, 16 channel audio metering, safe area markers and Metadata display are just a few of the on-screen monitoring features. The yelloGUI software provides support for a host of additional settings and features which are accessed using a PC and the USB port on the module.

SDI Fiber Transmitter Options			
Model	Description	Power	
OH-TX-1-LC / ST / SC	SFP Fiber TX - Singlemode - LC, ST or SC conn. - 10km	-5dBm (1310nm)	
SDI Fiber Receiver Options			
Model	Description	Sensitivity	
OH-RX-1-LC / ST / SC	SFP Fiber RX - Singlemode - LC, ST or SC connector	-16dBm	
SDI Fiber Transceiver Options			
Model	Description	Power	Sense
OH-TR-1-LC	SFP Fiber RX/TX - Singlemode, LC Connector - 10km	-5dBm	-18dBm
OH-TR-0-850-MM	SFP Fiber RX/TX - Multimode, LC Connector - 300m	-5dBm	-15dBm
SDI CWDM Fiber Transmitter Options			
Model	Description	Power	
OH-TX-4-XXXX-LC	CWDM SFP Fiber TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm	
SDI CWDM Fiber Transceiver Options			
Model	Description	Power	Sense
OH-TR-4-XXXX-LC	CWDM SFP Fiber RX/TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm	-20dBm

Technical Specifications

SDI Input	1 x SDI video on 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M 3G Level A & B-DL & B-DS according to SMPTE ST 425-1 and ST 425-2 (3D) with image formats 1280 x 720 and 1920 x 1080 For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Support for 'single link' 3D modes: "side by side", "top-bottom" and "dual stream (SMPTE ST-423-2)"
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Fiber Input	1 x fiber optic SDI input. SMPTE 297M - 2006 (Optional- see fiber options table)
SDI Output	1 x reclocked SDI video output on 75 Ohm BNC connector
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
Fiber Output	1 x reclocked fiber optic SDI output. SMPTE 297M - 2006 (Optional- see fiber options table)
HDMI Output	10 bit HDMI 1.4a support including 3D, deep color and embedded audio Type A connector. 3D modes supported: "side by side" + "top and bottom" + "frame packing"
	24bit (3 X 8bit) and 30bit (3 x 10bit) deep color (R,G,B / Y,Cr,Cb / X,Y,Z)
	2 or 8 channel audio embedding (selectable)
AES Output	AES3id on 75 Ohm BNC, 2 channels (selectable)
Audio Output	Left and right analog audio using 1/4 inch jack sockets (phono sockets)
	Balanced mode with 24, 22, 20, 18, 15, 12dBu full scale (selectable)
	Unbalanced mode with (line level) at -10 dBv
	1/4 inch Jack plug (phono) to RCA connection adapters supplied
USB	Standard USB port for yelloGUI interface and firmware updates (Mini Type "B" plug)
Power	+12VDC @ 3.7W nominal - (supports 10 - 14VDC input range)
Physical	Size: 138mm x 90mm x 22mm (5.13" x 3.54" x 0.86") including connectors Weight: 230g (8.11oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	CDH 1813 - (EAN# 4250479359833)
Includes	Module, AC power supply, RCA adapters, HDMI + mini USB cable

Specifications subject to change

yellobrik®

CDH 1813

yelloGUI compatible

Monitoring Features

The CHD 1813 is ideal for regular transparent image monitoring, providing a clean 1:1 HDMI conversion of the SDI input signal. There are also a number of other HDMI monitoring options available. These monitoring modes are activated using the module dip switch and can be used individually or as combined monitoring modes.

Clean Feed

- Direct conversion of input SDI Stream
- The CHD 1813 does not scale the image, therefore the HDMI output format is the same as the native SDI input resolution and frame rate.

Burn in Windows

- Select and display up to three timecode values (VITC, LTC, DVITC)
- SDI input format, bit depth and color scheme
- AFD present and format code
- 16 audio level meters
- Closed Caption, WSS and VI metadata presence

Safe Area Markers

- SMPTE Safe Action (default)
  (default can be changed using yelloGUI)
- Center cross marker
- Fully programmable with yelloGUI

H / V Delay

- View horizontal and vertical blanking

yellobrik®

CDH 1813

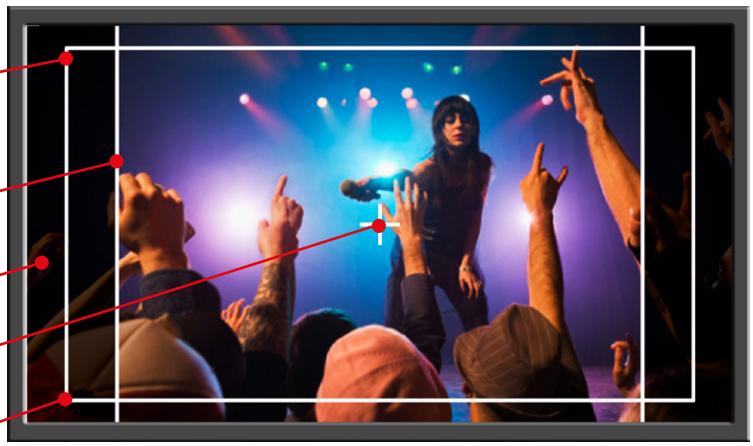
yelloGUI compatible

yelloGUI™

The CHD 1813 features full yelloGUI support that provides access to additional features and settings not possible from the module's local controls.
Additional features are accessed using our free **yelloGUI** application. Additional settings include:

Parameter	Settings
Safe Area Markers	OFF
	SMPTE Safe Action (90/90)
	SMPTE Safe Title (80/80)
	EBU Action (3.5/3.5)
	EBU Graphics (5/10)
Aspect Ratio Markers	OFF
	4:3
	16:9
Curtain Transparency	100%
	Adjustable 30%-90%
Center Cross	ON
	OFF
Marker Color	White
	Red, Green, Blue, Yellow, Cyan, Magenta, Black
Safe Area from Aspect	ON
	OFF

= Default Settings



The on screen markers can be custom configured to suit any application. This includes various "standard" safe area markers, aspect ratio markers with adjustable curtain transparency. The color of the markers may also be changed.

Parameter	Settings
SDI input RGB Range	SMPTE Limited
	Full Range
HDMI Input Bit Depth	AUTO
	8 bit
	10 bit
	12 bit

Parameter	Settings
HDMI Color Range	SMPTE Limited
	Full Range
HDMI Color Space	AUTO
	RGB
	Y,Cr,Cb 4:2:2
	Y,Cr,Cb 4:4:4

Parameter	Settings
Audio Channels	1:1
	Convert*

*DEFAULT: Audio channels 1 through 8 are mapped 1:1 from SDI to HDMI. When set to "Convert" channels 3 and 4 are swapped resulting in channel allocations per SMPTE 320M (3=center /4=LFE) and CEA-861 (3=LFE / 4=FrontCenter)

Parameter	Settings
3D HDMI Output Format	AUTO
	Frame Packing (FP)
	Side by Side (SS)
	Top and Bottom (TB)
3D Flip Left Eye	NO FLIP
	Horizontal
	Vertical
	Both

Parameter	Settings
3D SDI Input Format	AUTO
	Side by Side (SS)
	Top and Bottom (TB)
	Dual Stream (3G/LevelB)
	2D (no 3D)
3D Flip Right Eye	NO FLIP
	Horizontal
	Vertical
	Both

Parameter	Settings
Swap SDI Streams	Regular
	Inverted

When a 3G LevelB input signal is processed as 3D content then the default setting is: Left Eye from Stream A, and Right Eye from Stream B. This can be inverted with this switch. For 2D content, default is stream A, and stream B is selected with this switch.

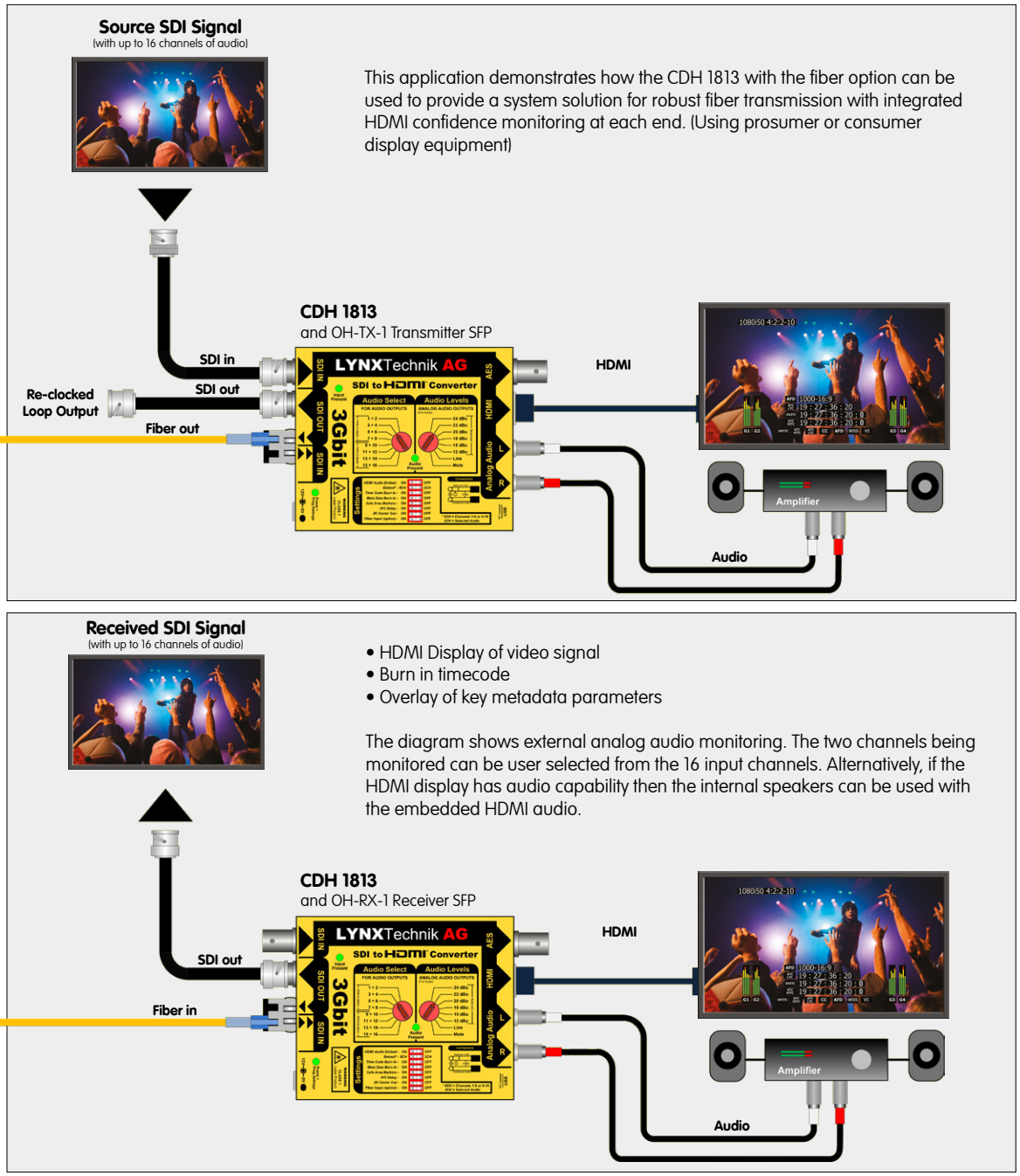
Parameter	Settings
Horizontal Flip	NO FLIP
	FLIP

This mode flips the input siganal horizontally to show a mirror image on the HDMI output. Useful for Virtual Set (Green Screen) on set monitoring.

HDMI configuration settings are set automatically by the internal EDID communication between the two connected devices. These settings can be changed manually for specific applications.

Fiber Application Using CDH 1813 SDI to HDMI Converter

Sample application using two CDH 1813 modules for SDI fiber optic transmission up to 10km (6.2 miles) @3Gbit/s with integrated HDMI signal confidence monitoring at each end.



yellobrik®

CHD 1812-1

yelloGUI compatible

3Gbit HDMI® to SDI Converter + Frame Synchronizer

- SDI video output formats up to 3Gbit (1080p60)
- 3G SDI Level A and Level B support
- Support for single link 3D formats
- Integrated Frame Synchronizer
- Multi-format sync reference input - cross lock compatible
- 2 x SDI outputs with optional SDI fiber output
- HDMI embedded audio passed transparently
- 2 x external analog audio inputs
- Professional balanced analog audio inputs or unbalanced line level audio inputs
- Selectable AES channel for embedding external audio
- HDMI, reference and audio present LED indication
- yelloGUI compatible to access additional internal settings

Shown with Fiber SFP Option Installed

The CHD 1812-1 is a versatile and compact HDMI to SDI converter with integrated frame synchronizer. It is an ideal solution for any application which requires a fully synchronized SDI input from an external asynchronous HDMI source.

The flexible reference sync input will accept any analog video sync format including SD bi-level sync, black burst, colorbars and tri-level HD sync. The sync input is auto detecting and fully cross lock compatible. For example: An SDTV reference can be used to frequency lock an HD HDMI input. If no reference is present, the converter performs a standard asynchronous HDMI to SDI conversion. A pair of stereo analog inputs can be embedded into any AES channel. Audio inputs can be either professional balanced audio with selectable full scale level, or unbalanced consumer line level audio. By default any audio present in the HDMI stream will be embedded into the SDI output or it can be replaced with the external audio signals.

The module is also compatible with the yelloGUI software package, which provides access to a host of additional internal settings including adjustable video delay for timing purposes.

An SDI fiber output is also provided with a variety of plug in SFP options available.

SDI Fiber Transmitter Options		
Model	Description	Power
OH-TX-1-LC / ST / SC	SFP Fiber TX - Singlemode - LC, ST or SC conn. - 10km	-5dBm (1310nm)
SDI CWDM Fiber Transmitter Options		
Model	Description	Power
OH-TX-4-XXXX-LC	CWDM SFP Fiber TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm

Note: *For legal reasons, HDMI capture devices from LYNX Technik AG are designed not to capture, convert or transmit video or audio from HDCP copy-protected sources (e.g. Satellite receivers, Cable receivers, BD players etc.)*

Technical Specifications

HDMI Input	3D compatible input using type A connector For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Up to 8 channels embedded audio in HDMI is passed transparently or replaced with external analog audio input
Reference Input	SDTV: Analog 525 or 625 bi-level sync, black burst or colorbars HDTV: All tri-level sync standards (exceptions 1080p 50/59.94/60Hz) Cross lock compatible
	SMPTE 274M, SMPTE 296M - 75 Ohm BNC connector
Frame Synchronizer	Functional if valid reference is detected, otherwise operates in free run (asynchronous) mode. External audio and HDMI input are frequency locked to external reference, fully cross lock compatible across standards. One frame adjustable delay (in line and pixel increments) using yelloGUI
SDI Outputs	2 x SDI video, 75 Ohm BNC. (both have the same signal - NOT dual link) SMPTE 424M, SMPTE 292M, SMPTE 259M 3G Level A & B-DL & B-DS according to SMPTE ST 425-1 and ST 425-2 (3D) with image formats 1280 x 720 and 1920 x 1080 For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
Fiber Output	Optional plug in SFP for optical SDI output (see fiber options table)
Audio Inputs	Left and right analog audio using 1/4 inch jack plugs
	10k Ohm differential balanced input mode with 24,22,20,18,15,12 dBu full scale (selectable)
	Unbalanced mode with (line level) at -10 dBV (1/4 inch Jack Plug to RCA connection adapters supplied)
	Selectable AES channel for audio embedding (1 through 8) (Overwrites any HDMI embedded audio present in selected channel)
	Frequency response: <+/- 0.2dB 20Hz to 20KHz
	48kHz A/D sample rate (free run or frequency locked to reference input)
Power	+12VDC @ 4.7W nominal - (supports 10 - 14VDC input range)
Physical	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") including connectors Weight: 230g (8.11oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	CHD 1812-1 - (EAN# 4250479318335)
Includes	Module, AC power supply, RCA adapters, HDMI + USB cable

Specifications subject to change

yellobrik®

CHD 1812-1

yelloGUI compatible

Video Output Resolution

The SDI output format is automatically selected based on the detected HDMI input resolution. The module does not have an internal scaler, so if the input resolution does not match any of the supported SDI formats then the module will automatically select an appropriate SDI standard with a similar number of lines and pixels and map the signal into the SDI output, which may result in some image cropping (cut) or boxing (blanking)

The table below shows the input to output resolution settings that are applied in AUTOMATIC mode. The yelloGUI interface provides the ability to manually set the output resolution interdependently of the input resolution. For these cases the table below also lists the conversion mode applied to optimally fit the manually selected SDI output format by either cropping or boxing the image (C > Horizontal and Vertical crop, B > Horizontal and Vertical box, V=C / H=B > vertical crop and horizontal box, V=C > vertical crop only).

	HDMI Input Resolution								
SDI Output	**SDTV 720 x 525/625**	**720p 1280x720**	**1080i 1920x1080**	**1080p 1920x1080**	**VGA 640x480**	**SVGA 800x600**	**XGA 1024x768**	**WXGA 1280x768**	**WUXGA 1920X1200**
<auto>	SDTV	720p	1080i	1080p	720p	720p	1080p	1080p	1080p
SDTV	n.a.	C	C	C	V=C / H=B	V=C / H=B	C	C	C
720p	n.a.	n.a.	n.a.	C	B	V=C / H=B	V=C / H=B	V=C	C
1080i	B	B	n.a.	n.a.	B	B	B	B	V=C
1080p	n.a.	B	n.a.	n.a.	B	B	B	B	V=C

Cross Lock and Frame Rate Conversion

The frame synchronizer is fully cross lock compatible, meaning it can cross lock between different standards. With a given reference signal connected the synchronizer will drop or add frames to achieve a correctly synchronized (frame rate converted) SDI output.

Note: *This conversion drops and adds frames to achieve the desired output frame rate and will not provide the performance typical of a sophisticated standards converter. Please refer to the tables below for the conversion possibilities. Red = Drop Frame, Yellow = Adding Frames*

HDMI inputs with @ 23.98/29.97/59.94Hz Frame Rates

Reference Signal	23.98Hz / 29.97Hz / 59.94Hz	30Hz / 60Hz	24Hz / 25Hz / 50Hz
HDMI Input	**SDI Output Formats**		
525 / 59.94Hz	525 / 59.94Hz	525 / 60Hz	625 / 50Hz
720p / 59.94Hz	720p / 59.94Hz	720p / 60Hz	720p / 50Hz
720P / 29.97Hz	720p / 29.97Hz	720p / 30Hz	720p / 25Hz
720p / 23.98Hz	720p / 23.98Hz	720p / 30Hz	720p / 24Hz
1080i / 59.94Hz	1080i / 59.94Hz	1080i / 60Hz	1080i / 50Hz
1080p / 59.94Hz	1080p / 59.94Hz	1080p / 60Hz	1080p / 50Hz
1080p / 29.97Hz	1080p / 29.97Hz	1080p / 30Hz	1080p / 25Hz
1080p / 23.98Hz	1080p / 23.98Hz	1080p / 30Hz	1080p / 24Hz

HDMI inputs with @ 24/30/60Hz Frame Rates

Reference Signal	23.98Hz / 29.97Hz / 59.94Hz	30Hz / 60Hz	24Hz / 25Hz / 50Hz
HDMI Input	**SDI Output Formats**		
525 / 60Hz	525 / 59.94Hz	525 / 60Hz	625 / 50Hz
720p / 60Hz	720p / 59.94Hz	720p / 60Hz	720p / 50Hz
720P / 30Hz	720p / 29.97Hz	720p / 30Hz	720p / 25Hz
720p / 24Hz	720p / 23.98Hz	720p / 30Hz	720p / 24Hz
1080i / 60Hz	1080i / 59.94Hz	1080i / 60Hz	1080i / 50Hz
1080p / 60Hz	1080p / 59.94Hz	1080p / 60Hz	1080p / 50Hz
1080p / 30Hz	1080p / 29.97Hz	1080p / 30Hz	1080p / 25Hz
1080p / 30Hz	1080p / 23.98Hz	1080p / 30Hz	1080p / 24Hz

HDMI inputs with @ 25/50Hz Frame Rates

Reference Signal	23.98Hz / 29.97Hz / 59.94Hz	30Hz / 60Hz	24Hz / 25Hz / 50Hz
HDMI Input	**SDI Output Formats**		
625 / 50Hz	525 / 59.94Hz	525 / 60Hz	625 / 50Hz
720p / 50Hz	720p / 59.94Hz	720p / 60Hz	720p / 50Hz
720P / 25Hz	720p / 29.97Hz	720p / 30Hz	720p / 25Hz
1080i / 50Hz	1080i / 59.94Hz	1080i / 60Hz	1080i / 50Hz
1080p / 50Hz	1080p / 59.94Hz	1080p / 60Hz	1080p / 50Hz
1080p / 25Hz	1080p / 29.97Hz	1080p / 30Hz	1080p / 25Hz

DROP FRAME CONVERSION **ADD FRAME CONVERSION**

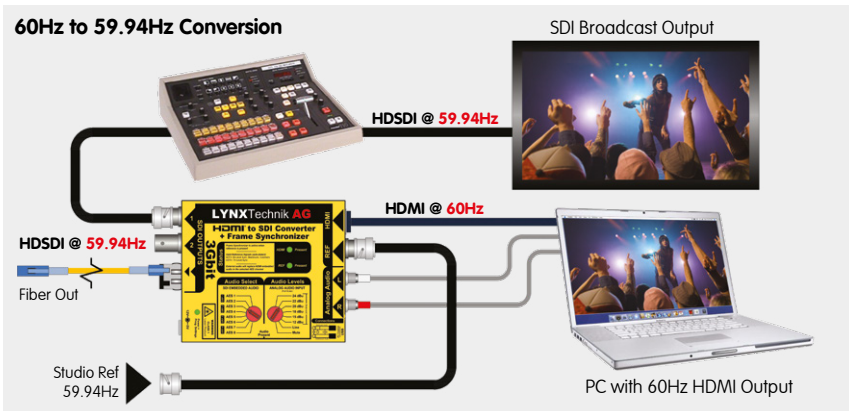
CHD 1812-1 Frame Rate Conversion Applications

In North American (or legacy NTSC) markets the HDMI signals from most devices tends to be at the consumer 60Hz frame rate and not 59.94Hz which is the required frame rate for broadcast and production.

The CHD 1812-1 can be used to solve this problem and convert a 60Hz HDMI signal to a 59.94Hz SDI signal. This is accomplished using the integrated frame synchronizer (which will drop frames to achieve the correct frame rate)

If fact, the module can also convert between 50Hz and 60Hz standards using the frame synchronizer, which is useful for monitoring applications.

Its also possible to precisely adjust the timing of the SDI output up to one full frame relative to the reference sync in pixel and line increments - which is useful for timing and synchronizing SDI sources into production switchers or routers etc.



yellobrik®

CHD 1802-1

yelloGUI compatible

3Gbit HDMI® to SDI Converter

- SDI video output formats up to 3Gbit (1080p60)
- 3G SDI Level A and Level B support
- Support for single link 3D formats
- 2 x SDI outputs
- Optional SDI fiber output
- HDMI embedded audio passed transparently
- HDMI present LED indication
- yelloGUI compatible to access additional internal settings

Shown with Fiber SFP Option Installed

The CHD 1802-1 is a compact HDMI to SDI converter. It is an ideal solution for any application which requires a broadcast quality SDI signal derived from an external HDMI source. Any audio present in the HDMI stream will be embedded into the corresponding channels on the SDI output. The module is also compatible with the yelloGUI software package, which provides access to a host of additional internal settings.

An SDI fiber output is also provided with a variety of plug in SFP options available.

SDI Fiber Transmitter Options		
Model	Description	Power
OH-TX-1-LC / ST / SC	SFP Fiber TX - Singlemode - LC, ST or SC conn. - 10km	-5dBm (1310nm)
OH-TX-4-XXXX-LC	CWDM SFP Fiber TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm

CHD 1802 DD+ Variants	
Model	Description
CHD 1802-DD+	Compressed Audio-Format (Data-type 21/0 - Enhanced AC-3 Burst Length 6144)
CHD 1802-DD+ Pro	Compressed Audio-Format (Data-type 21/0 - Enhanced AC-3 Burst Length 6144) Enhanced Audio-Format (Data-type 16/0 - ATRAC-X Burst Length 2048)

Note: *For legal reasons, HDMI capture devices from LYNX Technik AG are designed not to capture, convert or transmit video or audio from HDCP copy-protected sources (e.g. Satellite receivers, Cable receivers, etc.).*

Technical Specifications

HDMI Input	3D compatible input using type A connector For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Up to 8 channels embedded audio in HDMI is passed transparently
SDI Outputs	2 x SDI video, 75 Ohm BNC. (both have the same signal - NOT dual link) SMPTE 424M, SMPTE 292M, SMPTE 259M 3G Level A & B-DL & B-DS according to SMPTE ST 425-1 and ST 425-2 (3D) with image formats 1280 x 720 and 1920 x 1080 For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
Fiber Output	Optional plug in SFP for optical SDI output (see fiber options table)
Power	+12VDC @ 4W nominal - (supports 10 - 14VDC input range)
Physical	Size: 123mm x 90mm x 22mm (4.84" x 3.54" x 0.86") - including connectors Weight: 175g (6.17oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	CHD 1802-1 - (EAN# 4250479318328)
Includes	Module, AC power supply, HDMI + USB cable

Video Output Resolution

The SDI output format is automatically selected based on the detected HDMI input resolution. The module does not have an internal scaler, so if the input resolution does not match any of the supported SDI formats then the module will automatically select an appropriate SDI standard with a similar number of lines and pixels and map the signal into the SDI output, which may result in some image cropping (cut) or boxing (blanking)

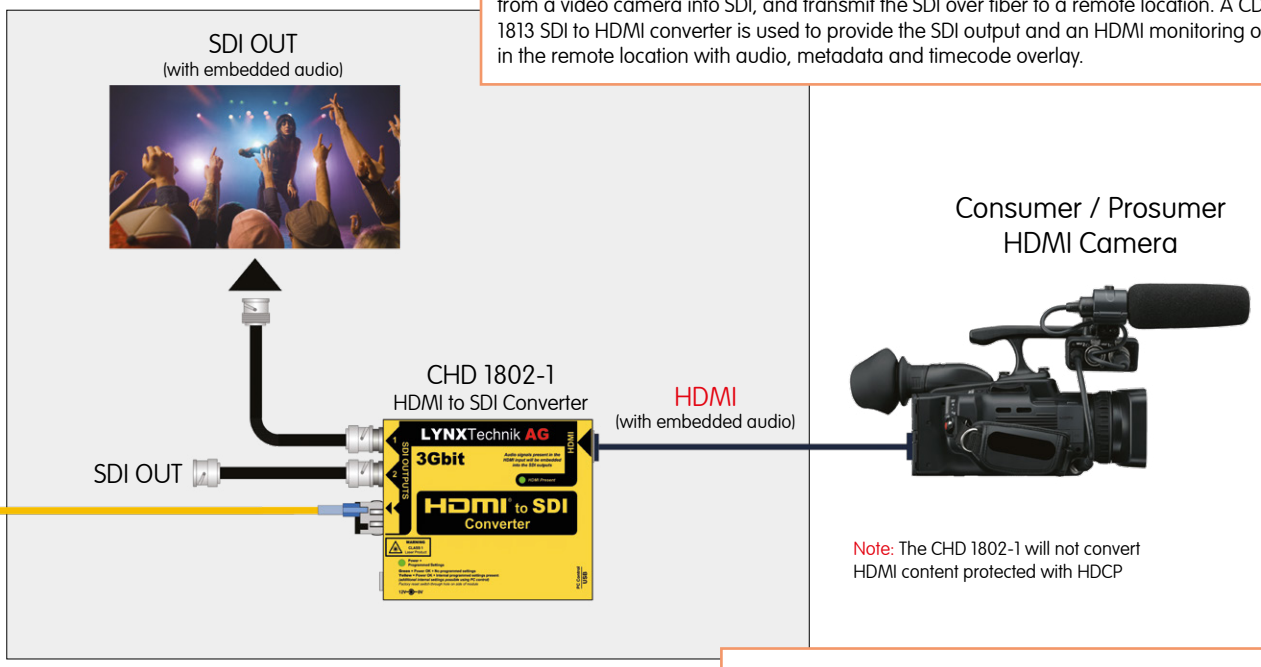
The table below shows the input to output resolution settings that are applied in AUTOMATIC mode. The yelloGUI interface provides the ability to manually set the output resolution interdependently of the input resolution. For these cases the table below also lists the conversion mode applied to optimally fit the manually selected SDI output format by either cropping or boxing the image (C > Horizontal and Vertical crop, B > Horizontal and Vertical box, V=C / H=B > vertical crop and horizontal box, V=C > vertical crop only, N > Output retains the input video standard, I > Output is interlaced).

	HDMI Input Resolution								
SDI Output	**SDTV 720x [525]625**	**720p 1280x720**	**1080i 1920x1080**	**1080p 1920x1080**	**VGA 640x480**	**SVGA 800x600**	**XGA 1024x768**	**WXGA 1280x768**	**WUXGA 1920X1200**
<auto>	SDTV	720p	1080i	1080p	720p	720p	1080p	1080p	1080p
SDTV	N	C	C	C	V=C / H=B	V=C / H=B	C	C	C
720p	N	N	N	C	B	V=C / H=B	V=C / H=B	V=C	C
1080i	B	B & I	N	I	B	B	B	B	V=C
1080p	N	B	N	N	B	B	B	B	V=C

Specifications subject to change

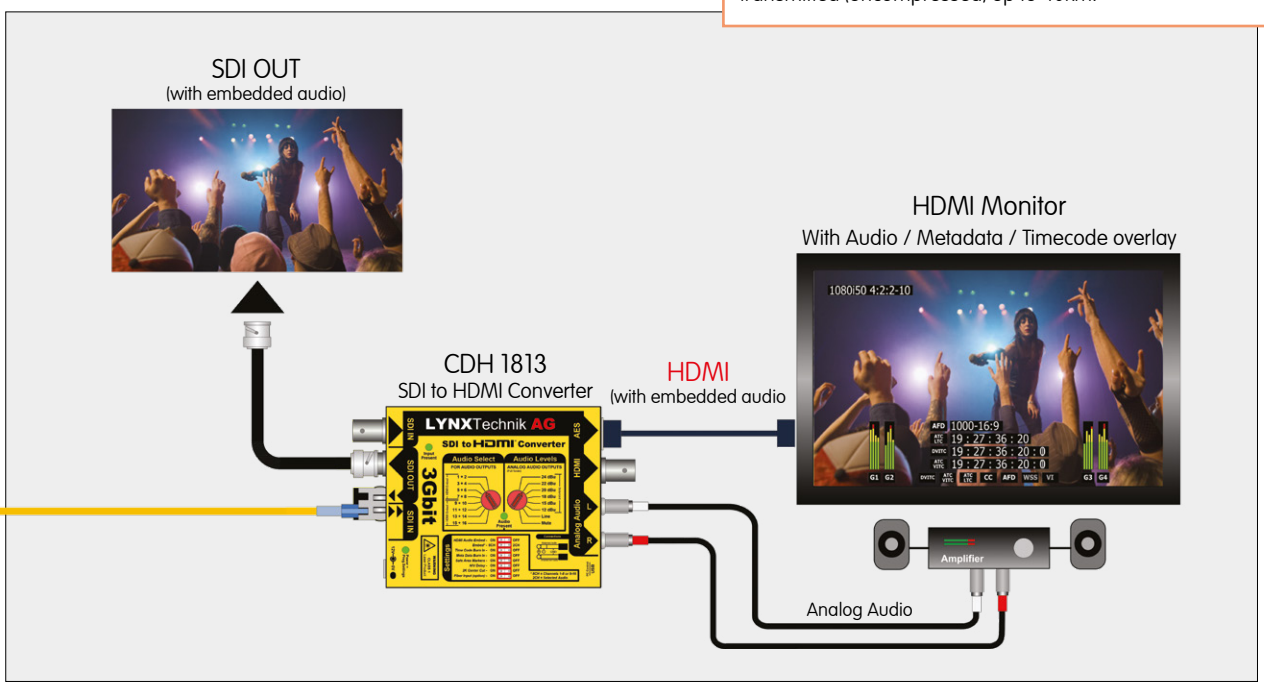
CHD 1802-1 Application

An example application is shown below, using the CHD 1802-1 to convert the HDMI output from a video camera into SDI, and transmit the SDI over fiber to a remote location. A CDH 1813 SDI to HDMI converter is used to provide the SDI output and an HDMI monitoring output in the remote location with audio, metadata and timecode overlay.



Fiber Connection up to 40km (24.9 miles) @ 3Gbit/s with selected SFP modules

This application shows how an inexpensive camera with HDMI capability can be used in a high quality digital environment using no image compression. Fiber capability allows the signal to be transmitted (uncompressed) up to 40km.



Note: CDH 1813 overlay mode can be switched on or off. Overlay is monitoring only, the module does not generate timecode or metadata.

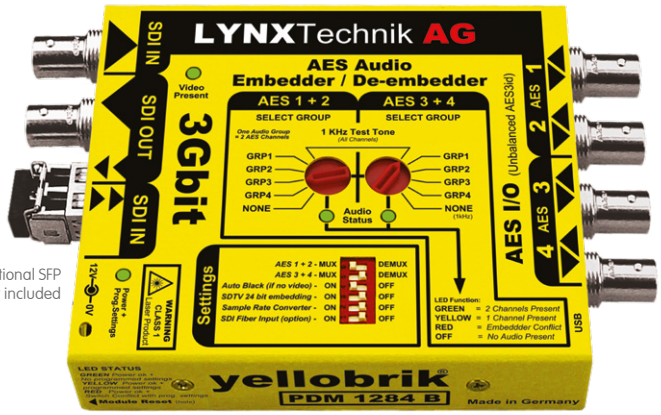
yellobrik®

PDM 1284 B

yelloGUI compatible

AES Audio Embedder / De-embedder (unbalanced AES)

- Multifunction - use as an embedder or de-embedder
- 3G SDI Level A and Level B support
- SDI video formats up to 3Gbit (1080p60)
- 4 x AES inputs or outputs with selectable audio groups
- Optional Fiber I/O
- Integrated 1 kHz test tone generator
- Automatic PCM / encoded audio detection
- Auto black if no video present
- Selectable SDTV 24 bit mode
- Video and Audio present LED indicators
- Internal full mono audio shuffling via yelloGUI



Installed optional SFP shown is not included

The PDM 1284 B is a versatile AES audio embedder and de-embedder designed for a wide range of SDI video formats up to 3Gbit. It supports unbalanced AES3id audio I/O using 75 Ohm BNC connections.

Audio groups are selected using the rotary switches, and its possible to embed and de-embed additional audio groups by cascading modules together. Simultaneous embedding and de-embedding means the module will de-embed and output the audio from the selected audio group before overwriting with new audio (if required). The module automatically detects audio formats and will deactivate the sample rate converters to preserve encoded bit streams such as DolbyE.

The "auto black" mode uses a black video frame if no SDI input is present. This allows the module to embed audio even when no video source is available. This mode is useful if the module is being used in an "audio only" application.
A 1 kHz test tone generator is included for audio testing purposes.

SDI Fiber Transmitter Options			
Model	Description	Power	
OH-TX-1-LC / ST / SC	SFP Fiber TX - Singlemode - LC, ST or SC conn. - 10km	-5dBm (1310nm)	
SDI Fiber Receiver Options			
Model	Description	Sensitivity	
OH-RX-1-LC / ST / SC	SFP Fiber RX - Singlemode - LC, ST or SC connector	-16dBm	
SDI Fiber Transceiver Options			
Model	Description	Power	Sense
OH-TR-1-LC	SFP Fiber RX/TX - Singlemode, LC Connector - 10km	-5dBm	-18dBm
OH-TR-0-850-MM	SFP Fiber RX/TX - Multimode, LC Connector - 300m	-5dBm	-15dBm
SDI CWDM Fiber Transmitter Options			
Model	Description	Power	
OH-TX-4-XXXX-LC	CWDM SFP Fiber TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm	
SDI CWDM Fiber Transceiver Options			
Model	Description	Power	Sense
OH-TR-4-XXXX-LC	CWDM SFP Fiber RX/TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm	-20dBm

The module is also compatible with the yelloGUI software package, which provides access to a host of additional internal settings which includes manual insertion of metadata (AFD,WSS,VI).

An SDI fiber input and output is also provided with a variety of plug in SFP options available.

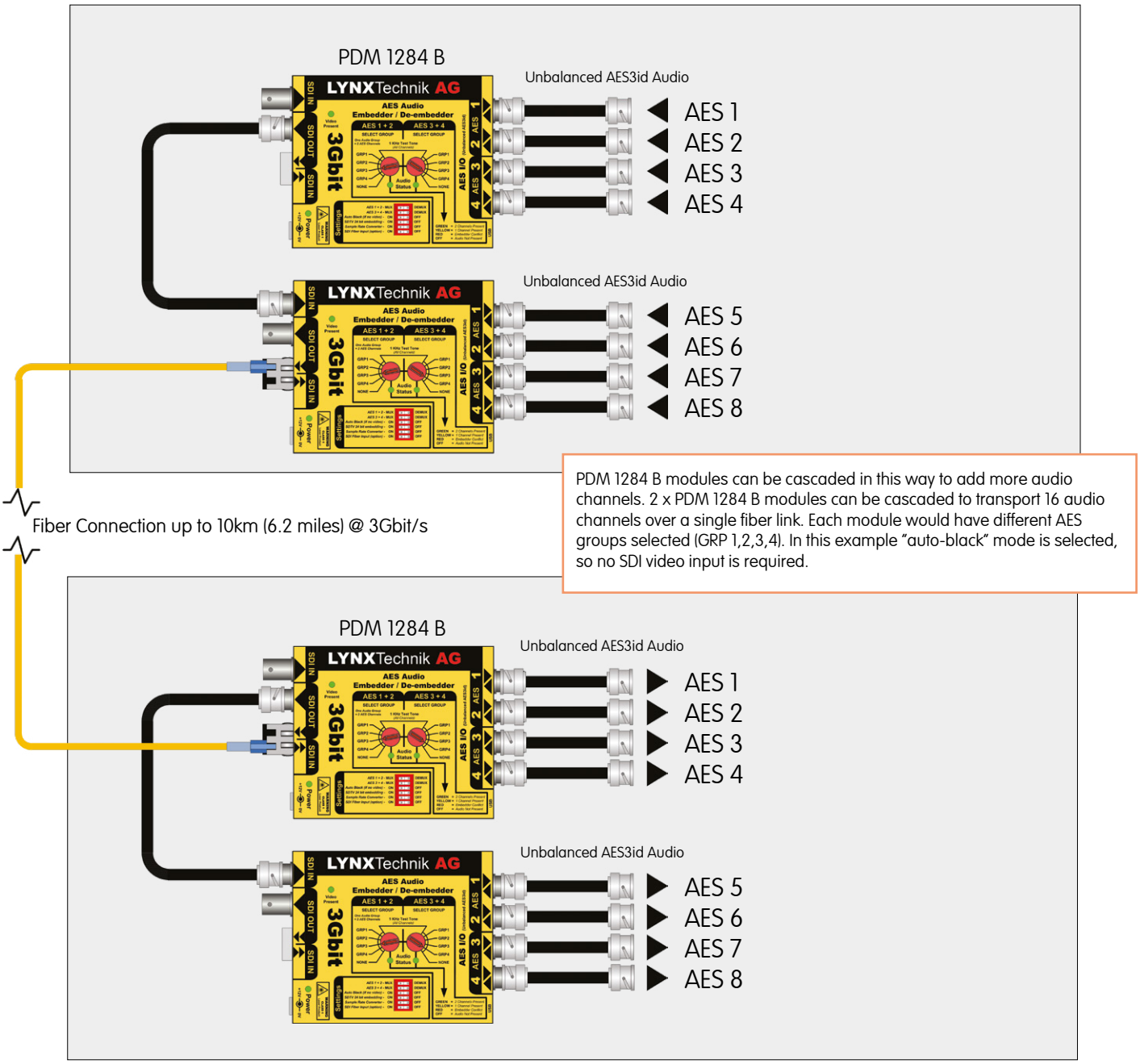
Technical Specifications

SDI Input	1 x SDI video on 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M 3G Level A & B-DL & B-DS according to SMPTE ST 425-1 and ST 425-2 (3D) with image formats 1280 x 720 and 1920 x 1080 For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Multi-standard operation from 270Mbit/s to 3Gbit/s SDTV (525/625) 720p and 1080p (23.98/24/25/29.97/30/50/59.94/60 Hz) 1080psf (23.98/24/25/29.97/30 Hz) 1080i (50/59.94/60 Hz)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Fiber I/O	(optional) 1 x fiber optic input and output (see table)
	SMPTE 297M - 2006
SDI Output	1 x SDI video on 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
AES I/O (switchable)	4 x AES3id unbalanced inputs or outputs on 75 Ohm BNC connectors AES group selection provided via rotary switch
Power	+12VDC @ 4.2W nominal - (supports 8 - 14VDC input range)
Physical	Size: 140mm x 90mm x 22mm (5.51" x 3.54" x 0.86") including connectors Weight: 200g (7.05oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	PDM 1284 B - (EAN# 4250479312845)
Includes	Module, AC power supply, mini USB cable

Specifications subject to change

PDM 1284 B Application

The basic SDI embedding and de-embedding applications for the PDM 1284 B are somewhat obvious, but with the "auto-black" mode the modules can be used to transport audio signals only. This provides a very cost-effective way to transport multichannel audio over fiber without the need for external optical multiplexing, The example below shows how two modules in each location can be used to transport 16 x digital audio signals between two locations over fiber.



PDM 1284 B modules can be cascaded in this way to add more audio channels. 2 x PDM 1284 B modules can be cascaded to transport 16 audio channels over a single fiber link. Each module would have different AES groups selected (GRP 1,2,3,4). In this example "auto-black" mode is selected, so no SDI video input is required.

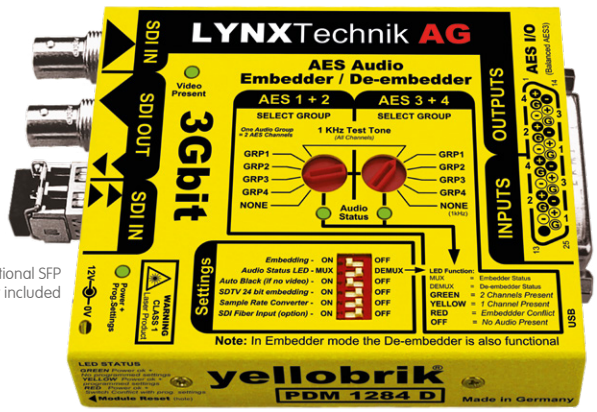
yellobrik®

PDM 1284 D

yelloGUI compatible

AES Audio Embedder / De-embedder (balanced AES)

- Simultaneous embedding and de-embedding
- 3G SDI Level A and Level B support
- SDI video formats up to 3Gbit (1080p60)
- 4 x AES inputs / outputs with selectable audio groups
- Optional Fiber I/O
- Integrated 1 kHz test tone generator
- Automatic PCM / encoded audio detection
- Auto black if no video present
- Selectable SDTV 24 bit mode
- Video and Audio present LED indicators
- Internal full mono audio shuffling via yelloGUI



Installed optional SFP shown is not included

The PDM 1284 D is a versatile AES audio embedder and de-embedder designed for a wide range of SDI video formats up to 3Gbit. It supports balanced AES3 audio I/O using a 25 pin SubD connector.

Audio groups are selected using the rotary switches, and its possible to embed and de-embed additional audio groups by cascading modules together. Simultaneous embedding and de-embedding means the module will de-embed and output the audio from the selected audio group before overwriting with new audio (if required). The module automatically detects audio formats and will deactivate the sample rate converters to preserve encoded bit streams such as DolbyE.

The "auto black" mode uses a black video frame if no SDI input is present. This allows the module to embed audio even when no video source is available. This mode is useful if the module is being used in an "audio only" application.

The module is also compatible with the yelloGUI software package, which provides access to a host of additional internal settings which includes manual insertion of metadata (AFD,WSS,VI).

SDI Fiber Transmitter Options			
Model	Description	Power	
OH-TX-1-LC / ST / SC	SFP Fiber TX - Singlemode - LC, ST or SC conn. - 10km	-5dBm (1310nm)	
SDI Fiber Receiver Options			
Model	Description	Sensitivity	
OH-RX-1-LC / ST / SC	SFP Fiber RX - Singlemode - LC, ST or SC connector	-16dBm	
SDI Fiber Transceiver Options			
Model	Description	Power	Sense
OH-TR-1-LC	SFP Fiber RX/TX - Singlemode, LC Connector - 10km	-5dBm	-18dBm
OH-TR-0-850-LC	SFP Fiber RX/TX - Multimode, LC Connector - 300m	-5dBm	-15dBm
SDI CWDM Fiber Transmitter Options			
Model	Description	Power	
OH-TX-4-XXXX-LC	CWDM SFP Fiber TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm	
SDI CWDM Fiber Transceiver Options			
Model	Description	Power	Sense
OH-TR-4-XXXX-LC	CWDM SFP Fiber RX/TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm	-20dBm

A 1 kHz test tone generator is included for audio testing purposes.

An SDI fiber input and output is also provided with a variety of plug in SFP options available.

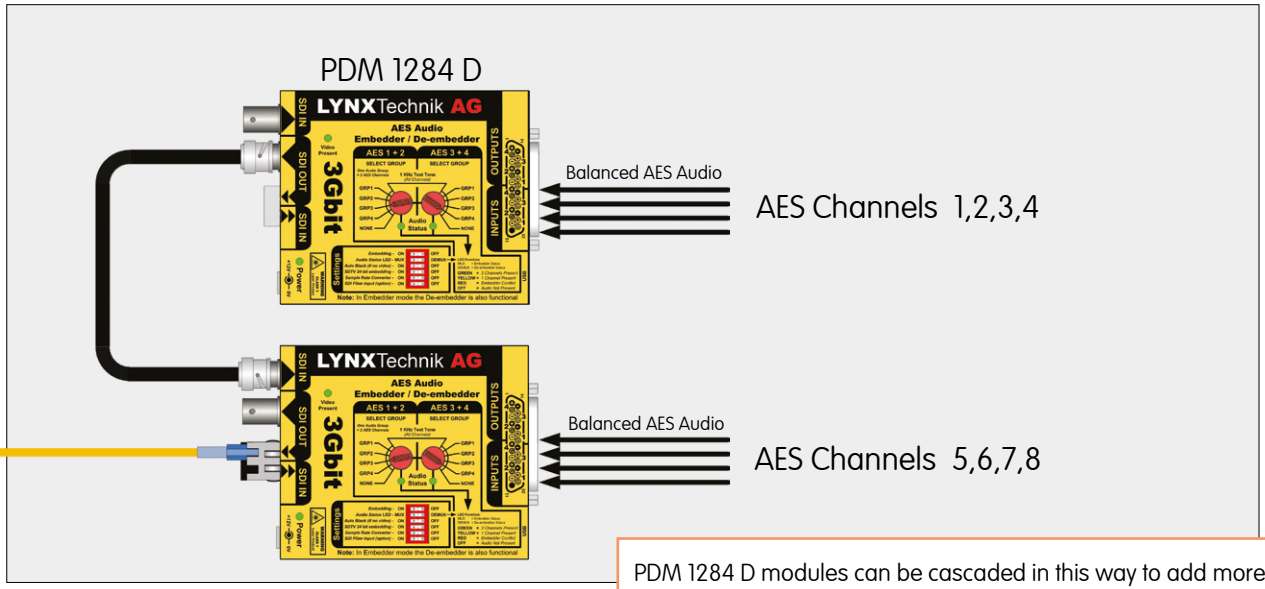
Technical Specifications

SDI Input	1 x SDI video on 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M 3G Level A & B-DL & B-DS according to SMPTE ST 425-1 and ST 425-2 (3D) with image formats 1280 x 720 and 1920 x 1080 For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Multi-standard operation from 270Mbit/s to 3Gbit/s SDTV (525/625) 720p and 1080p (23.98/24/25/29.97/30/50/59.94/60 Hz) 1080psf (23.98/24/25/29.97/30 Hz) 1080i (50/59.94/60 Hz)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Fiber I/O	(optional) 1 x fiber optic input and output (see table)
	SMPTE 297M - 2006
SDI Output	1 x SDI video on 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
AES Inputs	4 x AES3 balanced inputs on 25 pin SubD Connector (110 Ohm)
	AES group selection provided via rotary switch
AES Outputs	4 x AES3 balanced outputs on 25 pin SubD Connector (110 Ohm)
	AES group selection provided via rotary switch
Power	+12VDC @ 4.2W nominal - (supports 8 - 14VDC input range)
Physical	Size: 128mm x 90mm x 22mm (5.04" x 3.54" x 0.86") including connectors Weight: 200g (7.05oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	PDM 1284 D - (EAN# 4250479312852)
Includes	Module, AC power supply, SubD adapter PCB, mini USB cable

Specifications subject to change

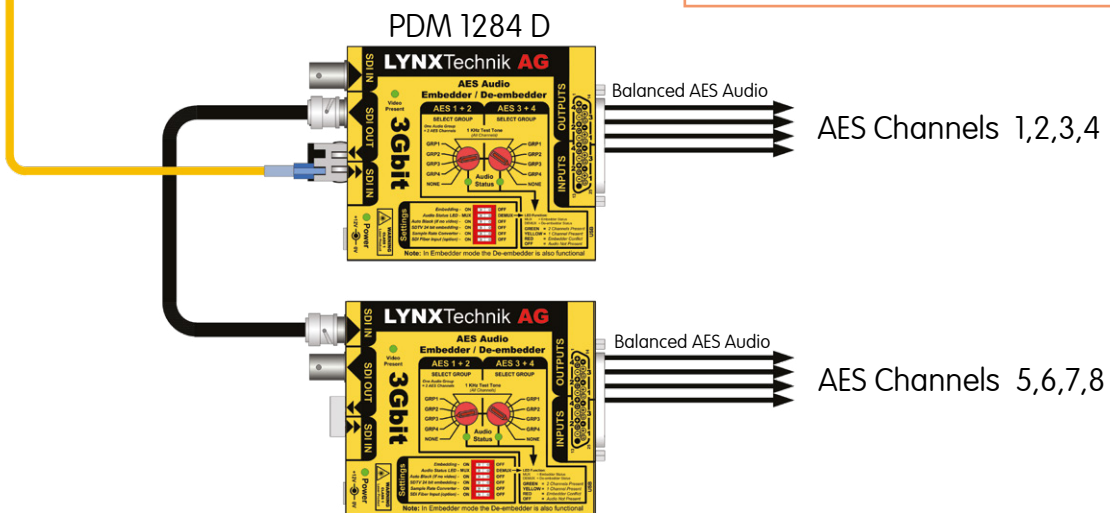
PDM 1284 D Application

The basic SDI embedding and de-embedding applications for the PDM 1284 D are somewhat obvious, but with the "auto-black" mode the modules can be used to transport audio signals only. This provides a very cost-effective way to transport multichannel audio over fiber without the need for external optical multiplexing. The example below shows how two modules in each location can be used to transport 16 x digital audio signals between two locations over fiber.



PDM 1284 D modules can be cascaded in this way to add more audio channels. 2 x PDM 1284 D modules can be cascaded to transport 16 audio channels over a single fiber link. Each module would have different AES groups selected (GRP 1,2,3,4). In this example "auto-black" mode is selected, so no SDI video input is required.

Fiber Connection up to 10km (6.2 miles) @ 3Gbit/s



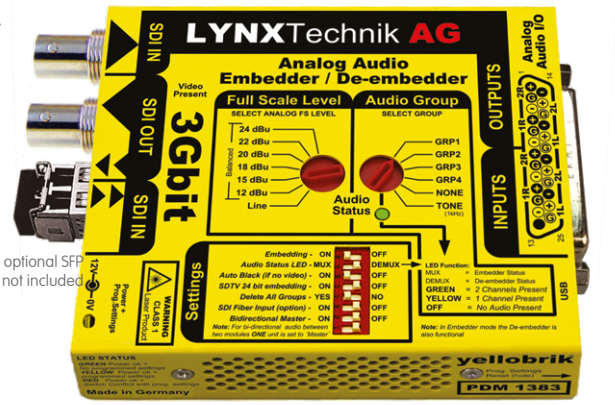
yellobrik®

PDM 1383

yelloGUI compatible

Analog Audio Embedder / De-embedder

- Simultaneous embedding and de-embedding
- 3G SDI Level A and Level B support
- SDI video formats up to 3Gbit (1080p60)
- 4 x Analog audio inputs / outputs with selectable audio groups
- Optional Fiber I/O
- Integrated 1 kHz test tone generator
- Bidirectional audio transport mode possible
- Auto black if no video present
- Selectable SDTV 24 bit mode
- Video and Audio present LED indicators
- Internal full mono audio shuffling via yelloGUI



Installed optional SFP shown is not included

The PDM 1383 is a versatile analog audio embedder and de-embedder designed for a wide range of SDI video formats up to 3Gbit. Analog audio I/O is connected using a 25 pin SubD connector. (screw terminal adapter provided).

Audio groups are selected using the rotary switches, and its possible to embed and de-embed additional audio groups by cascading modules together. Simultaneous embedding and de-embedding means the module will de-embed and output the audio from the selected audio group before overwriting with new audio (if required).

The "auto black" mode uses a black video frame if no SDI input is present. This allows the module to embed audio even when no video source is available. This mode is useful if the module is being used in an "audio only" application.

A 1 kHz test tone generator is included for audio testing purposes.

The module is also compatible with the yelloGUI software package, which provides access to a host of additional internal settings which includes manual insertion of metadata (AFD,WSS,VI)

An SDI fiber input and output is also provided with a variety of plug in SFP options available.

SDI Fiber Transmitter Options		
Model	Description	Power
OH-TX-1-LC / ST / SC	SFP Fiber TX - Singlemode - LC, ST or SC conn. - 10km	-5dBm (1310nm)

SDI Fiber Receiver Options		
Model	Description	Sensitivity
OH-RX-1-LC / ST / SC	SFP Fiber RX - Singlemode - LC, ST or SC connector	-16dBm

SDI Fiber Transceiver Options			
Model	Description	Power	Sense
OH-TR-1-LC	SFP Fiber RX/TX - Singlemode, LC Connector - 10km	-5dBm	-18dBm
OH-TR-0-850-LC	SFP Fiber RX/TX - Multimode, LC Connector - 300m	-5dBm	-15dBm

SDI Fiber Bidirectional Transceiver Options			
Model	Description	Power	Sense
OH-BD-1-1310-LC	SFP Fiber BiDi TR - Singlemode, LC Connector, 1310nm	-5dBm	-16dBm
OH-BD-1-1550-LC	SFP Fiber BiDi TR - Singlemode, LC Connector, 1550nm	-5dBm	-16dBm

SDI CWDM Fiber Transmitter Options		
Model	Description	Power
OH-TX-4-XXXX-LC	CWDM SFP Fiber TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm

SDI CWDM Fiber Transceiver Options			
Model	Description	Power	Sense
OH-TR-4-XXXX-LC	CWDM SFP Fiber RX/TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm	-20dBm

Technical Specifications

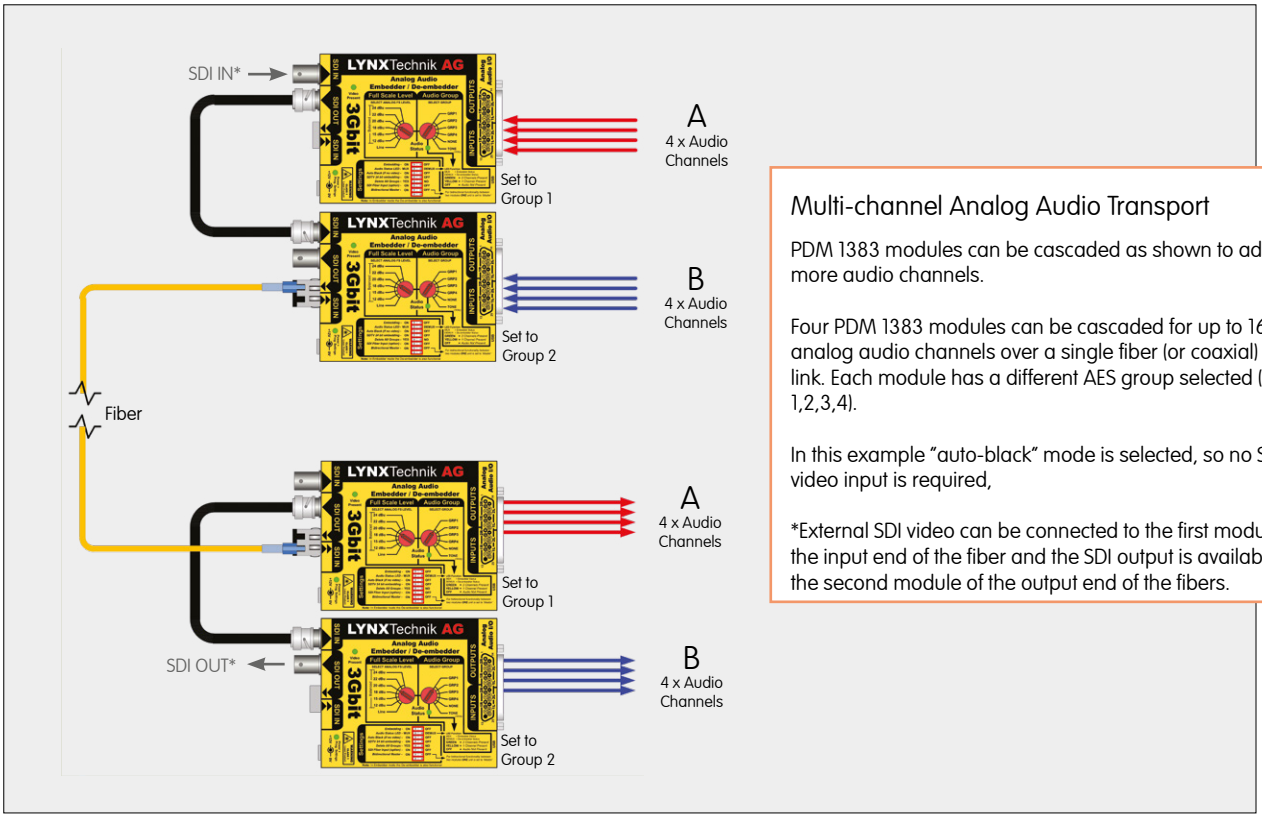
SDI Input	1 x SDI video on 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M 3G Level A & B-DL & B-DS according to SMPTE ST 425-1 and ST 425-2 (3D) with image formats 1280 x 720 and 1920 x 1080 For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Multi-standard operation from 270Mbit/s to 3Gbit/s SDTV (525/625) 720p and 1080p (23.98/24/25/29.97/30/50/59.94/60 Hz) 1080psf (23.98/24/25/29.97/30 Hz) 1080i (50/59.94/60 Hz)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Fiber I/O	(optional) 1 x fiber optic input and output (see table)
	SMPTE 297M - 2006
SDI Output	1 x SDI video on 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
Audio Inputs	4 x analog audio inputs on 25 pin SubD Connector (10K Ohm)
	AES group selection provided via rotary switch
Audio Outputs	4 x analog audio outputs on 25 pin SubD Connector (150 Ohm)
	AES group selection provided via rotary switch
Power	+12VDC @ 4.8W nominal - (supports 8 - 14VDC input range)
Physical	Size: 128mm x 90mm x 22mm (5.04" x 3.54" x 0.86") including connectors Weight: 200g (7.05oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	PDM 1383 - (EAN# 4250479359826)
Includes	Module, AC power supply, SubD adapter PCB, mini USB cable

Specifications subject to change

PDM 1383 Applications

The basic SDI embedding and de-embedding applications for the PDM 1383 are somewhat obvious, but with the "auto-black" mode the modules can be used to transport audio signals only. This provides a very cost-effective way to transport multi-channel audio over fiber (or coax) without the need for dedicated audio A/D converters and external optical multiplexing. This when combined with the new "Bidirectional Master" functionality really expands the flexibility of the modules into dedicated audio applications.

Below are two examples of how the modules can be untilized for "audio only" transport over fiber.



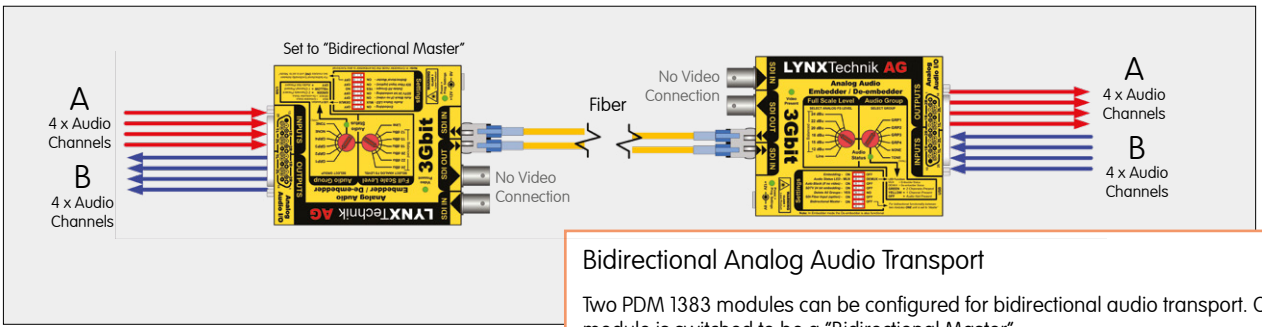
Multi-channel Analog Audio Transport

PDM 1383 modules can be cascaded as shown to add more audio channels.

Four PDM 1383 modules can be cascaded for up to 16 analog audio channels over a single fiber (or coaxial) link. Each module has a different AES group selected (AES 1,2,3,4).

In this example "auto-black" mode is selected, so no SDI video input is required,

*External SDI video can be connected to the first module of the input end of the fiber and the SDI output is available on the second module of the output end of the fibers.



Bidirectional Analog Audio Transport

Two PDM 1383 modules can be configured for bidirectional audio transport. One module is switched to be a "Bidirectional Master"
This works for audio signals only, (no external SDI video) and "auto-black" mode is used. (Note: Cascading modules is not possible in bidirectional mode).
SM/MM transceivers, single receiver or single transmitter (including CWDM types) can be used with duplex fiber, or BIDI SFPs may be used for single fiber connections.

Specifications subject to change

yellobrik®

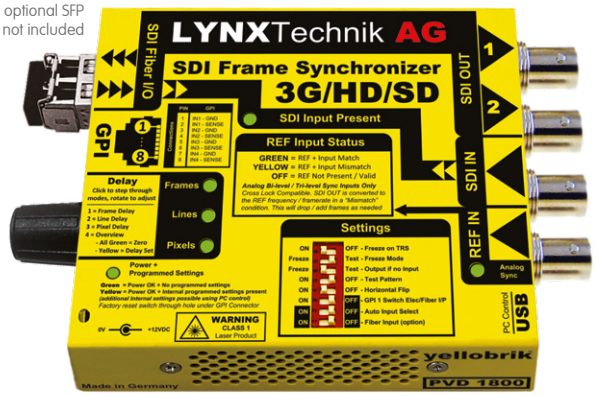
PVD 1800

yelloGUI compatible

3Gbit SDI Frame Synchronizer with Up/Down/Cross Converter

- Supports SDI 3G (level A+B)/HD/SD formats (auto-detect)
- Up/Down/Cross Converter with selectable fast scale mode
- Converter automated by AFD, WSS or VI mode
- Region of Interest scaler
- Converts between 3G Level A and B Dual Link or vice versa
- Optional fiber I/O
- Auto changeover or GPI switch between electrical and optical input
- Robust "flywheel" synchronization for problematic sources
- "Cross lock" compatible reference input
- All 16 channels of audio de-embedded from SDI input
- Audio delayed to match video processing delay and re-embedded
- Integrated test pattern generator
- Up to 30 frames of programmable delay (for timing)

Installed optional SFP shown is not included



The PVD 1800 is a broadcast quality compact SDI frame synchronizer with high quality Up/Down/Cross converter and scaler for professional applications in the Broadcast, Post Production and Pro A/V industry.

The frame synchronizer utilizes robust "flywheel" algorithms that will accommodate a wide variety of low quality asynchronous SDI sources. All embedded audio is extracted and delayed automatically to match the video processing delay. The module also provides up to 30 frames of programmable output delay, adjustable in frames, lines and pixels.

The Up/Down/Cross converter can convert between 3G/HD/SD video standards and has a selectable fast scale mode (<10 lines delay). In addition, the converter has a powerful Region of Interest (ROI) scaler that allows the user to extract a specific region of the incoming video and to output this as a full format SDI output.

The module is fully compatible with the yelloGUI software package, so the module can be configured, controlled and updated using a PC or MAC.

SDI Fiber Transmitter Options		
Model	**Description**	**Power**
OH-TX-1-LC / ST / SC	SFP Fiber TX - Singlemode - LC, ST or SC conn. - 10km	-5dBm (1310nm)

SDI Fiber Receiver Options		
Model	**Description**	**Sensitivity**
OH-RX-1-LC / ST / SC	SFP Fiber RX - Singlemode - LC, ST or SC connector	-18dBm

SDI Fiber Transceiver Options			
Model	**Description**	**Power**	**Sens**
OH-TR-1-LC	SFP Fiber RX/TX - Singlemode, LC connector - 10km	-5dBm	-16dBm
OH-TR-0-850-MM	SFP Fiber RX/TX - Multimode, LC connector - 300m	-5dBm	-15dBm

SDI CWDM Fiber Transmitter Options		
Model	**Description**	**Power**
OH-TX-4-XXXX-LC	CWDM SFP Fiber TX - Singlemode LC conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm

SDI CWDM Fiber Transceiver Options			
Model	**Description**	**Power**	**Sens**
OH-TR-4-XXXX-LC	CWDM SFP Fiber RX/TX - Singlemode LC conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm	-20dBm

Technical Specifications

SDI Input	1 x 75 Ohm BNC electrical SDI input + 1 x optional fiber SDI input
	Serial digital video SMPTE, 292M, 424M, 259M with automatic video format and standard detection
	SMPTE 424M, SMPTE 292M, SMPTE 259M 3G Level A & B-DL & B-DS according to SMPTE ST 425-1 with image formats 1280 x 720 and 1920 x 1080 For a detailed list of supported formats please refer to the correlating article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
SDI Outputs	2 x 75 Ohm BNC electrical SDI outputs. SMPTE, 292M, 424M, 259M 1 x optional fiber SDI output SDI output follows input format
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Timing Jitter: <0.2 UI @ 270Mbit/s, <1.0 UI @ 1.5Gbit/s, <2.0 UI @ 3Gbit/s
	Alignment Jitter: <0.2 UI @ 270Mbit/s, <0.2 UI @ 1.5Gbit/s, <0.3 UI @ 3Gbit/s
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 110m @ 3Gbit/s
Fiber I/O	Optional plug in SFP for optical SDI I/O (see fiber options table) SMPTE 297M - 2006
Reference Input	SDTV: Analog 525 or 625 bi-level sync HDTV: All tri-level sync standards (exceptions 1080p 50/59.94/60Hz) Cross lock compatible
	SMPTE 274M, SMPTE 296M - 75 Ohm BNC connector
Video Delay	Timing Adjustment: Up to 30 frames. Manually adjustable in frame / line / pixel increments
GPI	Connector: RJ45 with 4 x External GPI inputs: GPI 1 - used for Electrical / Optical SDI changeover GPI 2 - used to "freeze" the SDI output GPI 3 - (low) enable "latch" mode GPI 4 - (low) disables "latch" mode
USB	Mini "Type B" connection used for yelloGUI PC control and firmware updates
Power	+12VDC @ 5.8W nominal (without SFP) - (supports 7 - 24VDC input range)
Physical	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") including connectors Weight: 230g (8.11oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	PVD 1800 - (EAN# 4250479324596)
Includes	Module, AC power supply, mini USB cable

Specifications subject to change

yellobrik®

PVD 1800

yelloGUI compatible

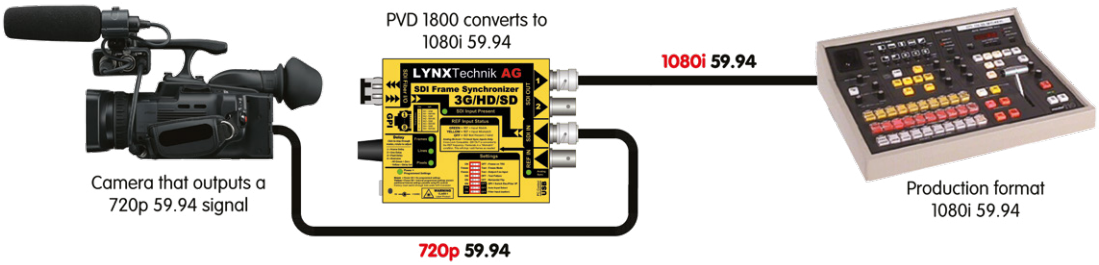
Up/Down/Cross Converter and Scaler

The PVD 1800 includes an integrated broadcast quality Up/Down/Cross Converter that converts between 3G, HD and SD formats. The converter uses the same state of the art technology that is used in the greenMachine® products. A selectable fast scale mode will deactivate the frame synchronizer and can reduce the processing delay to less than 10 lines, a fraction of a frame*. In addition, the converter can be automated by the incoming format description of the SDI (AFD, WSS or VI).

* For a detailed list of processing delays in fast scale mode please refer to the correlating article in our knowledge base (www.lynx-technik.com > support > tech.support)

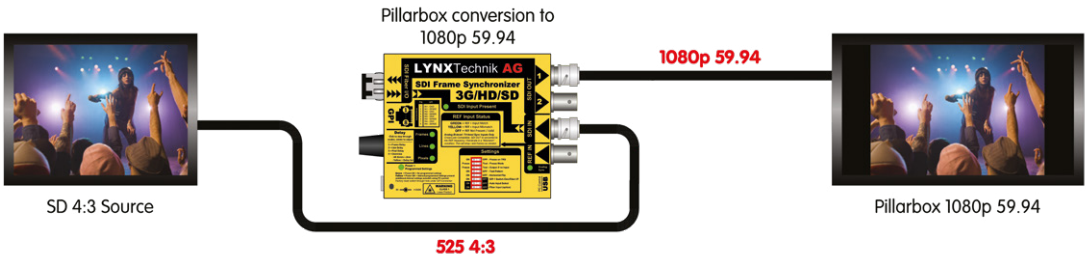
Cross convert between HD and 3G standards

With the cross conversion functionality of the PVD 1800 can convert between 720p, 1080i and 1080p resolutions.



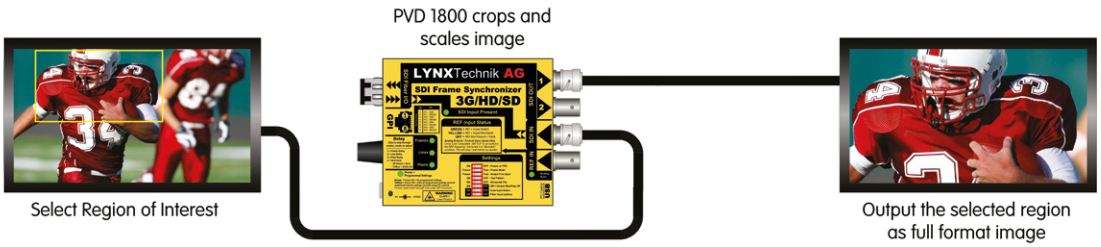
Up or down convert between SD and 3G/HD standards with aspect ratio conversion

The PVD 1800 can up or down convert between SD SDI and 3G/HD and will aspect ratio convert if required.



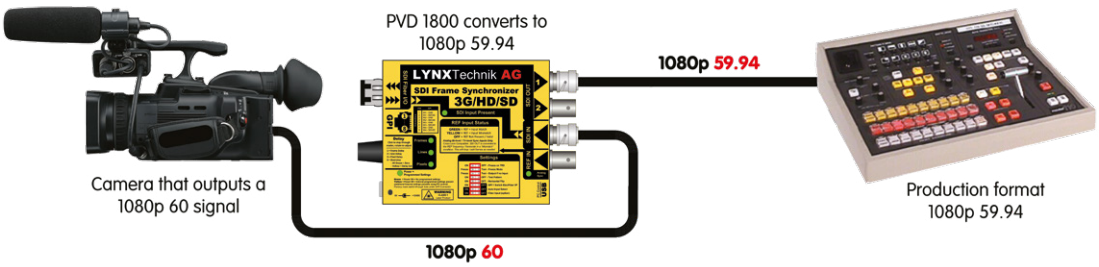
Region of Interest (ROI) scaler

The scaler of the PVD 1800 allows for a Region of Interest (ROI) selection. The user can select any region of the incoming video signal for output as a full video signal. The size and position of the output image can be freely adjusted.



Frame Rate Converter

The converter of the PVD 1800 can perform a simple frame rate conversion by adding or dropping frames.



yellobrik®

PVD 1800

yelloGUI compatible

Cross Lock and Frame Rate Conversion with Scaler in bypass

The frame synchronizer is fully cross lock compatible, meaning it can cross lock between different standards. With a specific reference signal connected and the converter in bypass mode, the synchronizer will drop or add frames to achieve a correctly synchronized (frame rate converted) SDI output. During all conversions, precise audio video timing is preserved and no "pops" or "clicks" or any audio disturbances will be present (even while dropping and adding frames).

Note: *This conversion simply drops and adds frames to achieve the desired output frame rate and will not provide the performance typical of a fully featured standards converter.*

Please refer to the tables below for the conversion possibilities.

SDI inputs with @ 23.98/29.97/59.94Hz Frame Rates

Reference Signal	23.98Hz / 29.97Hz / 59.94Hz	30Hz / 60Hz	24Hz / 25Hz / 50Hz
SDI Input	SDI Output Formats		
525 / 59.94Hz	525 / 59.94Hz	525 / 60Hz	625 / 50Hz
720p / 59.94Hz	720p / 59.94Hz	720p / 60Hz	720p / 50Hz
720P / 29.97Hz	720p / 29.97Hz	720p / 30Hz	720p / 25Hz
720p / 23.98Hz	720p / 23.98Hz	720p / 30Hz	720p / 24Hz
1080i / 59.94Hz	1080i / 59.94Hz	1080i / 60Hz	1080i / 50Hz
1080p / 59.94Hz	1080p / 59.94Hz	1080p / 60Hz	1080p / 50Hz
1080p / 29.97Hz	1080p / 29.97Hz	1080p / 30Hz	1080p / 25Hz
1080p / 23.98Hz	1080p / 23.98Hz	1080p / 30Hz	1080p / 24Hz

SDI inputs with @ 24/30/60Hz Frame Rates

Reference Signal	23.98Hz / 29.97Hz / 59.94Hz	30Hz / 60Hz	24Hz / 25Hz / 50Hz
SDI Input	SDI Output Formats		
525 / 60Hz	525 / 59.94Hz	525 / 60Hz	625 / 50Hz
720p / 60Hz	720p / 59.94Hz	720p / 60Hz	720p / 50Hz
720P / 30Hz	720p / 29.97Hz	720p / 30Hz	720p / 25Hz
720p / 24Hz	720p / 23.98Hz	720p / 30Hz	720p / 24Hz
1080i / 60Hz	1080i / 59.94Hz	1080i / 60Hz	1080i / 50Hz
1080p / 60Hz	1080p / 59.94Hz	1080p / 60Hz	1080p / 50Hz
1080p / 30Hz	1080p / 29.97Hz	1080p / 30Hz	1080p / 25Hz
1080p / 30Hz	1080p / 23.98Hz	1080p / 30Hz	1080p / 24Hz

SDI inputs with @ 25/50Hz Frame Rates

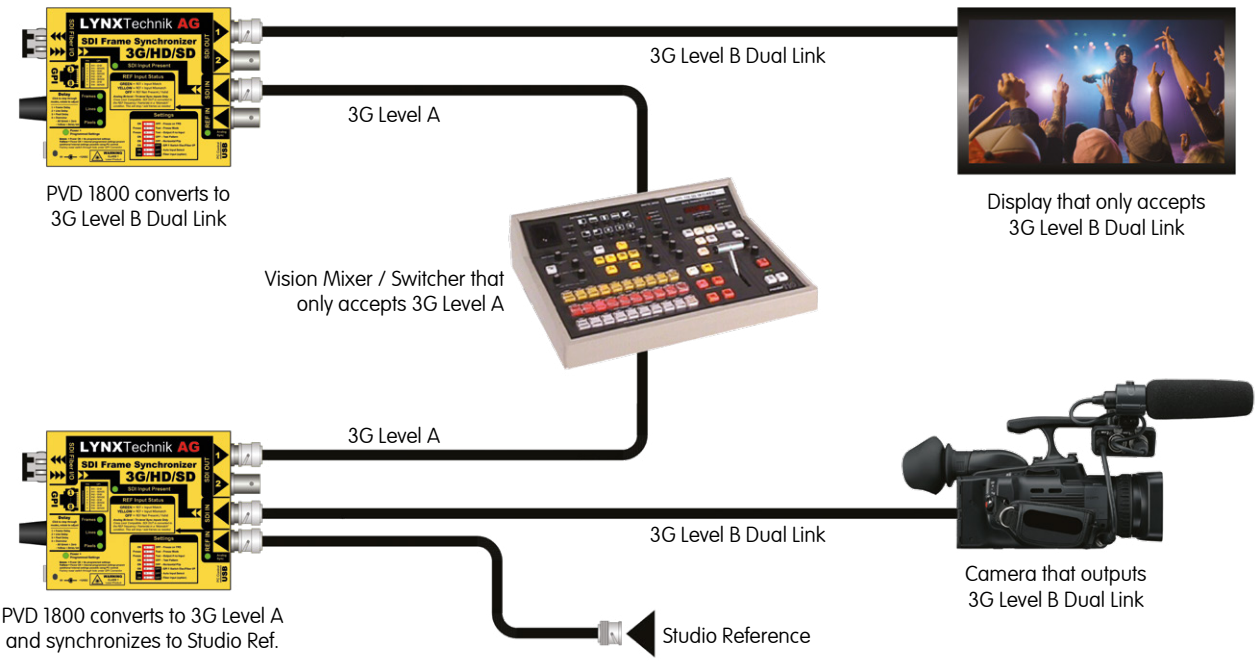
Reference Signal	23.98Hz / 29.97Hz / 59.94Hz	30Hz / 60Hz	24Hz / 25Hz / 50Hz
SDI Input	SDI Output Formats		
625 / 50Hz	525 / 59.94Hz	525 / 60Hz	625 / 50Hz
720p / 50Hz	720p / 59.94Hz	720p / 60Hz	720p / 50Hz
720P / 25Hz	720p / 29.97Hz	720p / 30Hz	720p / 25Hz
1080i / 50Hz	1080i / 59.94Hz	1080i / 60Hz	1080i / 50Hz
1080p / 50Hz	1080p / 59.94Hz	1080p / 60Hz	1080p / 50Hz
1080p / 25Hz	1080p / 29.97Hz	1080p / 30Hz	1080p / 25Hz

DROP FRAME CONVERSION

ADD FRAME CONVERSION

3G Level A to Level B Dual Link Conversion (or vice versa)

The PVD 1800 frame synchronizer is also a 3G Level A and Level B Dual Link converter. This is especially convenient since broadcast equipment is typically only compatible with either Level A or Level B. 3G Level A and Level B Dual Link are not compatible with each other, therefore making the PVD 1800 Frame Synchronizer + Converter an invaluable problem solver.



yellobrik® SPG 1707

HD / SD Sync Pulse Generator with Genlock

- Wide variety of HDTV Sync standards
- Simultaneous HD and SD analog sync outputs
- 3 x HD sync outputs and 3 x SD sync outputs
- Genlock with cross lock to any sync standard
- Sync only, Color bars or Black Burst for SD sync
- NTSC, PAL or PAL M/N sync outputs
- Burst phase adjustment for NTSC and PAL sync
- 48KHz Word Clock or DARS audio reference output
- Simple to use, all controls easily accessible

The SPG 1707 is a compact, versatile analog sync pulse generator with genlock providing HD / SD video sync and audio reference signals. The module provides three SD sync outputs and three HD sync outputs and a separate audio sync output that can be switched between 48 KHz World Clock or Digital Audio Reference (DARS).

Flexible genlock capability allows the module to genlock to any SD or HD reference input, with full cross lock capability, even across unmatched standards.

The HD tri-level sync outputs can be set to any of the available HD standards, and the bi-level SD outputs set for NTSC, PAL or PAL M/N. The SD and HD sync outputs and audio sync signals are all frequency locked to the reference regardless of the selected sync standard for the outputs.

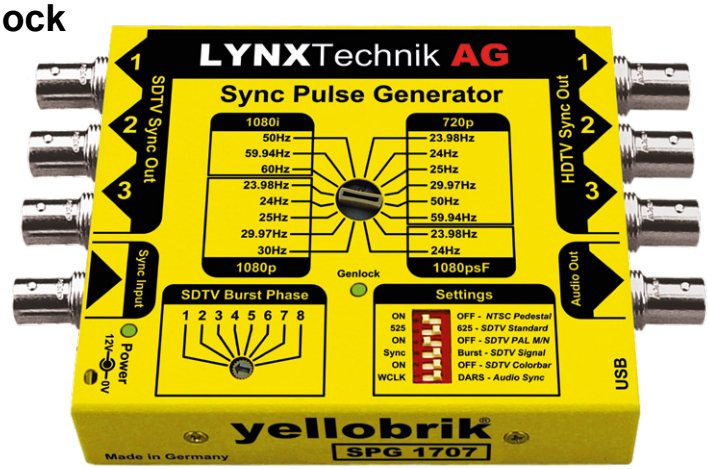
The SD sync outputs can be Color bars, Black Burst or Sync only with selectable 7.5 IRE pedestal for NTSC standards with adjustable burst phase in 8 increments.

The sync generator is robust and temperature stabilized, making it suitable as a reference source with 2ppm accuracy.

All user controls are located on the top of the module clearly labelled and easily accessible. This facilitates simple changes to module function and configuration without referring to a manual.

The compact portable design makes it suitable for a wide range of applications in broadcast and mobile production environments.

Note: 1080p 50Hz / 60Hz and 59.94Hz sync standards not supported



Technical Specifications

HDTV Sync	3 x Tri-level HD Analog Sync outputs
	Standards: 1080i /50Hz / 59.94Hz / 60Hz. 1080p / 23.98Hz / 24Hz / 25Hz / 29.97Hz / 30Hz. 720p / 23.98Hz / 24Hz / 25Hz / 29.97Hz / 50Hz / 59.94Hz. 1080psf / 23.98Hz/24Hz Note: 1080p 50Hz/60Hz is not supported and 720p 30Hz/60Hz is not supported, but the .001 derivatives are supported
	SMPTE 274M, SMPTE 296M
	Selectable via integrated 16 position rotary switch
	Return Loss > 40dB up to 5MHz. SNR > 75dB
SDTV Sync	3 x Bi-level SD sync outputs
	Standards: NTSC, PAL, PAL M/N
	SMPTE 170M, ITU-R BT 470.6
	Selectable: 75% color bars / black burst / sync only
	NTSC 7.5 IRE pedestal ON/OFF
	Adjustable burst phase in 8 increments
	Return Loss > 40dB up to 5MHz. SNR > 75dB
Ref Sync Input	Bi-level or tri-level analog sync
	Cross lock compatible to 525 and 625 SD sync and all HD sync standards (excluding 1080p 50/60/59.94Hz)
	SMPTE 274M, SMPTE 296M
Audio Ref.	Selectable 48KHz Word Clock or DARS
	DARS: SMPTE 276M unbalanced AES (24-bits) - Grade 2
	48KHz Word Clock: 0 - 5.0V
Accuracy	2 ppm
Power	+12VDC @ 2.3W nominal - (supports 7 - 17VDC input range)
USB	Mini "Type B" connection for firmware upgrades
Physical	Size: 140mm x 90mm x 22mm (5.51" x 3.34" x 0.86") including connectors Weight: 300g (10.6oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	SPG 1707 - - (EAN# 4250479317079)
Includes	Module, AC power supply, mni USB cable

Specifications subject to change

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

yellobrik® DVD 1423

12Gbit Dual 1 > 3 SDI Reclocking Distribution Amplifier

- 2 independent inputs
- 3 outputs per channel
- Suitable for SDI video up to 12Gbit/s (4k/UHD)
- Supports SD SDI, HD SDI, 3G SDI, 6G SDI and 12G SDI
- Reclocking
- Auto-detect input format
- Input present LED indication

The DVD 1423 is a compact SDI distribution amplifier, which is suitable for all SMPTE standard SDI signals from 270Mbit/s to 4k UHD (12 Gbit/s). The SDI input formats are auto-detected and all outputs are reclocked.

Each channel is 100% independent and can process differnt SDi formats if requeired.

SMPTE 259M (270Mbit/s), SMPTE 292M (1.5Gbit/s), SMPTE 424M (3Gbit/s), SMPTE 2081 (6GBit/S) and SMPTE 2082 (12GBit/s) standards are supported.

Technical Specifications

Input	2 x SDI; 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 2081, SMPTE 2082
	Multi-standard operation from 270Mbit/s to 12Gbit/s; reclocking
	Input present LED indication
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz, >7dB from 3GHz to 6GHz; >4dB from 6GHz to 12GHz
	Automatic cable EQ 400m @ 270Mbit/s, 200m @ 1.5Gbit/s, 150m @ 3Gbit/s (Belden 1694 cable) 90m @ 6Gbit/s; 80m @ 12Gbit/s (Belden 4794R cable)
Outputs	3 x multi-rate reclocked SDI outputs per channel ; 75 Ohm BNC connectors
	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 2081, SMPTE 2082
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz, >7dB from 3GHz to 6GHz; >4dB from 6GHz to 12GHz
	Alignment Jitter < 0.2 UI @ 270Mbit/s, < 0.2 UI @ 1.5Gbit/s, < 0.3 UI @ 3Gbit/s, , 6Gbit/s; 12Gbit/s
	Timing Jitter < 0.2 UI @ 270Mbit/s, < 1.0 UI @ 1.5Gbit/s, < 2.0 UI @ 3Gbit/s, 6Gbit/s; 12Gbit/s
Power	+12VDC @ 3.3W nominal - (supports 7 - 16VDC input range)
Physical	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") including connectors Weight: 240g (8.46oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	DVD 1423 - (EAN# 4250479325227)
Includes	Module, AC power supply

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik® DVD 1417

12Gbit 1 > 7 SDI Reclocking Distribution Amplifier

- 1 input and 7 outputs
- Suitable for SDI video up to 12Gbit/s (4k/UHD)
- Supports SD SDI, HD SDI, 3G SDI, 6G SDI and 12G SDI
- Reclocking
- Auto-detect input format
- Input present LED indication

The DVD 1417 is a compact SDI distribution amplifier, which is suitable for all SMPTE standard SDI signals from 270Mbit/s to 4k UHD (12 Gbit/s). The SDI input format is auto-detected and all outputs are reclocked.

SMPTE 259M (270Mbit/s), SMPTE 292M (1.5Gbit/s), SMPTE 424M (3Gbit/s), SMPTE 2081 (6GBit/S) and SMPTE 2082 (12GBit/s) standards are supported.

Technical Specifications

Input	1 x SDI; 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 2081, SMPTE 2082
	Multi-standard operation from 270Mbit/s to 12Gbit/s; reclocking
	Input present LED indication
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz, >7dB from 3GHz to 6GHz; >4dB from 6GHz to 12GHz
	Automatic cable EQ 400m @ 270Mbit/s, 200m @ 1.5Gbit/s, 150m @ 3Gbit/s (Belden 1694A cable) 90m @ 6Gbit/s; 80m @ 12Gbit/s (Belden 4794R cable)
Outputs	7 x multi-rate reclocked SDI outputs ; 75 Ohm BNC connectors
	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 2081, SMPTE 2082
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz, >7dB from 3GHz to 6GHz; >4dB from 6GHz to 12GHz
	Alignment Jitter < 0.2 UI @ 270Mbit/s, < 0.2 UI @ 1.5Gbit/s, < 0.3 UI @ 3Gbit/s, 6Gbit/s, 12Gbit/s
	Timing Jitter < 0.2 UI @ 270Mbit/s, < 1.0 UI @ 1.5Gbit/s, < 2.0 UI @ 3Gbit/s, 6Gbit/s, 12Gbit/s
Power	+12VDC @ 2.7W nominal - (supports 7 - 16VDC input range)
Physical	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") including connectors Weight: 240g (8.46oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	DVD 1417 - (EAN# 4250479325210)
Includes	Module, AC power supply

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik® DVD 1823

Dual 3Gbit 1 > 3 SDI Reclocking Distribution Amplifier

- Dual channel
- 1 input and 3 outputs per channel
- Suitable for SDI video up to 3Gbit/s (1080p60)
- Level A and Level B support (all formats) and DVB-ASI
- Reclocking
- Auto-detect input format
- Input present LED indication for each channel

The DVD 1823 is a compact general purpose, dual channel reclocking SDI distribution amplifier suitable for any level A or Level B SDI video signal up to 3Gbit (1080p60) including DVB-ASI signals.

SMPTE 424M (3Gbit/s), SMPTE 292M (1.5Gbit/s) and SMPTE 259M (270Mbit/s) standards are supported.

Technical Specifications

Inputs	2 x SDI - 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Multi-rate reclocking
	Input present LED indication for each channel
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 320m @ 270Mbit/s, 160m @ 1.5Gbit/s, 120m @ 3Gbit/s
Outputs	3 x multi-rate reclocked SDI outputs per channel
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	75 Ohm BNC connectors
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Alignment Jitter < 0.2 UI @ 270Mbit/s, < 0.2 UI @ 1.5Gbit/s, < 0.3 UI @ 3Gbit/s
	Timing Jitter < 0.2 UI @ 270Mbit/s, < 1.0 UI @ 1.5Gbit/s, < 2.0 UI @ 3Gbit/s
Power	+12VDC @ 2.1W nominal (supports 7 - 16V input range)
Physical	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") including connectors Weight: 240g (8.46oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	DVD 1823 - (EAN# 4250479359635)
Includes	Module, AC power supply

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik® DVD 1817

3Gbit 1 > 7 SDI Reclocking Distribution Amplifier

- 1 input and 7 outputs
- Suitable for SDI video up to 3Gbit/s (1080p60)
- Level A and Level B support (all formats) and DVB-ASI
- Reclocking
- Auto-detect input format
- Input present LED indication

The DVD 1817 is a compact general purpose reclocking SDI distribution amplifier suitable for any level A or Level B SDI video signal up to 3Gbit (1080p60) including DVB-ASI signals.

SMPTE 424M (3Gbit/s), SMPTE 292M (1.5Gbit/s) and SMPTE 259M (270Mbit/s) standards are supported.

Technical Specifications

Input	1 x SDI 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Multi-rate reclocking
	Input present LED indication
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 320m @ 270Mbit/s, 160m @ 1.5Gbit/s, 120m @ 3Gbit/s
Outputs	7 x multi-rate reclocked SDI outputs
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	75 Ohm BNC connectors
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Alignment Jitter < 0.2 UI @ 270Mbit/s, < 0.2 UI @ 1.5Gbit/s, < 0.3 UI @ 3Gbit/s
	Timing Jitter < 0.2 UI @ 270Mbit/s, < 1.0 UI @ 1.5Gbit/s, < 2.0 UI @ 3Gbit/s
Power	+12VDC @ 1.3W nominal - (supports 7 - 16VDC input range)
Physical	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") including connectors Weight: 240g (8.46oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	DVD 1817 - (EAN# 4250479359628)
Includes	Module, AC power supply

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik® DVA 1714

Wide Band 1 > 4 Analog Video / Sync Distribution Amplifier

- 1 input and 4 outputs
- Wide band - 30MHz
- Adjustable gain and EQ
- Input Clamp
- Input present LED indication
- Suitable for analog SDTV/HDTV video or Sync signals

The DVA 1714 is a compact general purpose wide band analog distribution amplifier suitable for analog SDTV and HDTV video signals.

The module can also be used for analog SDTV Bi-level sync pulses, black reference and analog HDTV Tri-level sync pulses.

Features include an Input clamp with user adjustable gain and cable equalization.

LED indicators are provided for signal presence and power.

Technical Specifications

Input	1 x 75 Ohm BNC connector
	Compatible Input Sources SDTV Composite video (NTSC/PAL) SDTV Component Analog Video HDTV Component Analog Video SDTV Bi-level sync (or black burst) HDTV Tri-Level Sync
	Return loss > 31dB to 30MHz
	Input Gain adjustment range +/- 2.5dB
	Input Cable Equalization Adjustment 0 - 8dB
	Input clamp
	Input presence detection (LED)
Outputs	4 x Analog Video / Sync Outputs
	75 Ohm BNC connectors
	Return loss >22dB to 30MHz
Performance	Frequency Response: -3dB @ 30MHz (EQ min) -3dB @ 37MHz (EQ max) +/- 0.1dB to 10MHz
	Signal to noise >60dB (RMS)
Power	+12VDC @ 1.3W nominal - (supports 8 - 24VDC input range)
Physical	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") - including connectors Weight: 220g (7.8oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model#	DVA 1714 - (EAN# 4250479321182)
Includes	Module, AC Power supply

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik®

CQS 1441

yelloGUI compatible

Bidirectional 2SI Quad Link to Single Link Converter

- Support for Quad 2SI to 12G SDI or 12G SDI to Quad 2SI conversions
- 4K UHD 12G SDI Fiber and BNC Input (Fiber SFP optional)
- 4K UHD 12G SDI Fiber and BNC Output (Fiber SFP optional)
- 4K UHD 12G SDI BNC Loop Output
- 4x 3G SDI BNC Input
- 4x 3G SDI BNC Output
- Control / configure via LYNX Technik yelloGUI
- Fully compatible with Rack frame LYNX Technik R FR 1000-1

The CQS 1441 is a compact solution to bridge between 4K UHD quad link 2SI devices and single link 12G SDI devices. The module can be configured to convert to or from Quad link 2SI. Note. This module does not support SQD (Square Division)

CQS 1441 can also be used for distributing 3G/HD signal on Input 1 (BNC/SFP) to four 3G/HD signals (BNC) as well as on the Loop out. Video format 720p is not supported in Auto distribution mode.

The module is suitable for all SMPTE standard signals from 1.5Gbit/s to 12Gbit/s (SMPTE 292M, 424M, 2081 and 2082)

Conversion modes:
- 12G SDI single link to 4 x 3G Quad link (2SI)
- 4 x 3G Quad link (2SI) to 12G SDI single link
- 6G SDI single link to 4 x 1.5G SDI
- 4 x 1.5G SDI to 6G SDI single link

With the distance limitations of 12G SDI electrical connections, the CQS 1441 is equipped with an integrated SFP fiber port which can accept a number of 12G fiber options depending on the specific application.

Fiber I/O Options:
There are 12G SDI fiber Transmitters, Receivers, Transceivers and also a selection of CWDM Transmitters available depending on the application.

Standard Fiber Options

Option #	Description
OH-TX-12G-LC	12G SDI Fiber Transmitter (1310nm)
OH-RX-12G-LC	12G SDI Fiber Receiver (1260-1620nm)
OH-TR-12G-LC	12G SDI Fiber Transceiver (1310nm)

CWDM Fiber Options

Option #	Description
OH-TX-12G-XXXX-LC	12Gbit SDI Optical Transmitter - CWDM (XXXX=Wavelength 1270nm to 1610nm)

Shown with optional 12G SDI fiber SFP Installed

Technical Specifications

Electrical Inputs	4x multi-rate SDI inputs. 75 Ohm BNC connector (2SI only no support for SQD or "Square Division")
	SMPTE 292M, SMPTE 424M, SMPTE 2081, SMPTE 2082
	Multi standard operation from 1.5Gbit/s to 12Gbit/s; reclocking
	Electrical Return Loss: >10dB from 1.5GHz to 3GHz, >7dB from 3GHz to 6GHz, >4dB from 6GHz to 12GHz
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz, >7dB from 3GHz to 6GHz; >4dB from 6GHz to 12GHz
	Automatic cable EQ 140m @ 3Gbit/s (Belden 1694A), 80m @ 6Gbit/s, 80m @ 12Gbit/s (Belden 4794R cable)
Electrical Outputs	5x multi-rate SDI outputs; 75 Ohm BNC connectors 1x 12Gbit/s SDI output; 75 Ohm BNC connector 1x 12Gbit/s SDI loop output; 75 Ohm BNC connector (2SI only no support for SQD or "Square Division")
	SMPTE 292M, SMPTE 424M, SMPTE 2081, SMPTE 2082
	Electrical Return Loss: >10dB from 1.5GHz to 3GHz, >7dB from 3GHz to 6GHz, >4dB from 6GHz to 12GHz
	Alignment Jitter: < 0.2 UI @ 1.5Gbit/s, < 0.3 UI @3Gbit/s, 6Gbit/s, 12Gbit/s Timing Jitter: < 1.0 UI @ 1.5Gbit/s, < 2.0 UI @ 3Gbit/s, 6Gbit/s, 12Gbit/s
Fiber Input	1 x fiber optic output option for 12G SDI input (see option table) Simplex (singlemode) using LC Connection
	SMPTE 297M - 2006
	Input range (wavelength) 1260nm to 1620nm
Fiber Output	1 x fiber optic output option for 12G SDI (see option table). Simplex (single-mode) using LC Connection
	Non CWDM (1310nm) and CWDM options available (see options table)
Power	+12VDC @ 6.79W nominal - (supports 7 - 24VDC input range)
Physical	Size: 138mm x 90mm x 44mm (5.43" x 3.54" x 1.72") including connectors
Weight	250g (8.9 Oz)
Ambient Temp	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model#	CQS 1441 - (EAN# 4250479325678)
Includes	Module,and AC to 12V DC power supply

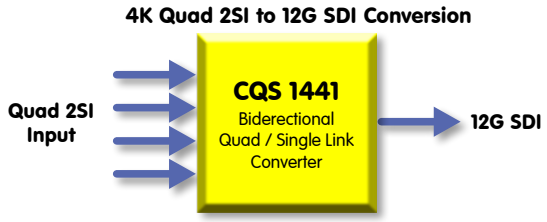
Specifications subject to change

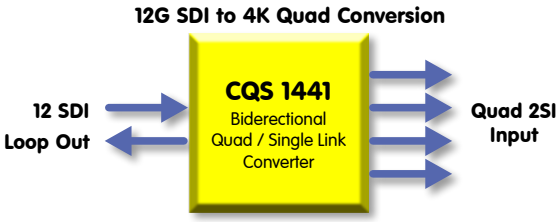
CQS 1441 Applications

There are multiple applications for the CQS 1441, aside from the basic conversions to and from Quad link to Single link, the optional fiber port opens up a host of additional possibilities.

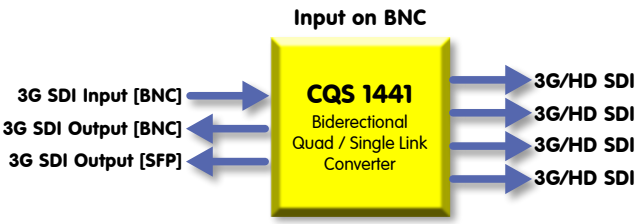
Basic Applications

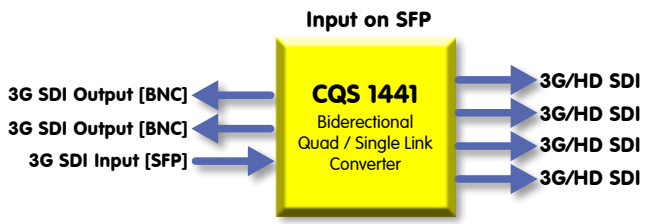
You may have a 4K camera (or another source device) which has a quad 2SI 4K UHD output which you would like to convert to a standard single link 12G SDI signal. Likewise, you may have a disk recorder or other device which requires a quad 2SI input, and you only have a 12G source. These basic "bridge" modes are the most simple and most common applications of the module.





You can also use CQS 1441 for distributing one 3G/HD signal from Input 1 [BNC/SFP] and distribute it to output 1-4 as well as loop out.

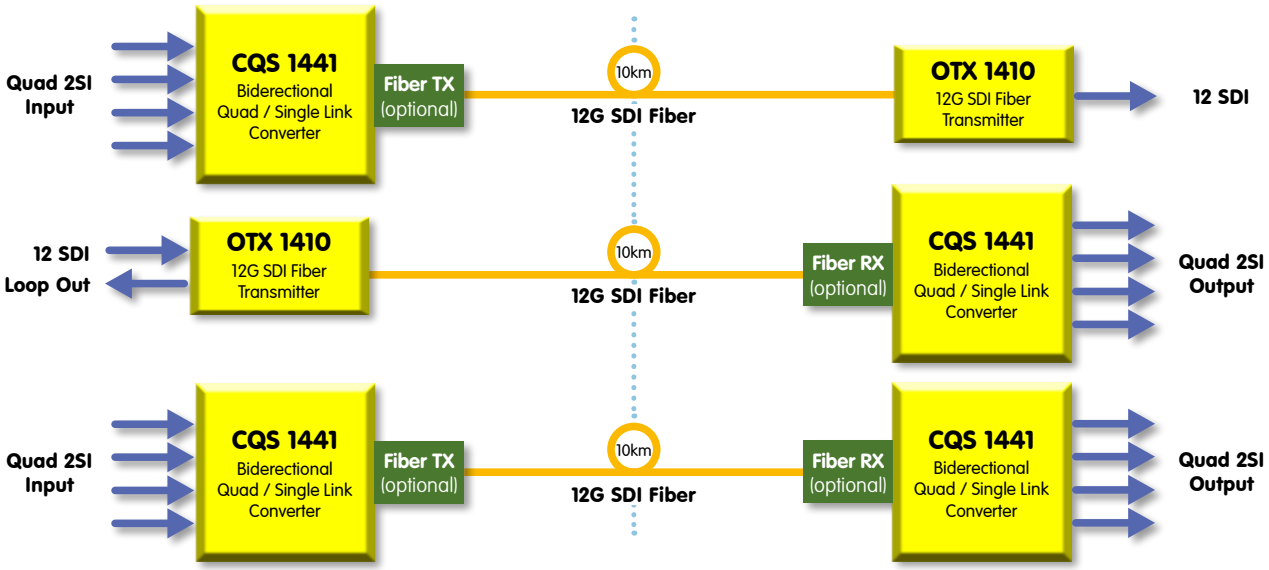




Note: 720p video format not supported

Basic Fiber Applications

Because of the distance limitations using coaxial cable for 12G SDI, using fiber makes a lot of sense. The CQS 1441 is quipped with an integrated SFP port which can accept several fiber options which expands the distance of the 12G SDI signal. Likewise, you can also extend the distance of a native Quad 2SI signal using fiber if needed. (Note: additional LYNX Technik Fiber conversion modules are shown in some applications)

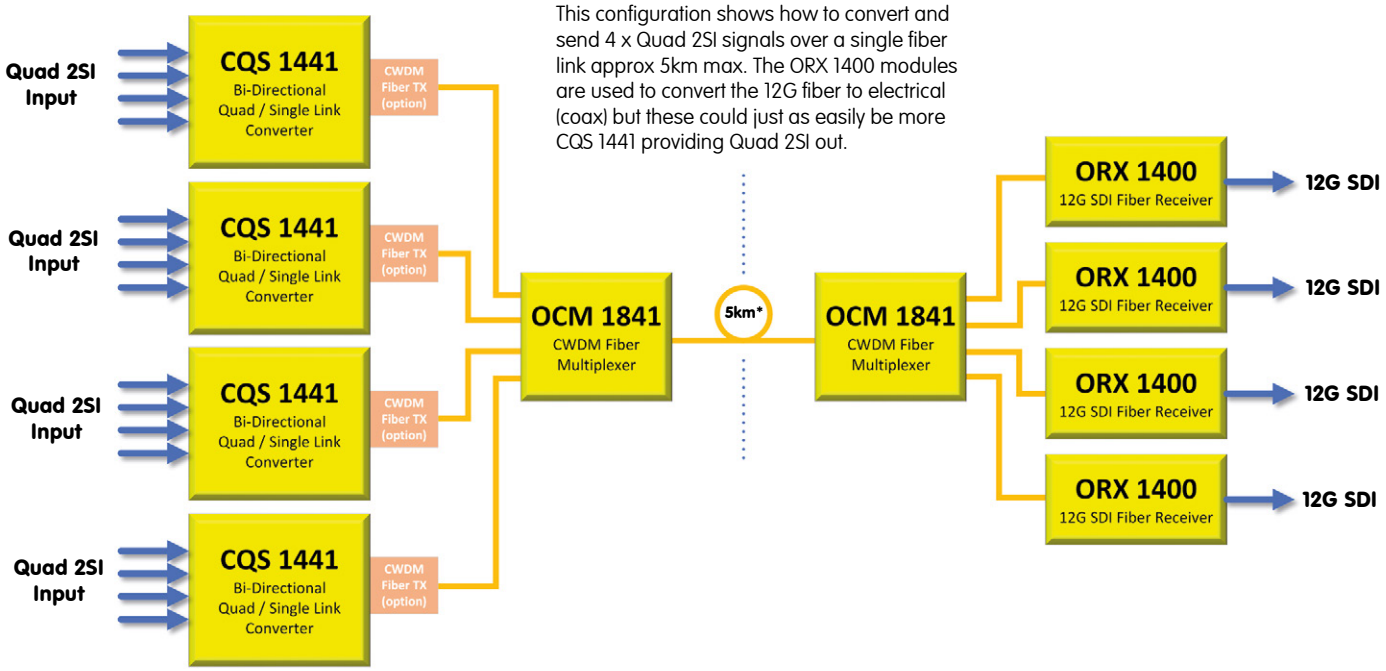


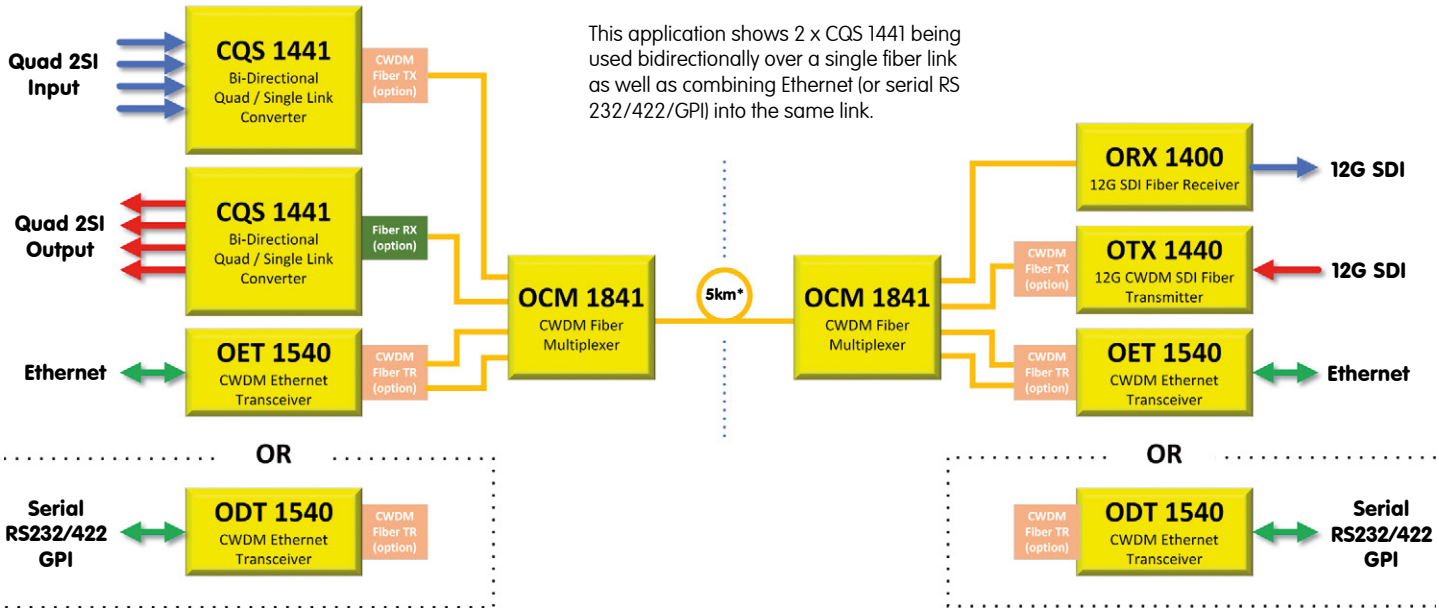
A fiber Transceiver option is also available. This includes both a Transmitter and Receiver in a single SFP package. The receive and transmit functions cannot be used simultaneously, but this option is useful if the CQS 1441 configuration is frequently changed where fiber transmission is sometimes needed and on other occasions fiber reception.

** Note: Max distances quoted are only approximations based on nominal fiber links. Actual distances achieved can be shorter or longer than that stated. Many things can impact distance such as splices, connections, patches, splitters and the quality of the fiber. For longer distances you should always calculate the total fiber losses in the fiber link and ensure adequate optical budget.*

CWDM Fiber Applications

Using the available 12G SDI CWDM fiber transmitter options with the CQS 1441 opens up a whole host of additional possibilities for more complex system designs combining multiple signals into a single fiber link, unidirectional and even bi-directional over a single link. Quad link 2SI and 12G can be combined with ethernet, serial data and even additional SDI signals if needed There are too many possibilities to show them all, but below are a few which show the versatility of CWDM fiber when used with the CQS 1441.





yellobrik®

OSW 1022

yelloGUI compatible

2x2 Optical Switch

- Compact 1 slot yellobrik module
- Two optical connection paths: State 1 and State 2
- Non-latching and latching mode
- 2 x GPI for path selections
- 2 x GPO for connection path monitoring
- 4 x dip switches for local control
- 2 x LEDs to display connection path status
- 1 x LED to display power status
- 1 x mini USB for PC control and configuration via yelloGUI
- Singlemode fiber connection with LC connector

The OSW 1022 is an optical 2x2 switch that provides connection paths between two pairs of fiber optic. The compact OSW 1022 switch is suitable for a wide range of applications such as fibre line emergency switchover, route diversity, optical networking system protection, and reconfiguration.

It allows the selection of passive optical paths via GPI control, or local dip switches, or PC/Mac. The GPIs and GPOs provide selection and monitoring of connection paths State 1 & State 2.

It also provides latching and non-latching mode. In the latching mode, the optical switch maintains the current optical connection path (state) and does not change on power failure. In the non-latching mode, the optical switch switches to State 1 connection path upon power failure. When the power is restored, the switch will revert to the connection path set by the dip switch or to the state set by the GUI.

Technical Specifications

Fiber Optic Cable Type	Singlemode
Fiber Connector	LC/PC
Optical Wavelength	1240 ~ 1640nm
Insertion loss	≤1.0 (Typ 0.4) dB
Return Loss	≥ 50 (Typ 55) dB
Switch Speed	≤1, (Typ 0.5) ms
Repeatability	≤0.002 dB
USB	1x mini USB Type B
GPI	Connector: RJ45 with 2x GPI and 2x GPO

Pin	1	2	3	4	5	6	7	8
GPIO	GPO 2A	GPO 2B	GND	GPI 1	GND	GPI 2	GPO 1A	GPO 1B

Power	+12VDC @ 1 W nominal - (supports 7 - 24VDC input range)
Physical	Size: 108 mm x 90mm x 22mm (4.25" x 3.54" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OSW 1022- (EAN# 4250479327443)
Includes	Module, AC power supply

Rack Frame Options

OPTIONAL rack mount solutions are available.

RFR 1000-1

Rack frame with redundant power supply options.

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

P-TAP 1000

Use with a standard battery P-TAP power source.

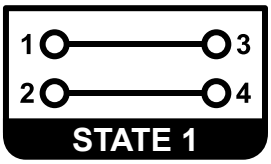
XLR 1000

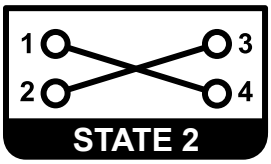
Use with a standard 4 pin XLR camera battery power source.

Specifications subject to change

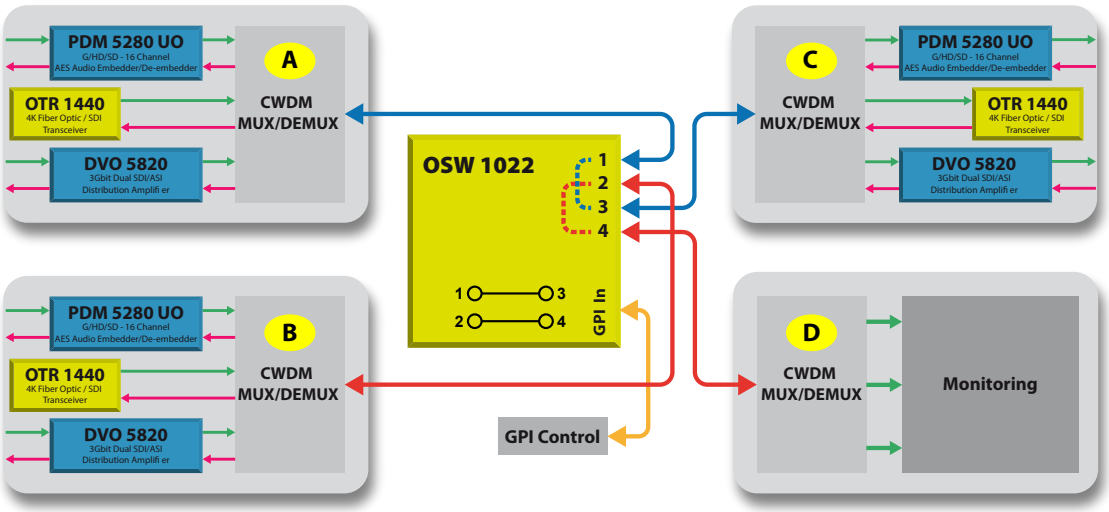
Optical Switch Example Application

The Optical switch OSW 1022 provides two connection paths: State 1 and State 2.

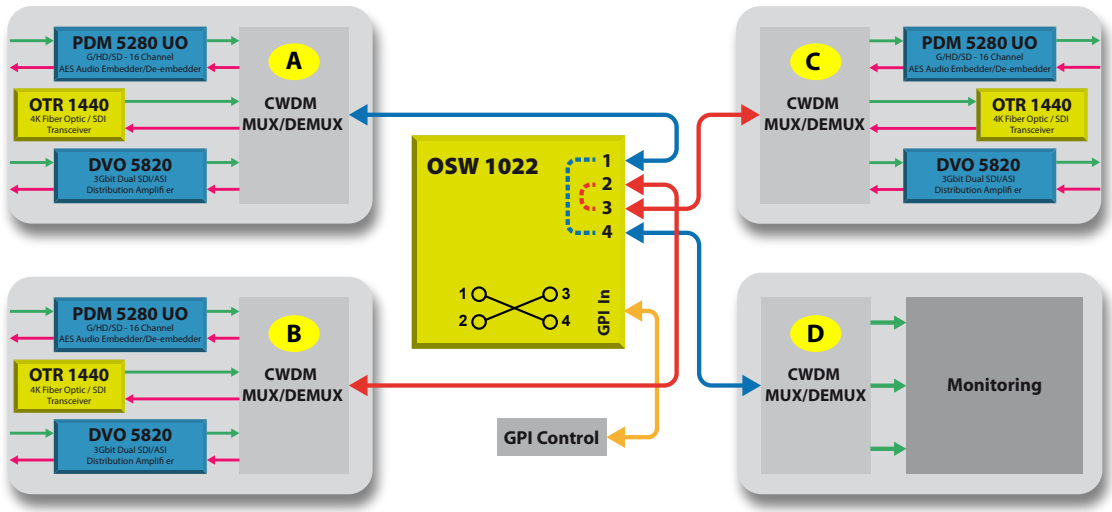




State 1: In this connection path, MUX A is connected to MUX C and MUX B is connected to MUX D.



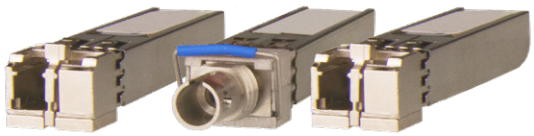
State 2: In this connection path, MUX A is connected to MUX D and MUX B is connected to MUX C.



yellobrik® OTX 1410

12G, 6G, 3G, 1.5G SDI to Fiber Optic Transmitter

- Supports 12G, 6G, 3G and 1.5G SDI video inputs
- 3Gbit Level A and Level B (support for all formats)
- Auto reclocking 1.5Gbit / 3Gbit / 6Gbit / 12Gbit
- Error free optical transmission
- Reclocked SDI loop out connection
- LC and ST connection variants
- Singlemode fiber connection
- Up to 10km (6.2 miles) @ 12Gbit/s (singlemode) with OTX 1410 LC and ST variant
- Up to 40km (24.8 miles) @ 12Gbit/s (singlemode) with OTX 1410 LC-40 variant
- Hot swappable and hot pluggable



LC singlemode | **ST** singlemode | **LC** singlemode long haul

Using the same basic module we provide three versions suitable for LC or ST singlemode fiber connections, as well as a version for long haul 40km fiber transmissions. Each version has a different SFP installed. See Model# in the Technical Specifications table for more information.

The OTX 1410 is a compact SDI to fiber optic transmitter designed to combat the restrictions involved with the distribution of uncompressed, high bandwidth, broadcast quality video signals over long distances.

When paired with the fiber optic to SDI receiver (e.g. yellobrik ORX 1400) you have a very cost-effective optical transmission / receiver system for signals up to 12Gbit/s (4096×2160 @ 60Hz), while preserving full uncompressed quality.

Operation of the OTX 1410 is fully automatic. The SDI video format is automatically detected, reclocked and then transmitted over the fiber optic connection. A reclocked electrical SDI output is also provided.

The OTX 1410 supports 12G, 6G, 3G and 1.5G SDI video standards and is available in LC, LC-40 and ST variants.

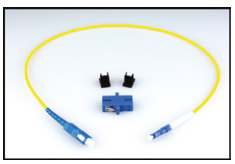
OTX 1410 LC Version Shown

Technical Specifications

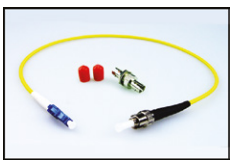
SDI Input	1 x SDI video input and 1 x SDI reclocked loop output 75 Ohm BNC connectors	
	SMPTE 2082-1, SMPTE 2081-1, SMPTE 424M, SMPTE 292M	
	Multi-standard operation from 1.5Gbit/s to 12Gbit/s	
	Multirate reclocking: 1.5G- 3G - 6G - 12G	
	Automatic cable EQ 260m @ 1.5Gbit/s, 150m @ 3Gbit/s (Belden 1694A cable) 90m @ 6Gbit/s, 80m @ 12Gbit/s (Belden 4794R cable)	
SFP Options	1 x fiber optic output using LC or ST singlemode (SM) connection (Module variants are named LC and ST for 10km, LC-40 for 40km)	
	SMPTE 297M - 2006	
	Wavelength 1310nm, typical Optical power -3dBm	
	TX active LED on side of module	
	Max. distance	~10km (6.2 miles) @ 12Gbit/s (SM) with OTX 1410 LC / ST
		~40km (24.8 miles) @ 12Gbit/s (SM) with OTX 1410 LC-40
Power	+12VDC @ 2.2W nominal - (supports 7 - 24VDC input range)	
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors	
	Weight: 125g (4.4oz)	
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)	
Model #	OTX 1410 LC - (EAN# 4250479324756) OTX 1410 LC-40 - (EAN# 4250479328495) OTX 1410 ST - (EAN# 4250479327641)	
Includes	Module, SPF module, AC power supply	

Fiber Adapter Options (singlemode)

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# **LC/SC SIM**
LC/PC to SC/PC Adapter



Model# **LC/ST SIM**
LC/PC to ST/SC Adapter

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik® OTT 1412

Dual Channel 12Gbit SDI to Fiber Transmitter

- Dual channel
- Supports 12G, 6G, 3G, and 1.5G SDI video inputs
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 1.5Gbit / 3Gbit / 6Gbit / 12Gbit
- Error free optical transmission
- Up to 10km (6.2 miles) @ 12Gbit/s (singlemode)
- Duplex LC/PC singlemode optical connection
- Supports hot swapping and hot plugging

The OTT 1412 is a compact dual channel SDI to fiber optic transmitter designed to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

When paired with the dual channel fiber optic to SDI receiver (e.g. yellobrik ORR 1402) you have a very cost-effective dual channel optical transmission / receiver system for signals up to 12Gbit/s (4096x2160 @ 60Hz) , while preserving full uncompressed quality.

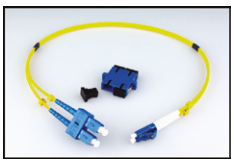
The OTT 1412 has two completely independent channels and each will auto-detect and re-clock any 1.5Gbit, 3Gbit, 6Gbit or 12Gbit SDI source prior to optical transmission. The module is fully compatible with 3Gbit Level A and Level B formats.

Technical Specifications

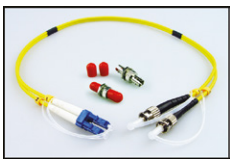
Input	2 x SDI video on 75 Ohm BNC connector (two independent channels)
	SMPTE 2082-1, SMPTE 2081-1, SMPTE 424M, SMPTE 292M
	Multi-standard operation from 1.5Gbit/s to 12Gbit/s
	Multirate reclocking:1.5Gbit -3Gbit -6Gbit - 12Gbit
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ 245m @ 1.5Gbit/s, 145m @ 3Gbit/s (Belden 1694A cable) 85m @ 12Gbit/s, 6Gbit/s (Belden 4794R cable)
Optical Outputs	2 x fiber optic outputs (one for each channel) Duplex (single mode) using LC/PC Connections
	SMPTE 297M - 2006
	Wavelength 1310nm (each channel)
	Optical power -5.5dBm...0.5dBm (each channel)
	TX active LEDs on side of module
	Max. distance approx. 10km (6.2 miles) @ 12Gbit/s (Singlemode)
Power	+12VDC @ 2.5W nominal - (supports 7 - 24VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTT 1412 - (EAN# 4250479326491)
Includes	Module, AC power supply, SFP

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# **LC/SC DUP**
LC/PC to SC/PC Adapter



Model# **LC/ST DUP**
LC/PC to ST/SC Adapter

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik® OTX 1812

3Gbit SDI to Fiber Optic Transmitter

- Supports SDI video inputs up to 3Gbit/s (1080p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 270Mbit / 1.5Gbit / 3Gbit
- Error free optical transmission
- Reclocked SDI loop out connection
- Versions for LC, ST or SC fiber connections
- Multimode version available
- Up to 10km (6.2 miles) @ 3Gbit/s (singlemode)
- Up to 300m (984 feet) @ 3Gbit/s (multimode)
- Supports hot swapping and hot plugging

OTX 1812 LC Version Shown

LC singlemode | ST singlemode | SC singlemode | LC multimode

Using the same basic module we provide four versions suitable for LC, ST or SC singlemode fiber connections, as well as a version for multimode fiber. Each version has a different SFP installed.

The OTX 1812 is a compact SDI to fiber optic transmitter designed to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

When paired with the fiber optic to SDI receiver (e.g. yellobrik ORX 1802) you have a very cost-effective optical transmission / receiver system for signals up to 1080p60 (3Gbit/s), while preserving full uncompressed quality.

The OTX 1812 provides a looping SDI input and support for LC, ST or SC singlemode fiber connections as well as anLC version suitable for multimode fiber.

The OTX 1812 will auto-detect and re-clock any 270Mbit / 1.5Gbit and 3Gbit SDI source prior to optical transmission. The module is fully compatible with 3Gbit Level A and Level B formats.

Technical Specifications

SDI Input	1 x SDI video input and 1 x SDI reclocked loop output 75 Ohm BNC connectors
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Multi-rate reclocking : 270Mbit/s - 1.5Gbit/s - 3Gbit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Fiber out Singlemode	1 x fiber optic singlemode output LC, ST or SC connection
	SMPTE 297M - 2006
	Wavelength 1310nm, Optical power -5dBm
	TX active LED on side of module
	Max. distance approx. 10km (6.2 miles) @ 3Gbit/s (Singlemode)
Fiber out Multimode	1 x fiber optic multimode output. LC connection
	SMPTE 297M - 2006
	Wavelength 850nm, Optical power -5dBm
	TX active LED on side of module
	Max. distance approx. 300m (984feet) @ 3Gbit/s (Multimode)
Power	+12VDC @ 1.7W nominal - (supports 7 - 16VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTX 1812 LC - (EAN# 4250479359642) OTX 1812 ST - (EAN# 4250479359666) OTX 1812 SC - (EAN# 4250479359659) OTX 1812 MM (Multimode) - (EAN# 4250479359673)
Includes	Module, AC power supply, SFP

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik® OTT 1812-1

Dual Channel 3Gbit SDI to Fiber Transmitter

- Dual channel
- Supports SDI video inputs up to 3Gbit/s (1080p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 270Mbit / 1.5Gbit / 3Gbit
- Error free optical transmission
- Up to 10km (6.2 miles) @ 3Gbit/s
- Duplex LC/PC singlemode optical connection
- Supports hot swapping and hot plugging

The OTT 1812-1 is a compact dual channel SDI to fiber optic transmitter designed to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

When paired with the dual channel fiber optic to SDI receiver (e.g. yellobrik ORR 1802-2) you have a very cost-effective dual channel optical transmission / receiver system for signals up to 1080p60 (3Gbit/s), while preserving full uncompressed quality.

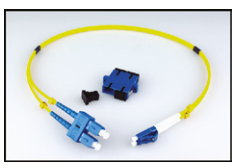
The OTT 1812-1 has two completely independent channels and each will auto-detect and re-clock any 270Mbit / 1.5Gbit and 3Gbit SDI source prior to optical transmission. The module is fully compatible with 3Gbit Level A and Level B formats.

Technical Specifications

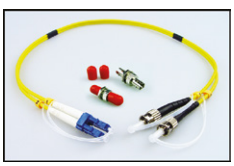
Input	2 x SDI video on 75 Ohm BNC connector (two independent channels)
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Multi-rate reclocking 270Mbit/s - 1.5Gbit/s - 3Gbit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Optical Outputs	2 x fiber optic outputs (one for each channel) Duplex (single mode) using LC/PC Connections
	SMPTE 297M - 2006
	Wavelength 1310nm (each channel)
	Optical power -5dBm (each channel)
	TX active LEDs on side of module
	Max. distance approx. 10km (6.2 miles) @ 3Gbit/s (Singlemode)
Power	+12VDC @ 2.5W nominal - (supports 7 - 16VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTT 1812-1 - (EAN# 4250479318229)
Includes	Module, AC power supply, SFP

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC DUP
LC/PC to SC/PC Adapter



Model# LC/ST DUP
LC/PC to ST/SC Adapter

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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

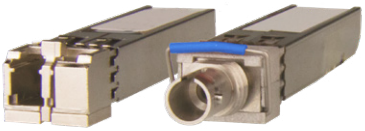
XLR 1000
Use with a standard 4 pin XLR camera battery power source.

Specifications subject to change

yellobrik® ORX 1400

12G, 6G, 3G, 1.5G Fiber Optic to SDI Receiver

- Supports 12G, 6G, 3G and 1.5G SDI video standards
- 3Gbit Level A and Level B (support for all formats)
- Auto reclocking 1.5Gbit / 3Gbit / 6Gbit / 12Gbit
- Error free optical transmission
- Two reclocked SDI outputs
- LC/PC and ST connection variants
- Singlemode fiber connection
- Input range 1260nm to 1620nm (supports CWDM)
- Hot swappable and hot pluggable



LC singlemode

ST singlemode

Using the same basic module we provide two versions suitable for LC or ST singlemode fiber connections, as well as a version for multimode fiber. Each version has a different SFP installed.

The ORX 1400 is a compact SDI to fiber optic Receiver designed to combat the restrictions involved with the distribution of uncompressed, high bandwidth, broadcast quality video signals over long distances.

When paired with the fiber optic to SDI transmitter (e.g. yellobrik OTX 1410) you have a very cost-effective optical transmission / receiver system for signals up to 12Gbit/s (4096×2160 @ 60Hz), while preserving full uncompressed quality.

Operation of the ORX 1400 is fully automatic. The SDI video format is automatically detected, reclocked and provided on two SDI output connections.

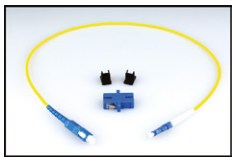
The ORX 1400 supports 12G, 6G, 3G and 1.5G SDI video standards and is available in LC and ST variants.

Technical Specifications

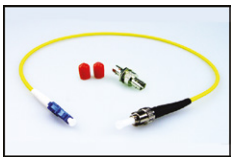
Optical Input	1 x fiber optic input Simplex LC/PC connection for ORX 1400 LC ST connection for ORX 1400 ST
	SMPTE 297M - 2006
	Input range (wavelength) 1260nm to 1620nm
	RX sensitivity -2dBm to -10dBm
	RX active LED on side of module
	SMF (Singlemode) fiber
	Hot pluggable
SDI Outputs	2x SDI video on 75 Ohm BNC connector
	SMPTE 2082-1, SMPTE 2081-1, SMPTE 424M, SMPTE 292M
	Multi-standard operation from 1.5Gbit/s to 12Gbit/s
	Multirate reclocking: 1.5Gbit - 3Gbit - 6Gbit - 12Gbit
Power	+12VDC @ 2.2W nominal - (supports 7 - 24VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	ORX 1400 LC - (EAN# 4250479324732) ORX 1400 ST - (EAN# 4250479327658)
Includes	Module, AC power supply, SFP

Fiber Adapter Options (singlemode)

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC SIM
LC/PC to SC/PC Adapter



Model# LC/ST SIM
LC/PC to ST/SC Adapter

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik® ORR 1402

Dual Channel 12Gbit Fiber to SDI Receiver

- Dual channel
- Supports 12G, 6G, 3G, and 1.5G SDI video standards
- Supports SDI video inputs up to 12Gbit/s (4096x2160 @ 60Hz)
- Auto reclocking 1.5Gbit / 3Gbit / 6Gbit / 12Gbit
- 3Gbit Level A and Level B (support for all formats)
- Error free optical reception
- 1260nm to 1620nm wavelength input range
- Up to 10km (6.2 miles) @ 12Gbit/s (singlemode)
- 2x fiber optic inputs (LC Connector - singlemode)
- Supports hot swapping and hot plugging

The ORR 1402 is a compact dual channel fiber optical to SDI receiver designed to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

When paired with a SDI optical transmitter (e.g. yellobrik OTT 1412, OTX1410, OTX1440 etc), the user will have a very cost-effective optical transmission/ receiver system for signals up to 12Gbit/s (4096x2160 @ 60Hz), while preserving full uncompressed quality.

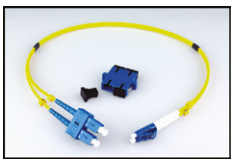
The ORR1402 has two completely independent channels and each will auto-detect and re-clock any 1.5Gbit, 3Gbit, 6Gbit, or 12Gbit SDI fiber source prior to electrical conversion. The module is fully compatible with 3Gbit Level A and Level B formats.

Technical Specifications

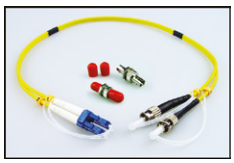
Fiber Inputs	2 x fiber optic Inputs (one for each channel) Duplex (single mode) using LC/PC Connections
	SMPTE 297M - 2006
	Hot pluggable
	Input range (wavelength) 1260nm to 1620nm
	RX sensitivity -10dBm / -9dBm @ 12Gbit/s
	RX active LED on side of module
	(SMF) Singlemode fiber
SDI Outputs	2 x SDI video on 75 Ohm BNC connector (two independent channels)
	SMPTE 2082-1, SMPTE 2081-1, SMPTE 424M, SMPTE 292M
	Multi-standard operation from 1.5Gbit/s to 12Gbit/s
	Multirate reclocking:1.5Gbit -3Gbit -6Gbit - 12Gbit
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
Power	+12VDC @ 2.2W nominal - (supports 7 - 24VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	ORR 1402 - (EAN# 4250479326484)
Includes	Module, AC power supply, SFP

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# **LC/SC DUP**
LC/PC to SC/PC Adapter



Model# **LC/ST DUP**
LC/PC to ST/SC Adapter

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik® ORX 1802

3Gbit Fiber to SDI Receiver

- Supports SDI video inputs up to 3Gbit/s (1080p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 270Mbit / 1.5Gbit / 3Gbit
- 2 x SDI outputs
- Versions for LC, ST or SC fiber connections
- Multimode version available
- Input range 1260nm to 1620nm (singlemode) (supports CWDM)
- Input range 780nm to 880nm (multimode)
- Supports hot swapping and hot plugging

LC singlemode | ST singlemode | SC singlemode | LC multimode

Using the same basic module we provide four versions suitable for LC, ST or SC singlemode fiber connections, as well as a version for multimode fiber. Each version has a different SFP installed.

The ORX 1802 is a compact fiber to SDI receiver designed to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

When paired with the fiber optic to SDI transmitters (e.g. yellobrik OTX 1812 or OTX 1842) you have a very cost-effective optical transmission / receiver system for signals up to 1080p60 (3Gbit/s), while preserving full uncompressed quality.

The OTX 1812 provides 2 SDI outputs and support for LC, ST or SC singlemode fiber connections as well as an LC version suitable for multimode fiber.

The ORX 1802 will auto-detect and re-clock any 270Mbit / 1.5Gbit and 3Gbit SDI fiber source and convert to an electrical signal. The module is fully compatible with 3Gbit Level A and Level B formats.

ORX 1802-2 LC Version Shown

Technical Specifications

Fiber Input singlemode	1 x fiber optic Input LC, ST or SC connection
	SMPTE 297M - 2006
	Input range (wavelength) 1260nm to 1620nm
	RX sensitivity -3dBm to -19dBm
	RX active LED on side of module
Fiber Input multimode	1 x Fiber Optic Input LC Connection
	SMPTE 297M - 2006
	Input range (wavelength) 780nm to 880nm
	RX sensitivity 0dBm to -15dBm
	RX active LED on side of module
SDI Output	2 x SDI video on 75 Ohm BNC connectors
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
Power	+12VDC @ 1.3W nominal - (supports 7 - 16VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	ORX 1802-2 LC - (EAN# 4250479359697) ORX 1802 ST - (EAN# 4250479359710) ORX 1802 SC - (EAN# 4250479359703) ORX 1802 MM (Multimode) - (EAN# 4250479359727)
Includes	Module, AC power supply, SFP

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

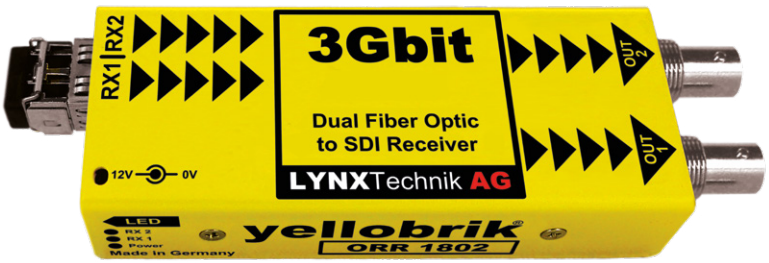
Specifications subject to change

yellobrik®

ORR 1802-2

Dual Channel 3Gbit Fiber to SDI Receiver

- Dual channel
- Supports SDI video inputs up to 3Gbit/s (1080p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 270Mbit / 1.5Gbit / 3Gbit
- Error free optical reception
- 1260nm to 1620nm wavelength input range (supports CWDM)
- Duplex LC/PC singlemode optical connection
- Supports hot swapping and hot plugging



The ORR 1802-2 is a compact dual channel fiber optical to SDI receiver designed to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

When paired with a SDI optical transmitter (e.g. yellobrik OTT 1812-1, OTX 1812, OTX 1842 etc) you have a very cost-effective optical transmission / receiver system for signals up to 1080p60 (3Gbit/s), while preserving full uncompressed quality.

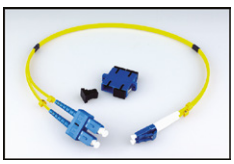
The ORR 1802-2 has two completely independent channels and each will auto-detect and re-clock any 270Mbit / 1.5Gbit and 3Gbit SDI fiber source prior to electrical conversion. The module is fully compatible with 3Gbit Level A and Level B formats.

Technical Specifications

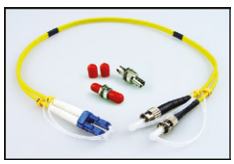
Fiber Inputs	2 x fiber optic Inputs (one for each channel) Duplex (single mode) using LC/PC Connections
	SMPTE 297M - 2006
	Hot pluggable
	Input range (wavelength) 1260nm to 1620nm
	RX sensitivity -3dBm to -16dBm
	RX active LED on side of module
	(SMF) Singlemode fiber
SDI Outputs	2 x SDI video on 75 Ohm BNC connector (two independent channels)
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
Power	+12VDC @ 2.2W nominal - (supports 7 - 16VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	ORR 1802-2 - (EAN# 4250479318021)
Includes	Module, AC power supply, SFP

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC DUP
LC/PC to SC/PC Adapter



Model# LC/ST DUP
LC/PC to ST/SC Adapter

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik®

OTR 1A41

8K Fiber Transmission System

- Support for 4 independent 12G/6G/3G/HD channels
- Transport 8K (uncompressed) singals up to 10km (6.2miles)
- Each channel supports resolutions up to 2160p/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 1A41 is a self contained fiber transmission kit for the transport of 4 discreet 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, or 12K signals.

Each SDI channel is fully independent. For 8K use, the signal is split over 4 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, 1.5Gbit, 3Gbit and 12Gbit.

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

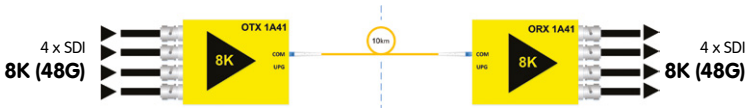
Technical Specifications

SDI I/O	4 x multi-format 12G/6G/3G/HD/SD-SDI inputs [OTX 1A41] 4 x multi-format 12G/6G/3G/HD/SD-SDI outputs [ORX 1A41] 75 Ω BNC connections
	SMPTE 259M-2008 , SMPTE 292-1:2012, SMPTE 292-2:2011 SMPTE 424M-2006 , SMPTE ST-2081, SMPTE ST-2082 , DVB ASI
	Multi-standard / Multi-format operation auto-detect. Multi-rate reclocking: 1.5Gbit / 3Gbit / 12Gbit
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz, >7dB from 3GHz to 6GHz, >4dB from 6GHz to 12GHz
	Automatic cable EQ (Belden 1694A cable) : 150m @ 1.5Gbit/s, 120m @ 3Gbit/s Automatic cable EQ (Belden 4794R cable) : 80m @ 12Gbit/s
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
	Fiber activity LEDs for each channel
Power	+12VDC nominal. ORX 1A41 = 4.4W, OTX 1A41 = 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) - (each Module) Weight: 600g (21.1oz) net - (each module)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTR 1A41 - (EAN# 4250479326637)
Includes	OTX 1A41 - 4K Fiber Transmitter module ORX 1A41 - 4K Fiber Receiver module 2 x 12VDC [brick] power supplies

Application

4 x SDI (8K 48G) Fiber Transport

This basic configuration is used for transporting up to 4 discreet SDI signals (SD/HD/3G/6G/12G) or it can be used for transporting a 8K (48G) signal over fiber.



RFR 1018

19" Rack frame to mount up to 4 modules.
No tools required, modules are clipped securely in place.

Specifications subject to change

yellobrik® OTR 1442

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
- Available in LC/PC and SC variants
- Kit includes transmitter, receiver and power supplies
- Optional 19" Rack tray to mount (max) 4 modules

The OTR 1442 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, 1.5Gbit and 3Gbit.

An expansion port is included for the connection of the OTR 1441 to add 4 more SDI channels (or 8K / 24G over a single fiber), or add bidirectional Ethernet or Serial RS 232 data into the link.

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

RFR 1018

19" Rack frame to mount up to 4 modules.
No tools required, modules are clipped securely in place.

Technical Specifications

SDI I/O	4 x multi-format 3G/HD/SD-SDI inputs [OTX 1442] 4 x multi-format 3G/HD/SD-SDI outputs [ORX 1442] 75 Ω 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 / 1.5Gbit / 3Gbit
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic Cable EQ (Belden 1694A cable) 340m@270Mbit, 150m@1.5BGbit, 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 for OTR 1442 LC SC conections - Single Mode for OTR 1442 SC
	SMPTE 297M - 2006
	Internal CWDM Multiplexing Wavelengths : 1350nm, 1370nm, 1390nm, 1410nm Optical budget: 10.6dB Maximum distance (typical): 20km (12 miles)
	Fiber activity LEDS for each channel
Power	+12VDC nominal. ORX1442 = 4.4W, OTX 1442 = 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) - (each Module) Weight: 600g (21.1oz) net - (each module)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTR 1442 LC - (EAN# 4250479324374) OTR 1442 SC - (EAN# 4250479325418)
Includes	**For OTR 1442 LC:** OTX 1442 LC - 4K Fiber Transmitter module ORX 1442 LC - 4K Fiber Receiver module 2 x 12VDC (brick) power supplies **For OTR 1442 SC:** OTX 1442 SC - 4K Fiber Transmitter module ORX 1442 SC - 4K Fiber Receiver module 2 x 12VDC (brick) power supplies

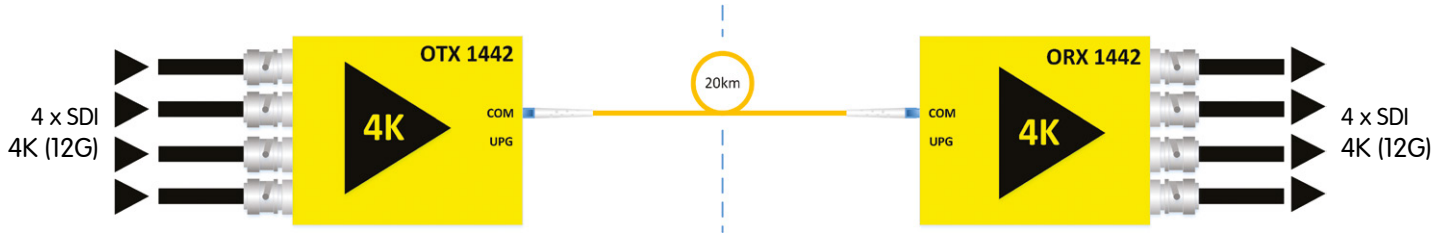
Note: Internal CWDM optical multiplexing is utilized within the modules. This kit should be considered a self contained point to point solution and should not be integrated into external CWDM systems. An expansion port is included on each module which can be used to add additional SDI channels from the OTR 1441, or a bidirectional Ethernet or Serial RS232 signal.

Specifications subject to change

Applications

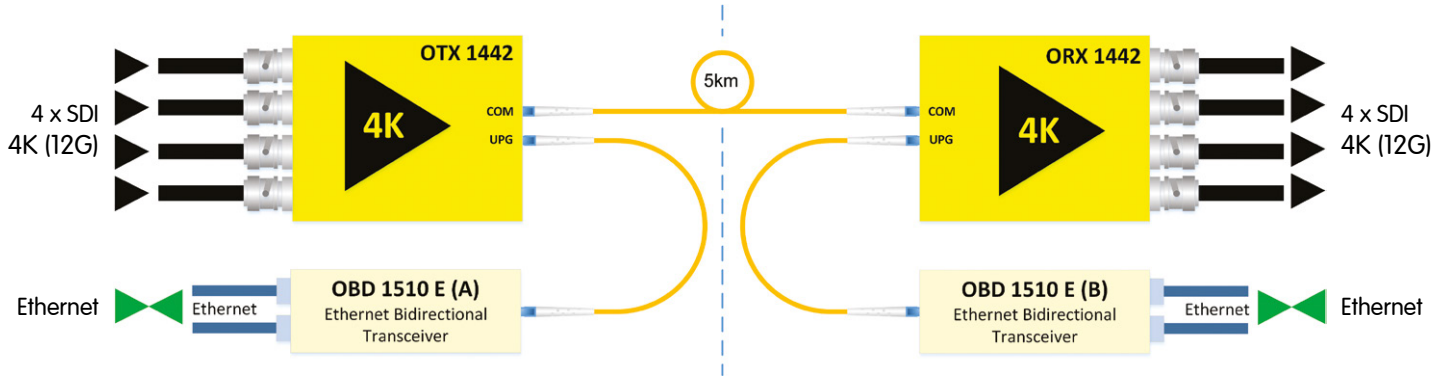
4 x SDI (4K 12G) Fiber Transport

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.



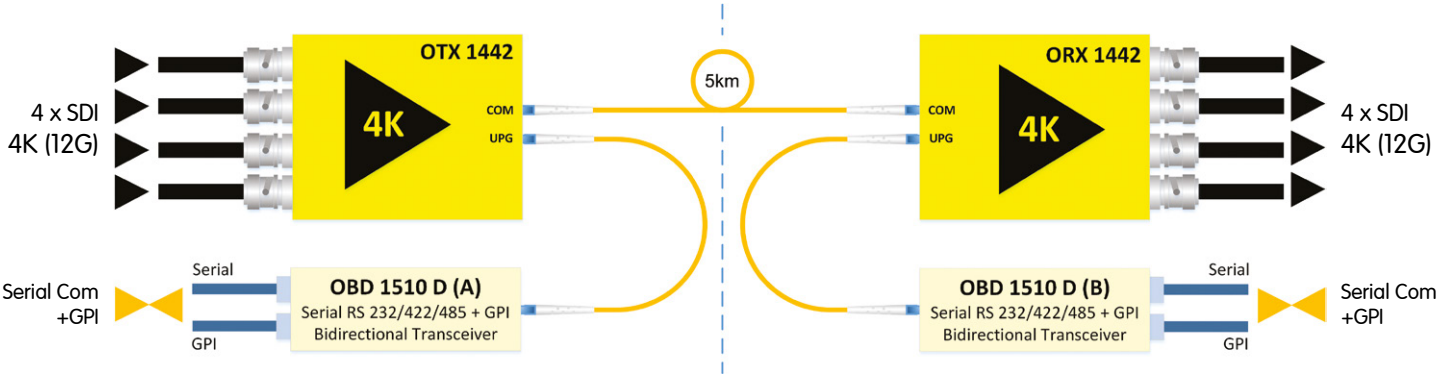
4 x SDI (4K 12G) Fiber Transport + Ethernet

This configuration transports 4 discreet SDI signals (SD/HD/3G) or 4K (12G) and also adds bidirectional Ethernet from the OBD 1510 E into the same fiber link using the UPG expansion port. Note: Total distance is reduced to 5km when used in this configuration.



4 x 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.



8 x SDI (8K 24G) Fiber Transport and 4K Bidirectional Fiber Transport

Connecting the OTR 1441 into the expansion port will add 4 more SDI channels to the system which will enable the transport of uncompressed 8K (24G) over a single fiber link. It is also possible to have 4K (12G) uncompressed bidirectional fiber transport over a single fiber link. Please refer to the product information for the OTR 1441 for diagrams of these configurations.

Specifications subject to change

yellobrik® OTR 1441

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
- Available in LC/PC and SC variants
- 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, 1.5Gbit and 3Gbit.

An expansion port is included for the connection of the OTR 1442 to add 4 more SDI channels (or 8K / 24G over a single fiber)

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

RFR 1018

19" Rack frame to mount up to 4 modules.
No tools required, modules are clipped securely in place.

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 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 / 1.5Gbit / 3Gbit
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
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 SC 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) - (each Module) Weight: 600g (21.1oz) net - (each module)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTR 1441 LC - (EAN# 4250479321151) OTR 1441 SC - (EAN# 4250479325401)
Includes	**For OTR 1441 LC:** OTX 1441 LC - 4K Fiber Transmitter module ORX 1441 LC - 4K Fiber Receiver module 2 x 12VDC (brick) power supplies **For OTR 1441 SC:** OTX 1441 SC - 4K Fiber Transmitter module ORX 1441 SC - 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.

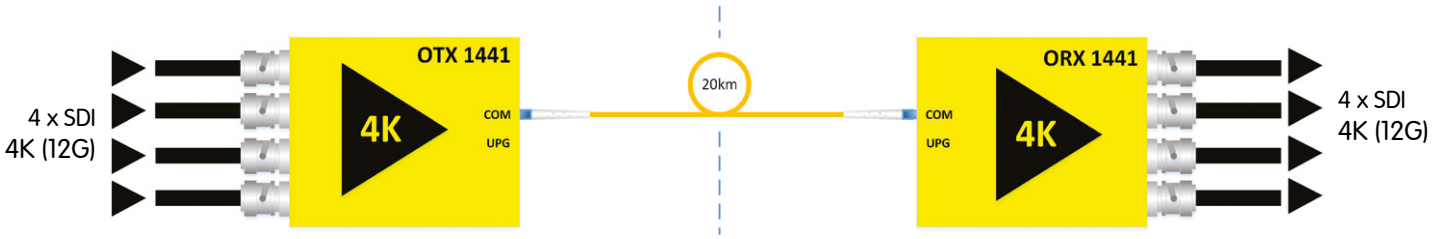
Specifications subject to change

yellobrik® OTR 1441

Applications

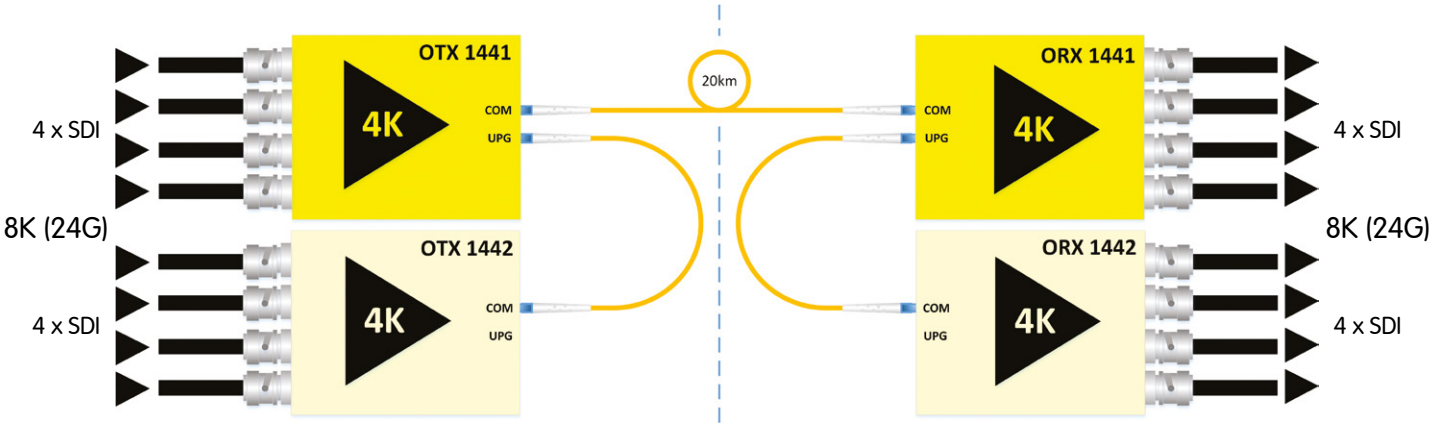
4 x SDI (4K 12G) Fiber Transport

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.



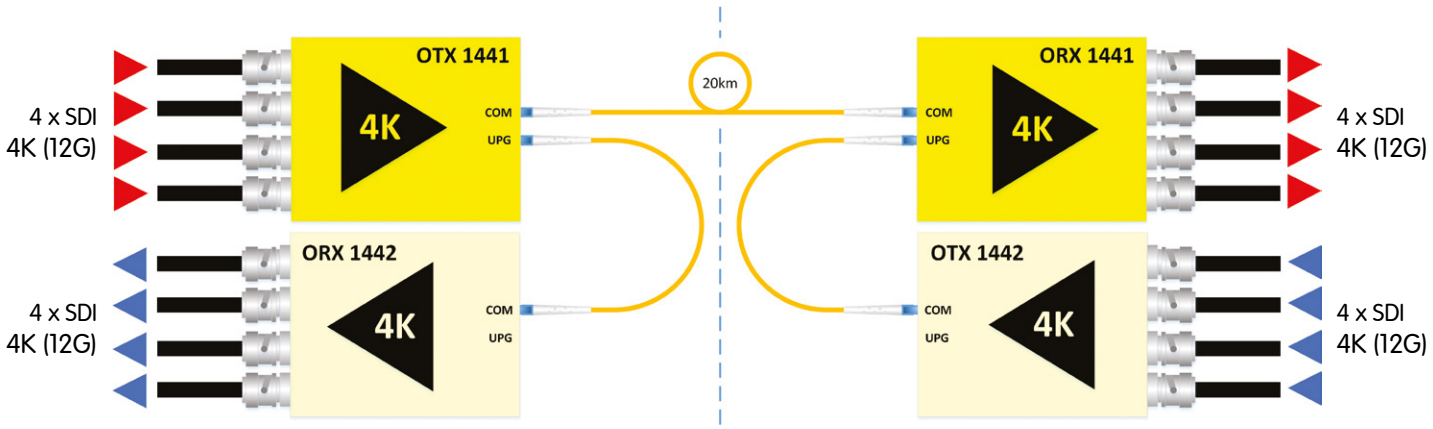
8 x SDI (8K 24G) Fiber Transport

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 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.



Specifications subject to change

yellobrik® OTR 1410

12G, 6G, 3G, 1.5G SDI / Fiber Optic Transceiver

- SDI fiber receiver and transmitter in single package
- Supports 12G, 6G, 3G and 1.5G SDI video standards
- 3Gbit Level A and Level B (support for all formats)
- Auto reclocking 1.5Gbit / 3Gbit / 6Gbit / 12Gbit
- Error free optical transmission
- LC/PC duplex connection
- Singlemode fiber connection
- Up to 10km (6.2 miles) @ 3Gbit/s (singlemode)
- Hot swappable and hot pluggable

The OTR 1410 is a Fiber / SDI transmitter and receiver combined in a single self contained package. It is a convenient and cost-effective solution to combat the restrictions involved with the distribution of uncompressed, high bandwidth, broadcast quality video signals over long distances.

Each OTR 1410 transceiver has an independent transmitter and receiver channel, which provides an effective solution for any SDI signal up to 12Gbit/s (4096×2160 @ 60Hz), while preserving full uncompressed quality.

Operation of the receiver and transmitter is automatic. For transmission, the SDI video format is automatically detected, reclocked and then transmitted over the fiber optic TX connection. For reception, the optical SDI video input signal on the RX connection is automatically detected, reclocked and provided on the SDI output connection.

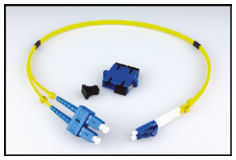
The OTX1410 supports 12G, 6G, 3G and 1.5G SDI video standards.

Technical Specifications

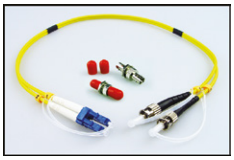
SDI Video	1 x SDI video input, 1 x SDI output 75 Ohm BNC connectors
	SMPTE 2082-1, SMPTE 2081-1, SMPTE 424M, SMPTE 292M
	Multi-standard operation from 1.5Gbit/s to 12Gbit/s
	Multirate reclocking: 1.5Gbit - 3Gbit - 6Gbit - 12Gbit
	Automatic cable EQ 260m @ 1.5Gbit/s, 150m @ 3Gbit/s (Belden 1694A cable) 80m @ 12Gbit/s, 6Gbit/s (Belden 4794R cable)
Fiber Optic	1 x fiber optic input, 1 x fiber optic output SMF (singlemode) using LC/PC connection
	SMPTE 297M - 2006
	Transmitter: 1310nm, typical Optical power -3dBm
	Receiver: 1260nm - 1620nm (-2dBm to -10dBm)
	Max. distance approx. 10km (6.2 miles) @ 3Gbit/s (Singlemode)
	TX active and RX active LEDs on side of module
Power	+12VDC @ 2.2W nominal - (supports 7 - 24VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTR 1410 - (EAN# 4250479324749)
Includes	Module, AC power supply, SFP

Fiber Adapter Options (singlemode)

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC DUP
LC/PC to SC/PC Adapter



Model# LC/ST DUP
LC/PC to ST/SC Adapter

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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

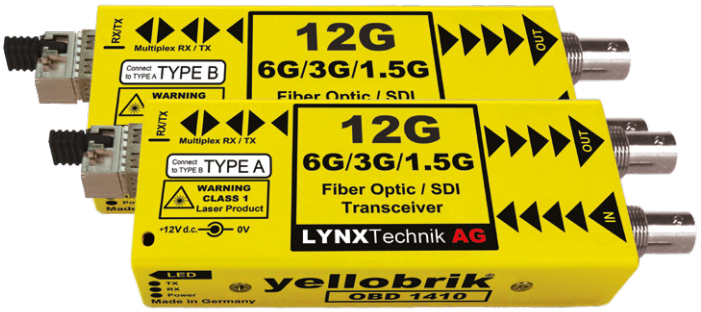
XLR 1000
Use with a standard 4 pin XLR camera battery power source.

Specifications subject to change

yellobrik® OBD 1410

12Gbit Bidirectional SDI/Fiber Transceiver

- Supports SDI video up to 12Gbit/s (2160p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 1.5Gbit / 3Gbit / 6Gbit / 12Gbit
- Bidirectional - send and receive on single fiber
- Error free optical connections
- Up to 10km (6.2 miles) @ 12Gbit/s
- Simplex LC/PC singlemode fiber connection
- Supports hot swapping and hot plugging



The OBD 1410 is a bidirectional Fiber Optic to SDI transmitter and receiver which uses a single fiber link supplied in a compact self contained package. It is a convenient and cost-effective solution to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

The OBD 1410 modules are supplied in pairs, one Type A and one Type B which work together in a WDM closed loop application. Each module has an electrical SDI in and SDI out connection and uses a single fiber link between the two.

Each channel is fully independent and can have different standards and formats of SDI video. The modules auto-detect and re-clock any 1.5Gbit, 3Gbit, 6Gbit or 12Gbit SDI source prior to conversion. The modules are fully compatible with 3Gbit Level A and Level B formats.

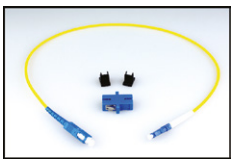
Note: This system used WDM optical multiplexing and should only be used in point to point applications. This solution cannot be integrated into a CWDM multiplexed system.

Technical Specifications

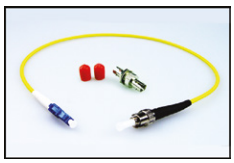
SDI Video	1 x SDI video input 1 x SDI Video output 75 Ohm BNC connectors
	SMPTE 2082-1, SMPTE 2081-1, SMPTE 424M, SMPTE 292M
	Multi-standard operation from 1.5Gbit/s to 12Gbit/s
	Multirate reclocking: 1.5Gbit - 3Gbit - 6Gbit - 12Gbit
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	260m @ 1.5Gbit/s, 150m @ 3Gbit/s (Belden 1694A cable) 90m @ 6Gbit/s, 80m @ 12Gbit/s (Belden 4794R cable)
Fiber Optic	1 x Bidirectional fiber connection (LC/PC Connection)
	SMPTE 297M - 2006
	1270nm and 1330nm (WDM)
	TX and RX active LEDs on side of module
	Max. distance 10km (6.2 miles) @ 12Gbit/s (single mode)
Power	+12VDC @ 2.7W nominal for each module - (supports 7 - 16VDC input range)
Physical (each module)	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OBD 1410 (pair) - (EAN# 4250479327450)
Includes	2 x OBD 1410 modules (Type A and Type B), 2 x AC power supplies, SFPs included

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



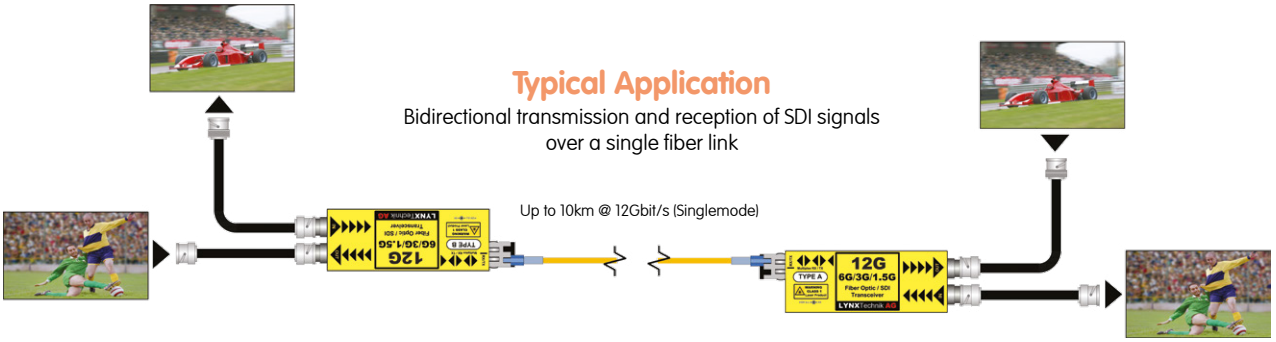
Model# **LC/SC SIM**
LC/PC to SC/PC Adapter



Model# **LC/ST SIM**
LC/PC to ST/SC Adapter

Typical Application

Bidirectional transmission and reception of SDI signals over a single fiber link



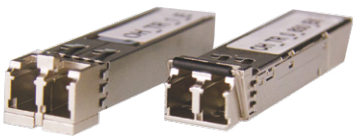
Specifications subject to change

yellobrik®

OTR 1810-1
OTR 1810-1 MM

3Gbit Fiber Optic / SDI Transceiver

- SDI Fiber receiver and transmitter in single package
- Supports SDI video up to 3Gbit/s (1080p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 270Mbit / 1.5Gbit / 3Gbit
- Error free optical connections
- Singlemode and Multimode versions
- Up to 10km (6.2 miles) @ 3Gbit/s (singlemode)
- Up to 300m (984 feet) @ 3Gbit/s (multimode)
- Duplex LC optical connection
- Supports hot swapping and hot plugging



Singlemode SFP Multimode SFP

Using the same basic module we provide two versions suitable for singlemode or multimode fiber. Each version has a different SFP installed.

The OTR 1810-1 is a Fiber / SDI transmitter and receiver combined in a single self contained package. It is a convenient and cost-effective solution to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

Each OTR 1810-1 transceiver has an independent transmitter and receiver channel, which provides an effective solution for any SDI signal up to 1080p60 (3Gbit/s) while preserving full uncompressed quality.

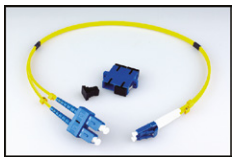
The OTR 1810-1 will auto-detect and re-clock any 270Mbit / 1.5Gbit and 3Gbit SDI source prior to conversion. The module is fully compatible with 3Gbit Level A and Level B formats.

Technical Specifications

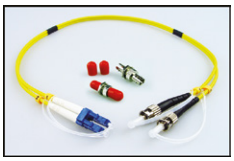
SDI Video	1 x SDI video input 1 x SDI Video output 75 Ohm BNC connectors
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Multi-rate reclocking 270Mbit/s - 1.5Gbit/s - 3Gbit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Fiber Optic	1 x fiber optic input 1 x fiber optic output Duplex using LC Connections
	SMPTE 297M - 2006
	Singlemode Version: OTR 1810-1 LC Transmitter: 1310nm (-5dBm) Receiver: 1260nm to 1620nm (-3dBm to -19dBm) Max. distance 10km (6.2 miles) @ 3Gbit/s
	Multimode Version: OTR 1810-1 MM Transmitter: 850nm (-5dBm) Receiver: 750nm to 880nm (0dBm to -15dBm) Max. distance 300m (984 feet) @ 3Gbit/s
	TX active LED, and RX active on side of module
Power	+12VDC @ 2.6W nominal - (supports 7 - 16VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTR 1810-1 LC (Singlemode) - (EAN# 4250479318144) OTR 1810-1 MM (Multimode) - (EAN# 4250479359840)
Includes	Module, AC power supply, SFP

Fiber Adapter Options (singlemode only not multimode)

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC DUP
LC/PC to SC/PC Adapter



Model# LC/ST DUP
LC/PC to ST/SC Adapter

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

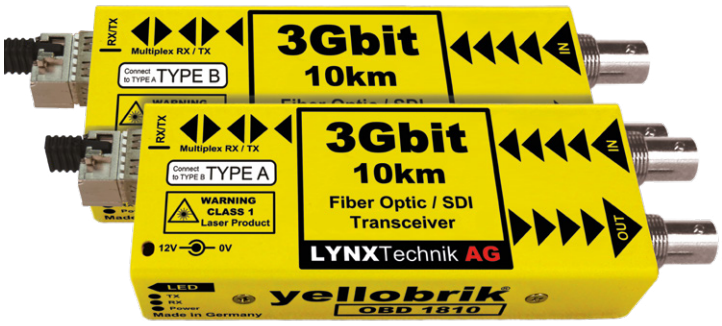
Specifications subject to change

yellobrik®

OBD 1810-2

3Gbit Bidirectional SDI/Fiber Transceiver

- Supports SDI video up to 3Gbit/s (1080p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 270Mbit / 1.5Gbit / 3Gbit
- Bidirectional - send and receive on single fiber
- Error free optical connections
- Up to 10km (6.2 miles) @ 3Gbit/s
- Simplex LC/PC singlemode fiber connection
- Supports hot swapping and hot plugging



The OBD 1810-2 is a bidirectional Fiber Optic to SDI transmitter and receiver which uses a single fiber link supplied in a compact self contained package. It is a convenient and cost-effective solution to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

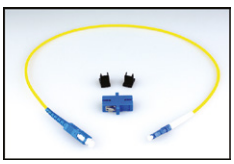
The OBD 1810-2 modules are supplied in pairs, one Type A and one Type B which work together in a WDM closed loop application. Each module has an electrical SDI in and SDI out connection and uses a single fiber link between the two.

Each channel is fully independent and can have different standards and formats of SDI video. The modules auto-detect and re-clock any 270Mbit, 1.5Gbit and 3Gbit SDI source prior to conversion. The modules are fully compatible with 3Gbit Level A and Level B formats.

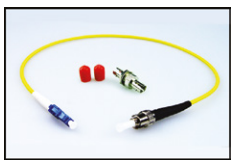
Note: This system used WDM optical multiplexing and should only be used in point to point applications. This solution cannot be integrated into a CWDM multiplexed system.

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC SIM
LC/PC to SC/PC Adapter



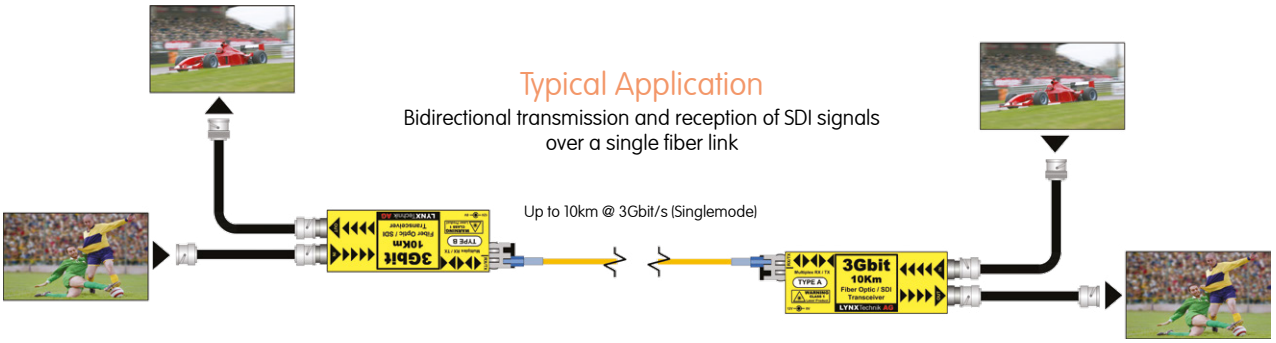
Model# LC/ST SIM
LC/PC to ST/SC Adapter

Technical Specifications

SDI Video	1 x SDI video input 1 x SDI Video output 75 Ohm BNC connectors
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Multi-rate reclocking 270Mbit/s - 1.5Gbit/s - 3Gbit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Fiber Optic	1 x Bidirectional fiber connection (LC/PC Connection)
	SMPTE 297M - 2006
	1310nm and 1550nm (WDM)
	11dB Optical Budget
	TX and RX active LEDs on side of module
	Max. distance 10km (6.2 miles) @ 3Gbit/s (single mode)
Power	+12VDC @ 2.7W nominal for each module - (supports 7 - 16VDC input range)
Physical (each module)	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OBD 1810-2 LC (pair) - (EAN# 4250479318175)
Includes	2 x OBD 1810-2 modules (Type A and Type B), 2 x AC power supplies, SFP

Typical Application

Bidirectional transmission and reception of SDI signals over a single fiber link



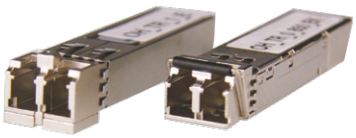
Specifications subject to change

yellobrik®

ODT 1510
ODT 1510 MM

Serial and GPI Fiber Transceiver

- Extend serial and GPI connections up to 10km
- Supports serial RS232 or RS422 or RS485
- 2 x GPI connections
- Singlemode fiber 1310nm up to 10km (6.2 miles)
- Multimode fiber 850nm up to 550m (1,804 feet)
- LC/PC duplex fiber connections
- Switchable RX/TX crossover
- Automatic or manual data direction
- Switchable end of line termination
- 'Plug and Play' - No PC software drivers needed
- Supports all serial protocols (standard or proprietary)



Singlemode SFP Multimode SFP

Using the same basic module we provide two versions suitable for singlemode or multimode fiber. Each version has a different SFP installed.

The ODT 1510 is a multi-function module which (when used with another ODT 1510 in the remote location) will extend the reach of serial RS232, RS422 or RS485 as well as two GPI (general purpose I/O) up to 10km (6.2 miles) over fiber.

A single RJ45 electrical serial connection can be configured for RS232, RS422 or RS485 serial standards. A separate RJ45 connector is provided for two electrical GPI inputs and outputs. Serial communications and GPI are transmitted and extended over the same fiber link.

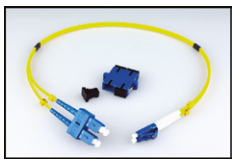
The ODT 1510 is completely agnostic to the serial protocol used, and supports all standard protocols and proprietary protocols at data rates from 300 to 460K Baud *(auto sensing and auto adjusting).*

The integrated dip switch provides precise control over the serial mode of operation with selections for the *serial standard, serial termination, RX/TX crossover and RS422/485 data direction (automatic or manual).* Data activity LEDs are provided for the serial port and the GPI port under the respective RJ45 connectors.

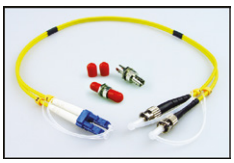
The ODT 1510 also supports mixing and matching of serial standards. For example: the transmitting module can have a RS232 input, and the receiving module can be set for RS422 output.

Fiber Adapter Options (singlemode only not multimode)

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# **LC/SC DUP**
LC/PC to SC/PC Adapter



Model# **LC/ST DUP**
LC/PC to ST/SC Adapter

Technical Specifications

Serial I/O	EIA/ETA RS232C / RS422 / RS485 (selectable)
	Connector - RJ45
	Baud rate - Auto sense and auto adjust from 300 to 460k
	Serial setting dip switch provides settings for: • Select RS232 / RS422 / RS485 modes • Select serial termination (for end of line) • RX/TX crossover to flip the RX and TX if needed • Set RS422/485 data direction to automatic or manual if needed
	LED status indicators (under RJ45 connector) Serial TX activity + Serial RX activity
	RS422/485 Max number of electrical nodes = 25
	ESD protection for up to 26kV
GPI I/O	2x general purpose inputs + 2x general purpose outputs
	Connector RJ45
	GPI Inputs: • External passive closure between pins (short) to trigger • Max input switching frequency 25Hz (50 operations / second) • Input insulation 3.75kV
	GPI Outputs: • Internal contact closure (relay) • Max switching frequency 25Hz (50 operations / second) • Max switching power 220VDC / 0.25A or 250VAC / 0.25A • Output insulation 3.75kV
	LED status indicators (under RJ45 connector) GPI Input 1 activity / GPI Input 2 activity GPI Output 1 activity / GPI Output 2 activity
Fiber Optic	1 x Fiber output (TX) and 1x Fiber input (RX) Singlemode fiber or Multimode fiber. LC/PC connections
	Singlemode Version: ODT 1510 TX wavelength 1310nm, power -3dBm RX input range 1260nm to 1620nm, sensitivity -3dBm to -21dBm Max. Distance 10km (6.2 miles)
	Multimode Version: ODT 1510 MM TX wavelength 850nm, power -2dBm to -7dBm RX input 850nm, sensitivity 0dBm to -15dBm Max. Distance 550m (1804 feet)
	RX and TX activity LEDs on side of module next to fiber I/O
Power	+12VDC @ 2.0W nominal - (supports 7 - 15VDC input range)
Physical	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	ODT 1510 (Singlemode) - (EAN# 4250479315136) ODT 1510 MM (Multimode) - (EAN# 4250479321137)
Includes	Module, AC power supply, SFP, mini USB cable, Ethernet cable

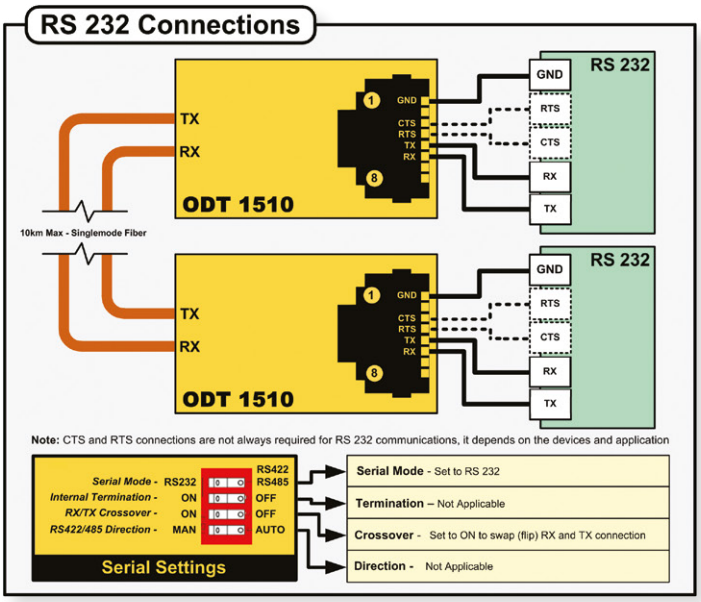
Specifications subject to change

yellobrik®

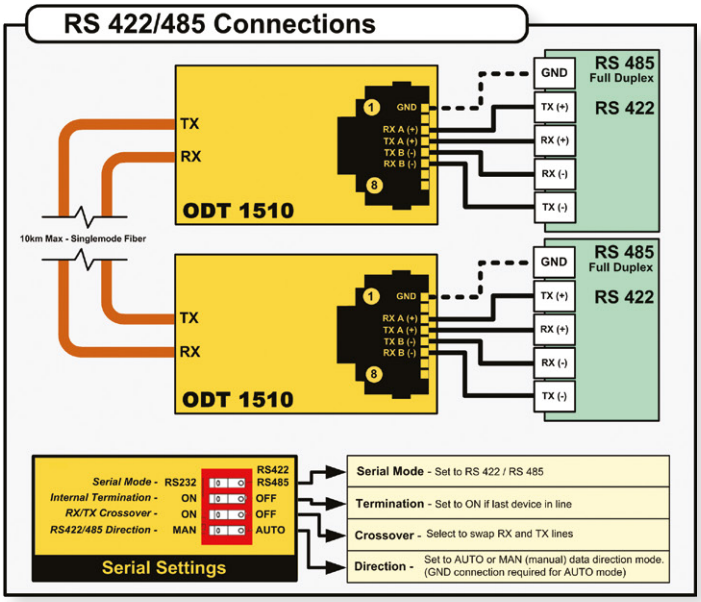
ODT 1510
ODT 1510 MM

Connection Diagrams

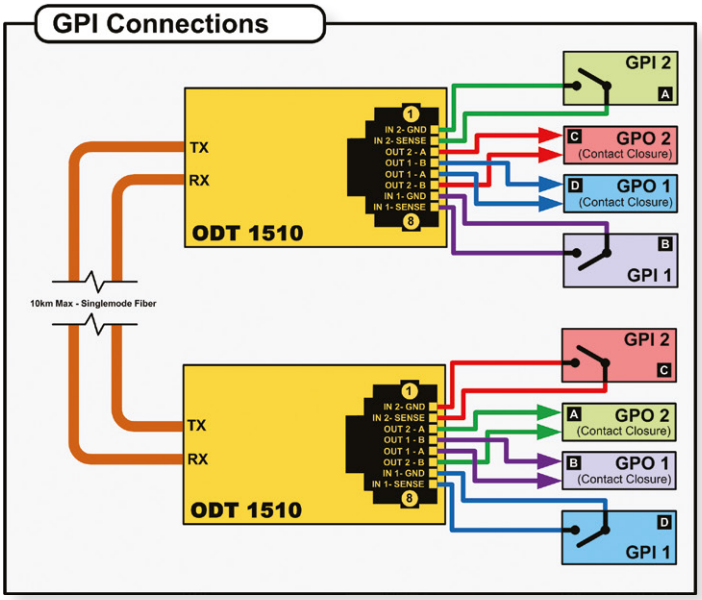
RS 232 Connections



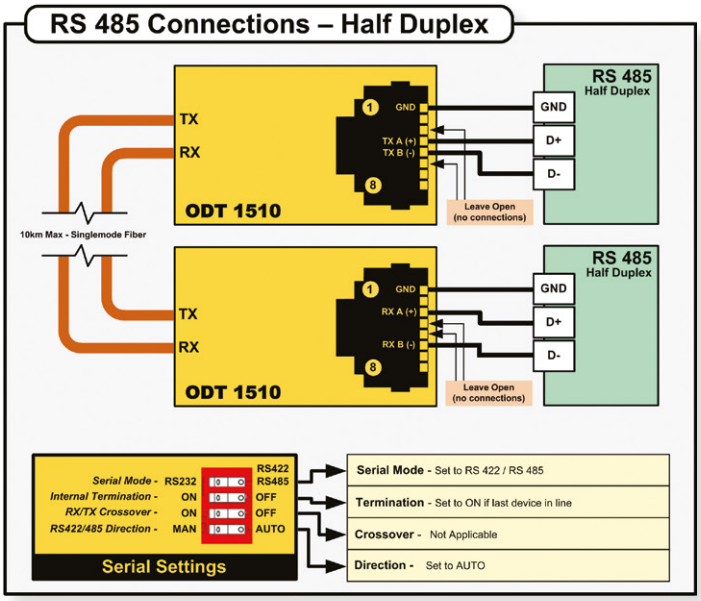
RS 422/485 Connections



GPI Connections



RS 485 Connections – Half Duplex



Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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

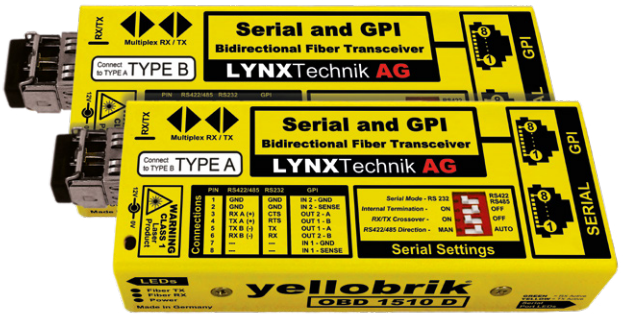
XLR 1000
Use with a standard 4 pin XLR camera battery power source.

Specifications subject to change

yellobrik® OBD 1510 D

Serial and GPI Bidirectional Fiber Transceiver

- Bidirectional send and receive over single fiber link
- Extend serial and GPI connections up to 10km
- Supports serial RS232 or RS422 or RS485
- 2 x GPI connections
- Singlemode fiber up to 10km (6.2 miles)
- LC/PC duplex fiber connections
- Switchable RX/TX crossover
- Automatic or manual data direction
- Switchable end of line termination
- 'Plug and Play' - No PC software drivers needed
- Supports all serial protocols (standard or proprietary)
- 300 - 460K Baud (auto sensing and auto adjusting)



The OBD 1510 D is a pair of multi-function modules which will extend the reach of serial RS232, RS422 or RS485 as well as two GPI (general purpose interface) up to 10km (6.2 miles) over a single bidirectional fiber link (WDM)

A single RJ45 electrical serial connection can be configured for RS232, RS422 or RS485 serial standards. A separate RJ45 connector is provided for two electrical GPI inputs and outputs. Serial communications and GPI are transmitted and extended over the same fiber link.

The OBD 1510 D is completely agnostic to the serial protocol used, and supports all standard protocols and proprietary protocols at data rates from 300 to 460K Baud *(auto sensing and auto adjusting).*

The integrated dip switch provides precise control over the serial mode of operation with selections for the *serial standard, serial termination, RX/TX crossover and RS422/485 data direction (automatic or manual).* Data activity LEDs are provided for the serial port and the GPI port under the respective RJ45 connectors.

The OBD 1510 D also supports mixing and matching of serial standards. For example: the transmitting module can have a RS232 input, and the receiving module can be set for RS422 output.

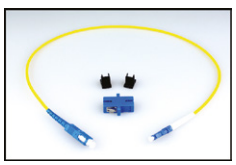
Note: This system used WDM optical multiplexing and should only be used in point to point applications. This solution cannot be integrated into a CWDM multiplexed system.

Technical Specifications

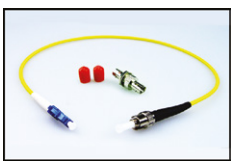
Serial I/O	EIA/ETA RS232C / RS422 / RS485 (selectable)
	Connector - RJ45
	Baud rate - Auto sense and auto adjust from 300 to 460k
	Serial setting dip switch provides settings for: • Select RS232 / RS422 / RS485 modes • Select serial termination (for end of line) • RX/TX crossover to flip the RX and TX if needed • Set RS422/485 data direction to automatic or manual if needed
	LED status indicators (under RJ45 connector) Serial TX activity + Serial RX activity
	RS422/485 Max number of electrical nodes = 25
	ESD protection for up to 26kV
GPI I/O	2x general purpose inputs + 2x general purpose outputs
	Connector RJ45
	GPI Inputs: • External passive closure between pins (short) to trigger • Max input switching frequency 25Hz (50 operations / second) • Input insulation 3.75kV
	GPI Outputs: • Internal contact closure (relay) • Max switching frequency 25Hz (50 operations / second) • Max switching power 220VDC / 0.25A or 250VAC / 0.25A • Output insulation 3.75kV
	LED status indicators (under RJ45 connector) GPI Input 1 activity / GPI Input 2 activity GPI Output 1 activity / GPI Output 2 activity
Fiber Optic	1 x Fiber optic I/O port (bidirection) Simplex (singlemode using LC/PC connection
	WDM using 1310nm and 1550nm wavelengths Optical budget = 18dB
	Maximum distance approx. 10km (6.2 miles)
	RX and TX activity LEDs on side of module next to fiber I/O
Power	+12VDC @ 2.0W nominal for each module - (supports 7 - 15VDC input range)
Physical (each module)	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OBD 1510 D - (EAN# 4250479319103)
Includes	2x OBD 1510 D modules (Type A and B), 2x AC power supplies, 2x SFP, 2x mini USB cable

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC SIM
LC/PC to SC/PC Adapter



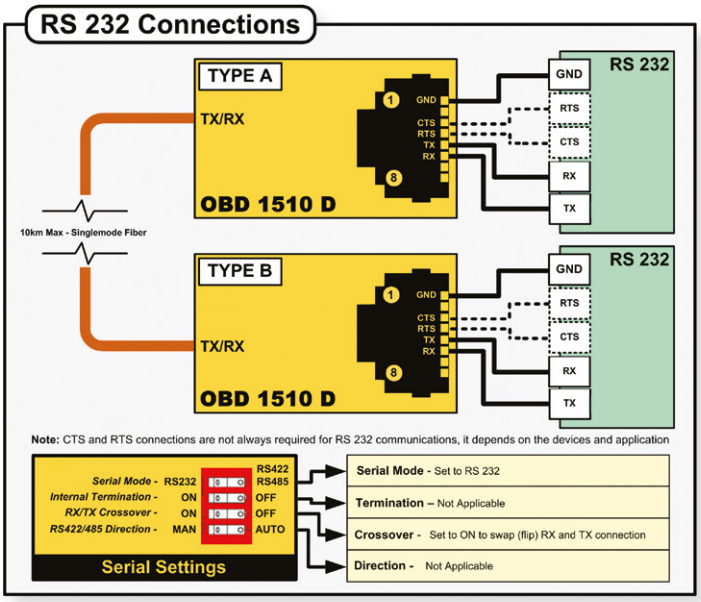
Model# LC/ST SIM
LC/PC to ST/SC Adapter

Specifications subject to change

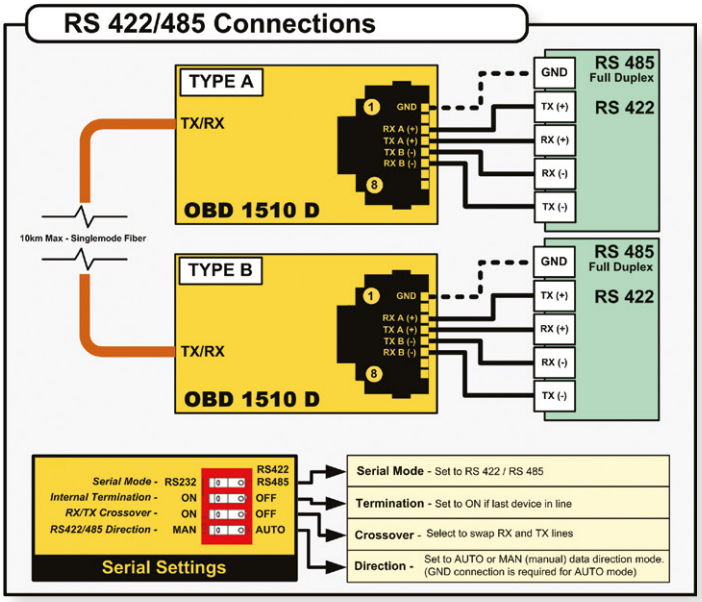
yellobrik® OBD 1510 D

Connection Diagrams

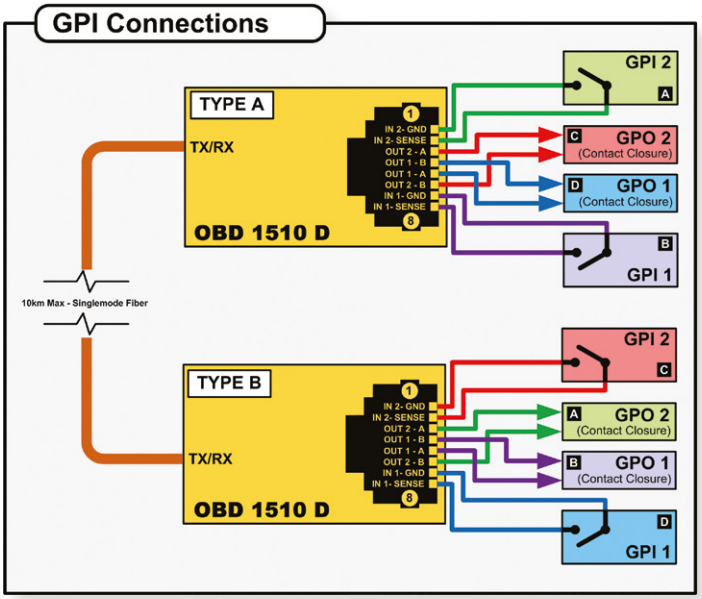
RS 232 Connections



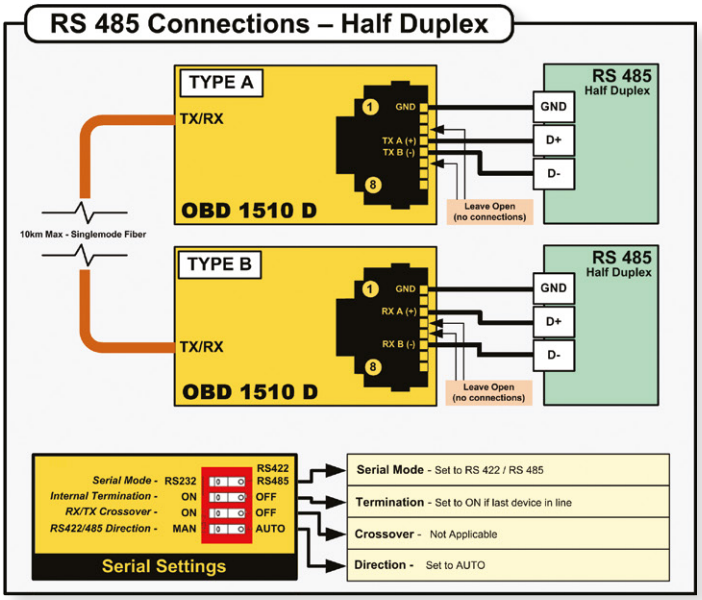
RS 422/485 Connections



GPI Connections



RS 485 Connections – Half Duplex



Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik®

OET 1510
OET 1510 MM

Ethernet to Fiber Transceiver (switch)

- Supports standard Ethernet inputs up to 1 Gbit
- 3 port Ethernet switch (1 fiber, 2 electrical)
- Auto (10/100/1000) electrical port speed detection
- Manually force 10Mbit electrical speed (if needed)
- Fiber transceiver speed always 1 Gbit
- Auto or manual electrical crossover selection
- Singlemode fiber 1310nm up to 10km (6.2 miles)
- Multimode fiber 850nm up to 550m (1,804 feet)
- Duplex LC optical connections
- Supports hot swapping and hot plugging

Singlemode SFP Multimode SFP

Using the same basic module we provide two versions suitable for singlemode or multimode fiber. Each version has a different SFP installed.

The OET 1510 is a compact 3 port Ethernet switch, designed to extend the reach of electrical Ethernet signals over long distances using a constant (fixed) high speed 1 Gbit optical transceiver speed.

When paired with another OET 1510 at the receiving end (using two fiber links) you have a cost-effective Ethernet extender system for distances up to 10km providing a stable, high speed 1Gbit error free optical connection between locations.

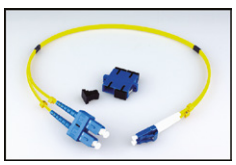
The OET 1510 has two standard RJ45 electrical Ethernet ports plus fiber I/O and functions as a 3 port Ethernet switch. For legacy system use; each electrical Ethernet port can be set for automatic speed detection (10/100/1000) or forced to 10Mbit, and each port can use auto crossover detection or be forced manually if needed. These functions are available using the dip switch.

Technical Specifications

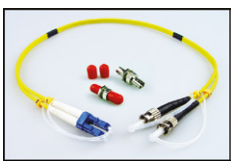
Ethernet	2 x Ethernet ports, RJ 45 Connectors. 10 BaseTUTP category 3,4 or 5 cable up to 328ft/100m (2 pairs) 100 BaseTXUTP category 5 cable up to 328ft/100m (2 pairs) 1000 BaseTXUTP category 5 cable up to 328ft/100m (4 pairs)
	Auto detect bit rate (10/100/1000), or force to 10Mbit for each port (selectable)
	Automatic crossover detection or force manually for each port (selectable)
	Port speed / activity LED indication (next to Ethernet port)
Fiber Optic	1 x fiber optic input (TX) 1 x fiber optic output (RX) Duplex using LC/PC Connections
	IEEE 802.3z (1000BASE-X Gbit/s Ethernet over Fiber at 1 Gbit/s (125 MB/s)
	Singlemode Version TX wavelength 1310nm, power -3dBm RX input range 1260nm to 1620nm, sensitivity -3dBm to -21dBm Max distance 10km (6.2miles)
	Multimode Version TX wavelength 850nm, power -2dBm to -7dBm RX input 850nm sensitivity 0dBm to -15dBm Max distance approx 550m (1804 feet)
	Fiber TX active and RX active LEDs on side of module
Power	+12VDC @ 2.2W nominal - (supports 7 - 15VDC input range)
Physical	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OET 1510 (singlemode) - (EAN# 4250479315129) OET 1510 MM (multimode) - (EAN # 4250479321144)
Includes	Module, AC power supply, SFP, mini USB cable

Fiber Adapter Options (singlemode only not multimode)

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC DUP
LC/PC to SC/PC Adapter



Model# LC/ST DUP
LC/PC to ST/SC Adapter

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

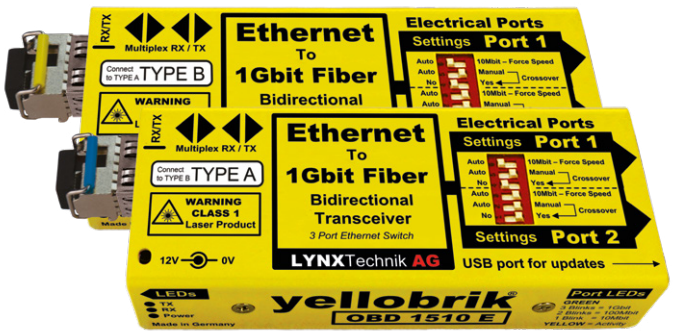
Specifications subject to change

yellobrik®

OBD 1510 E

Ethernet to Fiber Bidirectional Transceivers (switch)

- Bidirectional send and receive over single fiber link
- Supports standard Ethernet inputs up to 1Gbit
- Closed loop WDM fiber system
- Auto (10/100/1000) electrical port speed detection
- Manually force 10Mbit electrical speed
- Fiber connection speed always 1Gbit
- Auto or manual electrical crossover selection
- Distances up to 10km (6.2 miles) over SMF fiber
- Supplied as matched pair (A and B version)
- Supports hot swapping and hot plugging



The OBD 1510 E is a matched pair of compact Ethernet switches designed to extend the reach of electrical Ethernet signals over long distances. The two switches are linked via single bidirectional fiber link which operates at a constant 1Ggit speed.

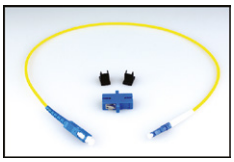
This pair of modules uses WDM fiber technology in a closed loop arrangement and essentially functions as an Ethernet extender solution. The fiber link supports distances up to 10Km and provides a single, high speed 1Gbit error-free optical connection between the two locations.

Each OBD 1510 E module has two standard RJ45 electrical Ethernet ports and the complete system functions as a 4 port Ethernet switch, providing two standard RJ45 Ethernet ports at each location bridged with fiber. For legacy systems, each electrical Ethernet port can be set for automatic speed detection (10/100/1000) or forced to 10Mbit. Each port uses auto crossover detection or can be forced manually if needed. These functions are available using the dip switch.

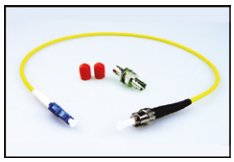
Note: This system used WDM optical multiplexing and should only be used in point to point applications. This solution cannot be integrated into a CWDM multiplexed system.

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC SIM
LC/PC to SC/PC Adapter



Model# LC/ST SIM
LC/PC to ST/SC Adapter

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Technical Specifications

Ethernet	2 x Ethernet ports, RJ45 Connectors. 10 BaseT UTP category 3,4 or 5 cable up to 328ft/100m (2 pairs) 100 BaseT XUTP category 5 cable up to 328ft/100m (2 pairs) 1000 BaseT XUTP category 5 cable up to 328ft/100m (4 pairs)
	Auto detect bit rate (10/100/1000), or force to 10Mbit for each port (selectable)
	Automatic crossover detection or force manually for each port (selectable)
	Port speed / activity LED indication (next to Ethernet port)
Fiber Optic	1 x fiber optic I/O port (bidirectional) Simplex (single mode) using LC/PC connection
	WDM using 1310nm and 1550nm wavelengths Optical budget = 18dB
	Fiber TX active and RX active LEDs on side of module
	Maximum distance approx. 10km (6.2 miles - Singlemode)
Power	+12VDC @ 1.9W nominal for each module - (supports 7 - 15VDC input range)
Physical (each module)	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OBD 1510 E - (EAN# 4250479319110)
Includes	2 x OBD 1510 E modules (Type A and Type B), 2 x AC power supplies, 2x SFP, 2x mini USB cable

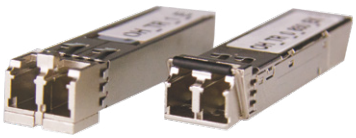
Specifications subject to change

yellobrik®

OTR 1210
OTR 1210 MM

MADI / Fiber Transceiver

- MADI Optical to MADI Coaxial converter
- Supports up to 64 channels of audio (IN and OUT)
- Real time conversion with no degradation of signal quality
- Singlemode and Multimode versions
- Up to 10km (6.2 miles) using Singlemode fiber
- Up to 550m (1804 feet) using Multimode fiber
- Duplex LC optical connections
- Supports hot swapping and hot plugging



Singlemode SFP Multimode SFP

Using the same basic module we provide two versions suitable for singlemode or multimode fiber. Each version has a different SFP installed.

The OTR 1210 is a MADI fiber transmitter and receiver combined in a single package. The module is designed to convert up to 64 audio channels bidirectionally (64 IN & 64 OUT) between MADI Optical and MADI Coaxial (electrical) formats. Conversion is real time (no latency) and does not degrade the signal quality.

The OTR 1210 is compact and cost-effective solution to extend the reach of MADI audio over long distances. When paired with another OTR 1210 at the receiving end (using two fiber links) you have a cost-effective, zero latency MADI extender system for distances up to 10km

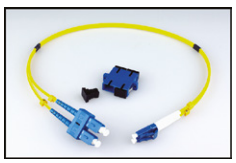
Two versions are available. The singlmode fiber version will transport MADI over distances up to 10km, and the Multimode version up to 550m.

Technical Specifications

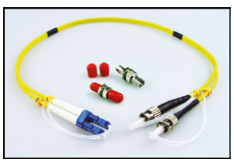
Coax Input	1 x 75 Ohm BNC connector
	Supported standards: AES10-2008
	Cable length 250m (Belden 1694A)
Coax Output	1 x 75 Ohm BNC connector
	Amplitude: 750mV P/P
	Cable length 250m (Belden 1694A)
Fiber Optic	1 x fiber optic input 1 x fiber optic output Duplex connection using LC Connections
	Singlemode Version: OTR 1210 Transmitter: 1310nm (-3dBm) Receiver sensitivity: 1260nm to 1620nm (-3dBm to -21dBm) Max. Distance 10km (6.2 miles)
	Multimode Version: OTR 1210 MM Transmitter: 850nm (-2dBm to -7dBm) Receiver sensitivity: 850nm (0dBm to -15dBm) Max. Distance 550m (1804 feet)
Power	+12VDC @ 2.6W nominal - (supports 7 - 16VDC input range) LED power present indicator
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTR 1210 (Singlemode) - (EAN# 4250479324671) OTR 1210 MM (Multimode) - (EAN# 4250479324688)
Includes	Module, AC power supply, SFP

Fiber Adapter Options (singlemode only not multimode)

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC DUP
LC/PC to SC/PC Adapter



Model# LC/ST DUP
LC/PC to ST/SC Adapter

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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

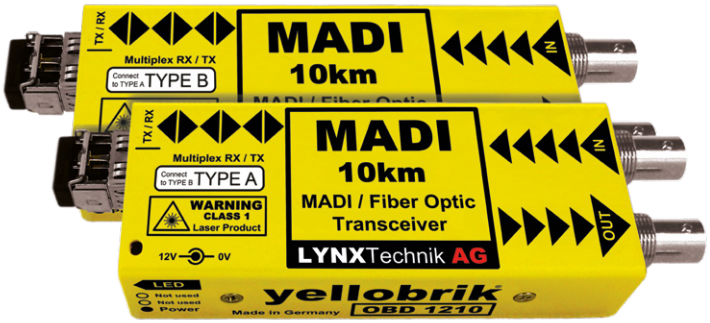
XLR 1000
Use with a standard 4 pin XLR camera battery power source.

Specifications subject to change

yellobrik® OBD 1210

MADI / Fiber Bidirectional Transceivers

- Bidirectional MADI send and receive over single fiber link
- MADI Optical to MADI Coaxial converters
- Supports up to 64 channels of audio (IN and OUT)
- Real time conversion with no degradation of signal quality
- Closed loop WDM fiber system
- Distances up to 10km (6.2 miles) over SMF fiber
- Supplied as matched pair (A and B version)
- Simplex LC singlemode optical connection
- Supports hot swapping and hot plugging



The OBD 1210 is a matched pair of compact MADI fiber transceivers designed to extend the reach of MADI signals over long distances (up to 10km)

The modules are designed to convert up to 64 audio channels bidirectionally (64 IN & 64 OUT) between MADI Optical and MADI Coaxial (electrical) formats.

Conversion is real time (no latency), does not degrade the signal quality and only requires a single bidirectional fiber link between the modules. (singlemode fiber)

The OBD 1210 solution is supplied as a complete kit which includes two matched modules, two power supplies and a transport case.

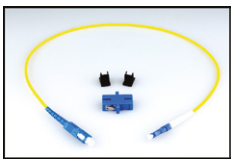
Note: This system used WDM optical multiplexing and should only be used in point to point applications. This solution cannot be integrated into a CWDM multiplexed system.

Technical Specifications

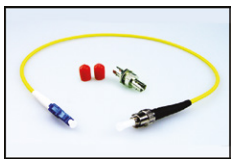
Coax Input	1 x 75 Ohm BNC connector
	Supported standards: AES10-2008
	Cable length 250m (Belden 1694A)
Coax Output	1 x 75 Ohm BNC connector
	Amplitude: 750mV P/P
	Cable length 250m (Belden 1694A)
Fiber Optic	1 x LC Bidirectional Fiber Connection (Singlemode) 1310nm and 1550nm (WDM) 18 dBm Optical Budget
	Max. Distance approx. 10km (6.2 miles - Singlemode)
Power	+12VDC @ 2.6W nominal each module - (supports 7 - 16VDC input range) LED power present indicator
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz) - each module
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OBD 1210 - (EAN# 4250479324640)
Includes	2 x Modules, (Type A + Type B), 2 x AC power supplies, 2x SFP

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC SIM
LC/PC to SC/PC Adapter



Model# LC/ST SIM
LC/PC to ST/SC Adapter

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik®

OTX 1712-2

yelloGUI compatible

Analog Sync / Video Fiber Optic Transmitter

- Supports analog black burst, bi-level, tri-level sync signals and NTSC and PAL composite video
- Passive loop output
- Broadcast quality performance
- Error free optical transmission
- Versions for LC, ST or SC fiber connections
- Multimode version available
- Up to 10km (6.2 miles) singlemode
- Up to 300m (984 feet) multimode
- Supports hot swapping and hot plugging
- yelloGUI compatible to access additional internal settings

LC singlemode | ST singlemode | SC singlemode | LC multimode

Using the same basic module we provide four versions suitable for LC, ST or SC singlemode fiber connections, as well as a version for multimode fiber. Each version has a different SFP installed.

The OTX 1712-2 is a compact analog sync or NTSC/PAL composite video to fiber optic transmitter. This device is specifically designed to combat the restrictions involved with the distribution of broadcast quality analog reference and composite video signals over long distances.

When paired with the fiber optic receiver ORX 1702-1 you have a very cost-effective optical transmission system for analog sync reference signals or NTSC/PAL composite video. This device is particularly useful for reference sync distribution between remote installations to maintain correct synchronization.

Unlike other very basic analog to fiber conversion solutions, the OTX 1712-2 incorporates technology to maintain a very high degree of sync and burst phase stability during the conversion and fiber transmission.

The module converts the NTSC/PAL video signal to an SDI signal (including reference and other relevant information) before it is converted to fiber. Therefore, when the OTX 1712-2 is used for NTSC or PAL video sources it is possible to convert the fiber signal directly to SDI if required using an SDI receiver (e.g. ORX 1802).

The OTX 1712-2 provides a passive loop output and support for LC, ST or SC singlemode fiber connections. An LC version suitable for multimode fiber is also available.

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

OTX 1712-2 LC Version Shown

Technical Specifications

Analog Input	Sync = analog black burst / SDTV bi-level / HDTV tri-level Video = NTSC / PAL composite video 1 x passive loop output (terminate if not used) 75 Ohm BNC connectors
	NTSC SMPTE 170M, PAL CCIR624 Analog tri-level sync SMPTE ST 274, ST 296 720p 50/59.94/60 1080i 50/59.94/60 1080p 23.97/24/25 1080psF 23.97/24
	Multi-standard operation, auto-detect
	Return loss: 31dB to 10MHz
Fiber Out Singlemode	1 x fiber optic singlemode output LC, ST or SC connection
	SMPTE 297M - 2006
	Wavelength: 1310nm, Optical power -5dBm
	TX active LED on side of module
	Max. distance: 10km (6.2 miles - approx)
Fiber Out Multimode	1 x fiber optic multimode output LC connection
	SMPTE 297M - 2006
	Wavelength: 850nm, Optical power -5dBm
	TX active LED on side of module
	Max. distance: 300m (984feet - approx)
Power	+12VDC @ 3.4W nominal - (supports 8 - 24VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTX 1712-2 LC - (EAN# 4250479323209) OTX 1712-2 ST - (EAN# 4250479324152) OTX 1712-2 SC - (EAN# 4250479324169) OTX 1712-2 MM (multimode) - (EAN# 4250479324176)
Includes	Module, 12V DC power supply, 2x SFP, 2x mini USB cable

Specifications subject to change

yellobrik®

ORX 1702-1

yelloGUI compatible

Analog Sync / Video Fiber Optic Receiver

- Supports analog black burst, bi-level, tri-level sync signals and NTSC and PAL composite video
- Two outputs
- Broadcast quality performance
- Versions for LC, ST or SC fiber connections
- Input range 1260nm to 1620nm (singlemode) (supports CWDM)
- Multimode version available
- Supports hot swapping and hot plugging
- yelloGUI compatible to access additional internal settings

LC singlemode | ST singlemode | SC singlemode | LC multimode

Using the same basic module we provide four versions suitable for LC, ST or SC singlemode fiber connections, as well as a version for multimode fiber. Each version has a different SFP installed.

The ORX 1702-1 is a compact analog sync or NTSC/PAL composite video to fiber optic receiver. This device is specifically designed to combat the restrictions involved with the distribution of broadcast quality analog reference and composite video signals over long distances.

When paired with the fiber optic transmitter OTX 1712-2 you have a very cost-effective optical transmission system for analog sync reference signals or NTSC/PAL composite video. This device is particularly useful for reference sync distribution between remote installations to maintain correct synchronization.

Unlike other very basic analog to fiber conversion solutions, the ORX 1702-1 incorporates technology to maintain a very high degree of sync and burst phase stability during the fiber reception and analog conversion.

The module receives an SDI signal (including reference and other relevant information) before it is converted to an analog signal. Therefore, when the ORX 1702-1 is used for 525 or 625 SDI video sources it is possible to convert the signal to an analog NTSC or PAL composite output directly. For example: if the 525 or 625 signal is received from an SDI video transmitter OTX 1812.

The ORX 1702-1 provides two analog outputs and support for LC, ST or SC singlemode fiber connections. An LC version suitable for multimode fiber is also available.

ORX 1702-1 LC Version Shown

Technical Specifications

Fiber Input Singlemode	1 x fiber optic Input LC, ST or SC connection
	SMPTE 297M - 2006
	Input range (wavelength): 1260nm to 1620nm
	RX sensitivity: -3dBm to -19dBm
	RX active LED on side of module
Fiber Input Multimode	1 x fiber optic input LC connection
	SMPTE 297M - 2006
	Input range (wavelength) 780nm to 880nm
	RX sensitivity: 0dBm to -15dBm
	RX active LED on side of module
Analog Output	Sync = analog black burst / SDTV bi-level / HDTV tri-level Video = NTSC / PAL composite video 2 identical outputs provided 75 Ohm BNC connectors
	NTSC SMPTE 170M, PAL CCIR624 Analog tri-level sync SMPTE ST 274, ST 296 720p 50/59.94/60 1080i 50/59.94/60 1080p 23.97/24/25 1080psF 23.97/24
	Return loss: 46.5dB to 10MHz
Power	+12VDC @ 3.5W nominal - (supports 8 - 24VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	ORX 1702-1 LC - (EAN# 4250479320383) ORX 1702-1 ST - (EAN# 4250479320390) ORX 1702-1 SC - (EAN# 4250479320406) ORX 1702-1 MM (multimode) - (EAN# 4250479320413)
Includes	Module, 12V DC power supply, SFP, mini USB cable

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Specifications subject to change

yellobrik® OTX 1440

12G, 6G, 3G, 1.5G SDI to Fiber Optic Transmitter (CWDM)

- Supports 12G, 6G, 3G and 1.5G SDI video inputs
- Suitable for SDI video up to 12Gbit/s (4k/UHD)
- Auto reclocking 1.5Gbit / 3Gbit / 6Gbit / 12Gbit
- Reclocked SDI loop output
- Multiple wavelengths available
- Error free optical transmission
- Simplex LC singlemode optical connection
- Supports hot swapping and hot plugging

Installed optional SFP shown is not included

The OTX 1440 is a compact CWDM SDI to fiber optic transmitter designed to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

When paired with the fiber optic to SDI receiver (e.g. yellobrik ORX 1400) you have a very cost-effective optical transmission / receiver system for signals up to 4096x2160 / 60Hz (12Gbit/s , 4K,/UHD) while preserving full uncompressed quality. Select from 18 wavelengths for 1.5G/3G or from 8 wavelengths for 6G/12G for full CWDM compatibility.

Operation of the OTX 1440 is fully automatic. The SDI video format is detected, reclocked and then transmitted over the fiber optic connection. A reclocked electrical SDI output is also provided.

Note: Matching receiver for the optical signals is the O RX 1400, which can be found in this catalog also.

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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.

Ordering Info:

Note: The **OTX 1440** price **DOES NOT INCLUDE** the fiber transmitter SFP sub module. Please specify the required SFP option from the option list below**.**

Technical Specifications

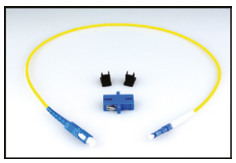
Input	1 x SDI video on 75 Ohm BNC connector with reclocked loop output
	SMPTE 2082-1, SMPTE 2081-1, SMPTE 424M, SMPTE 292M
	Multi-standard operation from 1.5Gbit/s to 12Gbit/s
	Multi-rate reclocking 1.5Gbit/s to 12bit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 260m @ 1.5Gbit/s, 150m @ 3Gbit/s (Beldem 1694A cable) 90m @ 6Gbit/s, 80m @ 12Gbit/s (Beldem 4794R cable)
Optical Output	1 x fiber optic output Simplex (singlemode) using LC Connection
	SMPTE 297M - 2006
	Hot pluggable
	Wavelength selection: see selected SFP option
	TX active LED on side of module
	TX power: see selected SFP option
Power	+12VDC @ 2.0W nominal without SFP (supports 7 - 24 VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTX 1440 (EAN# 4250479325968)
Includes	Module, AC power supply

CWDM Wavelength Options. ITU-T G.694.2 (select one)

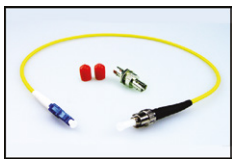
Wavelength	TX Power	Option # xxxx = Wavelength
1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610 nm	-3...+3 dBm	**12Gbit/s:** **OH-TX-12G-XXXX-LC**
1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610 nm	-1dBm (typ.)	**3Gbit/s (40km):** **OH-TX-4-XXXX-LC**
1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610 nm	+3dBm (typ.)	**3Gbit/s (80km):** **OH-TX-8-XXXX-LC**

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# **LC/SC SIM**
LC/PC to SC/PC Adapter



Model# **LC/ST SIM**
LC/PC to ST/SC Adapter

Specifications subject to change

yellobrik® OTT 1442

Dual Channel 12Gbit SDI to Fiber Transmitter (CWDM)

- Dual Channel
- Supports SDI video inputs up to 12Gbit/s (2160p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 270Mbit / 1.5Gbit / 3Gbit / 12Gbit
- Error free optical transmission
- Up to 10km (6.2 miles) @ 12Gbit/s
- Duplex LC/PC single mode optical connections
- Supports hot swapping and hot plugging

Installed optional SFP shown is not included

The OTT 1442 is a compact CWDM dual channel SDI to fiber optic transmitter designed to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances. Nine pairs of wavelength choices are provided.

When paired with a dual channel 12Gbit fiber optic to SDI receiver (e.g yellobrik ORR 1402) you have a very cost-effective optical transmission / receiver system for two independent signals up to 12Gbit/s (4096x2160 @ 60Hz), while preserving full uncompressed quality.

The OTT 1442 has two completely independent channels and each will auto-detect and re-clock any 270Mbit / 1.5Gbit / 3Gbit and 12Gbit SDI source prior to optical transmission. The module is fully compatible with 3Gbit Level A and Level B formats.

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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.

Ordering Info:
Note: The **OTT 1442** price **DOES NOT INCLUDE** the fiber transmitter SFP sub module. Please specify the required wavelength from the option list below.

Technical Specifications

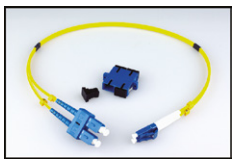
Input	2 x SDI video on 75 Ohm BNC connector
	SMPTE 2082-1, SMPTE 2081-1, SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 12Gbit/s
	Multi-rate reclocking 270Mbit/s - 1.5Gbit/s - 3Gbit/s - 12Gbit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 245m @ 1.5Gbit/s, 145m @ 3Gbit/s Automatc cable EQ (Belden 4794R cable) 85m @ 12Gbit/s, 6Gbit/s
Optical Outputs	2 x fiber optic outputs Simplex (single mode) using LC/PC Connections
	SMPTE 297M - 2006
	Nine available groups of wavelengths(nm): (1270 + 1290), (1310+ 1330), (1350 + 1370), (1390+ 1410), (1430+ 1450), (1470+ 1490), (1510+ 1530), (1550+ 1570), (1590+ 1610)
	TX active LEDs on side of module
	Max. distance approx 10km (6.2 miles) @ 12Gbit/s (Singlemode)
Power	+12VDC @ 1.9W nominal without SFP +12VDC @ 2.6W nominal with SFP (supports 7 - 16VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTT 1442 (EAN: 4250479327238)
Includes	Module, AC power supply

CWDM Wavelength Options. ITU-T G.694.2 (select one)

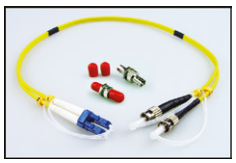
Wavelengths	Power	Option #	EAN / UPC
1270nm, 1290nm	-2dBm...3dBm	**OH-TT-12G-1270-1290-LC**	**4250479327337**
1310nm, 1330nm	-2dBm...3dBm	**OH-TT-12G-1310-1330-LC**	**4250479327344**
1350nm, 1370nm	-2dBm...3dBm	**OH-TT-12G-1350-1370-LC**	**4250479327351**
1390nm, 1410nm	-2dBm...3dBm	**OH-TT-12G-1390-1410-LC**	**4250479327368**
1430nm, 1450nm	-2dBm...3dBm	**OH-TT-12G-1430-1450-LC**	**4250479327375**
1470nm, 1490nm	-2dBm...3dBm	**OH-TT-12G-1470-1490-LC**	**4250479327382**
1510nm, 1530nm	-2dBm...3dBm	**OH-TT-12G-1510-1530-LC**	**4250479327399**
1550nm, 1570nm	-2dBm...3dBm	**OH-TT-12G-1550-1570-LC**	**4250479327405**
1590nm, 1610nm	-2dBm...3dBm	**OH-TT-12G-1590-1610-LC**	**4250479327412**

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# **LC/SC DUP**
LC/PC to SC/PC Adapter



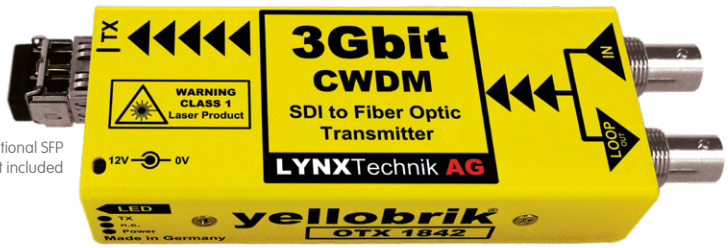
Model# **LC/ST DUP**
LC/PC to ST/SC Adapter

Specifications subject to change

yellobrik® OTX 1842

3Gbit SDI to Fiber Optic Transmitter (CWDM)

- Supports SDI video inputs up to 3Gbit/s (1080p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 270Mbit / 1.5Gbit / 3Gbit
- Reclocked SDI loop output
- 18 wavelength selections (ITU-T G.694.2)
- Error free optical transmission
- Up to 40km (24.85 miles) @ 3Gbit
- Simplex LC singlemode optical connection
- Supports hot swapping and hot plugging



Installed optional SFP shown is not included

The OTX 1842 is a compact CWDM SDI to fiber optic transmitter designed to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

When paired with the fiber optic to SDI receiver (e.g. yellobrik ORX 1802) you have a very cost-effective optical transmission / receiver system for signals up to 1080p60 (3Gbit/s), while preserving full uncompressed quality. Select from 18 wavelengths for full CWDM compatibility.

The OTX 1842 will auto-detect and re-clock any 270Mbit / 1.5Gbit and 3Gbit SDI source prior to optical transmission. The module is fully compatible with 3Gbit Level A and Level B formats.

Note: Matching receiver for the optical signals is the O RX 1800, which can be found in this catalog also.

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Ordering Info:
Note: The OTX 1842 price DOES NOT INCLUDE the fiber transmitter SFP sub module. Please specify the required wavelength from the option list below.

Technical Specifications

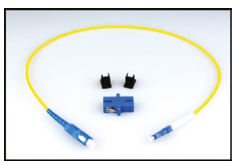
Input	1 x SDI video on 75 Ohm BNC connector with reclocked loop output
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Multi-rate reclocking 270Mbit/s - 1.5Gbit/s - 3Gbit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Optical Output	1 x fiber optic output Simplex (singlemode) using LC Connection
	SMPTE 297M - 2006
	Hot pluggable
	18 Wavelength selections per ITU-T G.694.2 (see table)
	TX active LED on side of module
	Max. distance approx. 40km (24.8 miles) @ 3Gbit/s (single mode)
Power	+12VDC @ 1.3W nominal without SFP +12VDC @ 1.8W nominal with SFP (supports 7 - 16VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTX 1842 - (EAN# 4250479359857)
Includes	Module, AC power supply

CWDM Wavelength Options. ITU-T G.694.2 (select one)

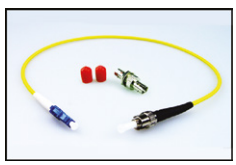
Wave-length	Power	Option #	Wave-length	Power	Option #
1270nm	-1dBm	OH-TX-4-1270-LC_	1450nm	-1dBm	OH-TX-4-1450-LC
1290nm	-1dBm	OH-TX-4-1290-LC	1470nm	-1dBm	OH-TX-4-1470-LC
1310nm	-1dBm	OH-TX-4-1310-LC	1490nm	-1dBm	OH-TX-4-1490-LC
1330nm	-1dBm	OH-TX-4-1330-LC	1510nm	-1dBm	OH-TX-4-1510-LC
1350nm	-1dBm	OH-TX-4-1350-LC	1530nm	-1dBm	OH-TX-4-1530-LC
1370nm	-1dBm	OH-TX-4-1370-LC	1550nm	-1dBm	OH-TX-4-1550-LC
1390nm	-1dBm	OH-TX-4-1390-LC	1570nm	-1dBm	OH-TX-4-1570-LC
1410nm	-1dBm	OH-TX-4-1410-LC	1590nm	-1dBm	OH-TX-4-1590-LC
1430nm	-1dBm	OH-TX-4-1430-LC	1610nm	-1dBm	OH-TX-4-1610-LC

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC SIM
LC/PC to SC/PC Adapter



Model# LC/ST SIM
LC/PC to ST/SC Adapter

Specifications subject to change

yellobrik® OTT 1842-1

Dual Channel 3Gbit SDI to Fiber Transmitter (CWDM)

- Dual Channel
- Supports SDI video inputs up to 3Gbit/s (1080p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 270Mbit / 1.5Gbit / 3Gbit
- Error free optical transmission
- 18 Wavelength selections (ITU-T G.694.2)
- Up to 40km (24.8 miles) @ 3Gbit/s
- Duplex LC/PC single mode optical connections
- Supports hot swapping and hot plugging

Installed optional SFP shown is not included

The OTT 1842-1 is a compact CWDM dual channel SDI to fiber optic transmitter designed to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances. 18 wavelength choices are provided.

When combined with the dual channel fiber optic to SDI receiver module ORR 1802-2,and the OCM 1891/1892 CWDM multiplexers you have a very cost-effective CWDM fiber system for up to 18 signals in a single fiber link.

The OTT 1842-1 has two completely independent channels and each will auto-detect and re-clock any 270Mbit / 1.5Gbit and 3Gbit SDI source prior to optical transmission. The module is fully compatible with 3Gbit Level A and Level B formats.

Note: Matching receiver for the optical signals is the O RR 1802, which can be found in this catalog also.

Technical Specifications

Input	2 x SDI video on 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Multi-rate reclocking 270Mbit/s - 1.5Gbit/s - 3Gbit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Optical Outputs	2 x fiber optic outputs Simplex (single mode) using LC/PC Connections
	SMPTE 297M - 2006
	18 Wavelength selections, in pairs - per ITU-T G.694.2 (see table)
	TX active LEDs on side of module
	Max. distance approx 40km (24.8 miles) @ 3Gbit/s (Singlemode)
Power	+12VDC @ 1.9W nominal without SFP +12VDC @ 2.6W nominal with SFP (supports 7 - 16VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTT 1842-1 - (EAN# 4250479318427)
Includes	Module, AC power supply

Power Adapter Options

The kit INCLUDES AC power supplies. The power adapters below are optional.

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.

Ordering Info:

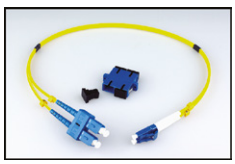
Note: The OTT 1842-1 price DOES NOT INCLUDE the fiber transmitter SFP sub module. Please specify the required wavelength from the option list below.

CWDM Wavelength Options. ITU-T G.694.2 (select one)

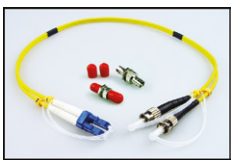
Wavelengths	Power	Option #
1270nm, 1290nm	-1dBm	OH-TT-4-1270-1290-LC
1310nm, 1330nm	-1dBm	OH-TT-4-1310-1330-LC
1350nm, 1370nm	-1dBm	OH-TT-4-1350-1370-LC
1390nm, 1410nm	-1dBm	OH-TT-4-1390-1410-LC
1430nm, 1450nm	-1dBm	OH-TT-4-1430-1450-LC
1470nm, 1490nm	-1dBm	OH-TT-4-1470-1490-LC
1510nm, 1530nm	-1dBm	OH-TT-4-1510-1530-LC
1550nm, 1570nm	-1dBm	OH-TT-4-1550-1570-LC
1590nm, 1610nm	-1dBm	OH-TT-4-1590-1610-LC

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC DUP
LC/PC to SC/PC Adapter



Model# LC/ST DUP
LC/PC to ST/SC Adapter

Specifications subject to change

yellobrik®

OTX 1742-2

yelloGUI compatible

Analog Sync / Video Fiber Optic Transmitter (CWDM)

- Supports analog black burst, bi-Level, tri-Level sync signals and NTSC and PAL composite video
- Passive loop analog output
- Broadcast quality performance
- LC/PC fiber connection
- 18 wavelength selections (ITU-T G.694.2)
- Error free optical transmission
- Up to 40km (24.8 miles) singlemode
- Supports hot swapping and hot plugging
- yelloGUI compatible to access additional internal settings

Installed optional SFP shown is not included

The OTX 1742-2 is a compact analog sync or NTSC/PAL composite video to fiber optic transmitter (CWDM compatible). This device is specifically designed to combat the restrictions involved with the distribution of broadcast quality analog reference and composite video signals over long distances.

When paired with the fiber optic receiver ORX 1702-1 you have a cost-effective optical transmission system for analog sync reference signals or NTSC/PAL composite video. This device is particularly useful for reference sync distribution between remote installations to maintain correct synchronization.

Unlike other very basic analog to fiber conversion solutions, the OTX 1742-2 incorporates technology to maintain a very high degree of sync and burst phase stability during the conversion and fiber transmission.

The module converts the NTSC/PAL video signal to an SDI signal (including reference and other relevant information) before it is converted to fiber. Therefore, when the OTX 1742-2 is used for NTSC or PAL video sources it is possible to convert the fiber signal directly to SDI if required using an SDI receiver (e.g. ORX 1802).

Note: Matching receiver for the optical signals is the O RX 1702, which can be found in this catalog also.

Ordering Info:
Note: The OTX 1742-2 price DOES NOT INCLUDE the fiber transmitter SFP sub module. Please specify the required wavelength from the option list below.

Technical Specifications

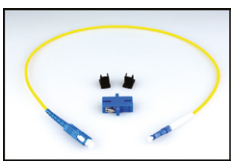
Analog Input	Sync = analog black burst / SDTV bi-level / HDTV tri-level Video = NTSC / PAL Composite video 1 x passive loop output (terminate if not used) 75 Ohm BNC connectors
	NTSC SMPTE 170M, PAL CCIR624 Analog tri-level sync SMPTE ST 274, ST 296 720p 50/59.94/60 1080i 50/59.94/60 1080p 23.97/24/25 1080psF 23.97/24
	Multi-standard operation, auto-detect
	Return loss: 31dB to 10MHz
Fiber Out Singlemode	1 x fiber optic singlemode output LC connection
	SMPTE 297M - 2006
	18 Wavelength selections per ITU-T G.694.2 (see table)
	TX active LED on side of module
	Max. distance approx. 40km (24.8 miles)
Power	+12VDC @ 3.5W nominal (supports 8 - 24VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTX 1742-2 - (EAN# 4250479324183)
Includes	Module, 12V DC power supply, mini USB cable

CWDM Wavelength Options. ITU-T G.694.2 (select one)

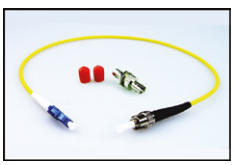
Wavelength	Power	Option #	Wavelength	Power	Option #
1270nm	-1dBm	OH-TX-4-1270-LC	1450nm	-1dBm	OH-TX-4-1450-LC
1290nm	-1dBm	OH-TX-4-1290-LC	1470nm	-1dBm	OH-TX-4-1470-LC
1310nm	-1dBm	OH-TX-4-1310-LC	1490nm	-1dBm	OH-TX-4-1490-LC
1330nm	-1dBm	OH-TX-4-1330-LC	1510nm	-1dBm	OH-TX-4-1510-LC
1350nm	-1dBm	OH-TX-4-1350-LC	1530nm	-1dBm	OH-TX-4-1530-LC
1370nm	-1dBm	OH-TX-4-1370-LC	1550nm	-1dBm	OH-TX-4-1550-LC
1390nm	-1dBm	OH-TX-4-1390-LC	1570nm	-1dBm	OH-TX-4-1570-LC
1410nm	-1dBm	OH-TX-4-1410-LC	1590nm	-1dBm	OH-TX-4-1590-LC
1430nm	-1dBm	OH-TX-4-1430-LC	1610nm	-1dBm	OH-TX-4-1610-LC

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC SIM
LC/PC to SC/PC Adapter



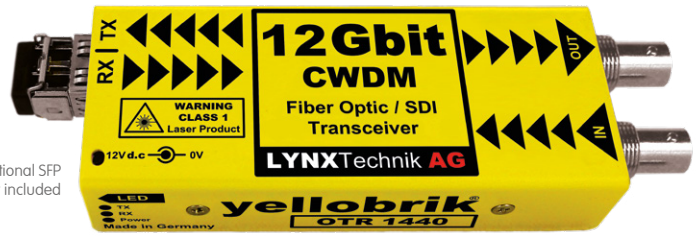
Model# LC/ST SIM
LC/PC to ST/SC Adapter

Specifications subject to change

yellobrik® OTR 1440

12Gbit Fiber Optic / SDI Transceiver (CWDM)

- Optical receiver and transmitter in single package
- Supports SDI video up to 12Gbit/s (4096x2160 @ 60 Hz)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 1.5Gbit / 3Gbit / 6Gbit / 12Gbit
- CWDM with 18 wavelengths (1270nm to 1610nm) selections
- Error free optical connections
- Up to 10km (6.2 miles) @ 12Gbit/s (singlemode)
- Duplex LC/PC single mode optical connections
- Supports hot swapping and hot plugging



Installed optional SFP shown is not included

The OTR 1440 is a CWDM Fiber Optic to SDI transmitter and receiver combined in a compact self contained package. It is a convenient and cost-effective solution to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

Each OTR 1440 CWDM tranceiver has an independent transmitter and receiver channel, which provides an effective solution for any SDI signal up to 12Gbit/s (4096x2160 @ 60Hz), while preserving full uncompressed quality. Select from 18 transmitter wavelengths for full CWDM compatibility (ITU-T G.694.2)

The OTR 1440 will auto-detect and re-clock any 1.5Gbit, 3Gbit, 6Gbit, or 12 Gbit SDI source prior to conversion. The module is fully compatible with 3Gbit Level A and Level B formats.

Technical Specifications

SDI Video	1 x SDI video input 1 x SDI Video output 75 Ohm BNC connectors
	SMPTE 2082-1, SMPTE 2081-1, SMPTE 424M, SMPTE 292M
	Multi-standard operation from 1.5Gbit/s to 12Gbit/s
	Multi-rate reclocking 1.5Gbit/s - 5Gbit/s - 6Gbit/s-12Gbit/s
	Automatic cable EQ 260m @ 1.5Gbit/s, 150m @ 3Gbit/s (Belden 1694A cable) 80m @ 12Gbit/s, 6Gbit/s (Belden 4794R cable)
Fiber Optic	**1 x fiber optic input and output (Transceiver** Provides flexibitly in choosing different types of SFPs (TX,RX, TR)
	SMPTE 297M - 2006
	Hot pluggable
	TX active LED, and RX active on side of module
	Single mode transmit / receive (duplex connector)
	Max. distance approx. 10km (6.2 miles) @ 12Gbit/s (Singlemode)
Power	+12VDC @ 1.9W nominal without SFP +12VDC @ 2.7W nominal with SFP (supports 7 - 24VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTR 1440 - (EAN# 4250479326620)
Includes	Module, AC power supply

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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.

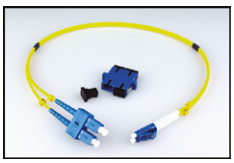
Ordering Info:
Note: The **OTR 1440** price **DOES NOT INCLUDE** the fiber transmitter SFP sub module. Please specify the required wavelength from the option list below.

CWDM Wavelength Options. ITU-T G.694.2 (select one)

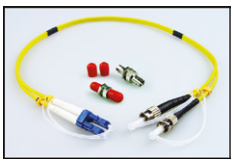
Wavelength	Power	RX Sensitivity	Option #
1270..1610nm	-2...+3dBm	-10 dBm (6G,12G) -14dBm (1.5G,3G)	**OH-TR-12G-XXXX-LC**
XXXX = Wavelength 18 wavelengths acc. to ITU T G692.2 1270nm through 1610nm.			

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# **LC/SC DUP**
LC/PC to SC/PC Adapter



Model# **LC/ST DUP**
LC/PC to ST/SC Adapter

Specifications subject to change

yellobrik® OTR 1840-1

3Gbit Fiber Optic / SDI Transceiver (CWDM)

- Optical receiver and transmitter in single package
- Supports SDI video up to 3Gbit/s (1080p60)
- 3Gbit Level A and Level B support (all formats)
- Auto reclocking 270Mbit / 1.5Gbit / 3Gbit
- CWDM with 18 wavelength selections
- Error free optical connections
- Up to 40km (24.8 miles) @ 3Gbit/s
- Duplex LC/PC single mode optical connections
- Supports hot swapping and hot plugging

Installed optional SFP shown is not included

The OTR 1840-1 is a CWDM Fiber Optic to SDI transmitter and receiver combined in a compact self contained package. It is a convenient and cost-effective solution to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

Each OTR 1840-1 CWDM tranceiver has an independent transmitter and receiver channel, which provides an effective solution for any SDI signal up to 1080p60 (3Gbit/s) while preserving full uncompressed quality. Select from 18 transmitter wavelengths for full CWDM compatibility (ITU-T G.694.2)

The OTR 1840-1 will auto-detect and re-clock any 270Mbit / 1.5Gbit and 3Gbit SDI source prior to conversion. The module is fully compatible with 3Gbit Level A and Level B formats.

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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.

Ordering Info:
Note: The **OTR 1840-1** price **DOES NOT INCLUDE** the fiber transmitter SFP sub module. Please specify the required wavelength from the option list below.

Technical Specifications

SDI Video	1 x SDI video input 1 x SDI Video output 75 Ohm BNC connectors
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Multi-rate reclocking 270Mbit/s - 1.5Gbit/s - 3Gbit/s
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
Fiber Optic	**1 x fiber optic input** (Range 1260-1620nm, Sensitivity -3dBm to -19dBm) **1 x fiber optic output** (CWDM - 18 selectable wavelengths - ITU-T G.694.2) Duplex (Singlemode) using LC/PC Connections
	SMPTE 297M - 2006
	Hot pluggable
	TX active LED, and RX active on side of module
	Single mode transmit / receive (duplex connector)
	Max. distance approx. 40km (24.8 miles) @ 3Gbit/s (Singlemode)
Power	+12VDC @ 1.9W nominal without SFP +12VDC @ 2.7W nominal with SFP (supports 7 - 16VDC input range)
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTR 1840-1 - (EAN# 4250479318403)
Includes	Module, AC power supply

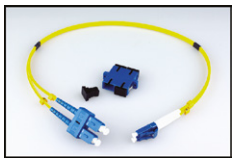
CWDM Wavelength Options. ITU-T G.694.2 (select one)

Wave-length	TX Power	RX Sensitivity	Option #
1270nm	-1dBm	-20dBm	**OH-TR-4-1270-LC**
1290nm	-1dBm	-20dBm	**OH-TR-4-1290-LC**
1310nm	-1dBm	-20dBm	**OH-TR-4-1310-LC**
1330nm	-1dBm	-20dBm	**OH-TR-4-1330-LC**
1350nm	-1dBm	-20dBm	**OH-TR-4-1350-LC**
1370nm	-1dBm	-20dBm	**OH-TR-4-1370-LC**
1390nm	-1dBm	-20dBm	**OH-TR-4-1390-LC**
1410nm	-1dBm	-20dBm	**OH-TR-4-1410-LC**
1430nm	-1dBm	-20dBm	**OH-TR-4-1430-LC**

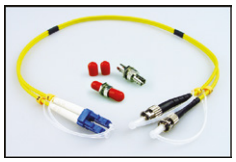
Wave-length	TX Power	RX Sensitivity	Option #
1450nm	-1dBm	-20dBm	**OH-TR-4-1450-LC**
1470nm	-1dBm	-20dBm	**OH-TR-4-1470-LC**
1490nm	-1dBm	-20dBm	**OH-TR-4-1490-LC**
1510nm	-1dBm	-20dBm	**OH-TR-4-1510-LC**
1530nm	-1dBm	-20dBm	**OH-TR-4-1530-LC**
1550nm	-1dBm	-20dBm	**OH-TR-4-1550-LC**
1570nm	-1dBm	-20dBm	**OH-TR-4-1570-LC**
1590nm	-1dBm	-20dBm	**OH-TR-4-1590-LC**
1610nm	-1dBm	-20dBm	**OH-TR-4-1610-LC**

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC DUP
LC/PC to SC/PC Adapter



Model# LC/ST DUP
LC/PC to ST/SC Adapter

Specifications subject to change

yellobrik® ODT 1540

Serial and GPI Fiber Transceiver (CWDM)

- Extend serial and GPI connections up to 40km
- Supports serial RS232 or RS422 or RS485
- 2 x GPI connections
- Select from 18 fiber wavelengths (CWDM)
- LC/PC duplex fiber connections
- Switchable RX/TX crossover
- Automatic or manual data direction
- Switchable end of line termination
- 'Plug and Play' - No PC software drivers needed
- Supports all serial protocols (standard or proprietary)
- 300 - 460K Baud (auto sensing and auto adjusting)

Installed optional SFP shown is not included

The ODT 1540 is a multi-function CWDM compatible module which (when used with another ODT 1540 in the remote location) will extend the reach of serial RS232, RS422 or RS485 as well as two GPI (general purpose I/O) up to 40km over fiber. 18 wavelength sections are provided for CWDM use.

A single RJ45 electrical serial connection can be configured for RS232, RS422 or RS485 serial standards. A separate RJ45 connector is provided for two electrical GPI inputs and outputs. Serial communications and GPI are transmitted and extended over the same fiber link.

The ODT 1540 is completely agnostic to the serial protocol used, and supports all standard protocols and proprietary protocols at data rates from 300 to 460K Baud *(auto sensing and auto adjusting)*.

The integrated dip switch provides precise control over the serial mode of operation with selections for the *serial standard, serial termination, RX/TX crossover and RS422/485 data direction (automatic or manual).* Data activity LEDs are provided for the serial port and the GPI port under the respective RJ45 connectors.

The ODT 1540 also supports mixing and matching of serial standards. For example: the transmitting module can have a RS232 input, and the receiving module can be set for RS422 output.

The ODT 1540 is 100% plug and play, hot pluggable and no special software drivers are required.

CWDM Wavelength Options. ITU-T G.694.2 (select one)

Wave-length	TX Power	RX Sensitivity	Option #
1270nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1270-LC**
1290nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1290-LC**
1310nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1310-LC**
1330nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1330-LC**
1350nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1350-LC**
1370nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1370-LC**
1390nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1390-LC**
1410nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1410-LC**
1430nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1430-LC**

Wave-length	TX Power	RX Sensitivity	Option #
1450nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1450-LC**
1470nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1470-LC**
1490nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1490-LC**
1510nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1510-LC**
1530nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1530-LC**
1550nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1550-LC**
1570nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1570-LC**
1590nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1590-LC**
1610nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1610-LC**

Technical Specifications

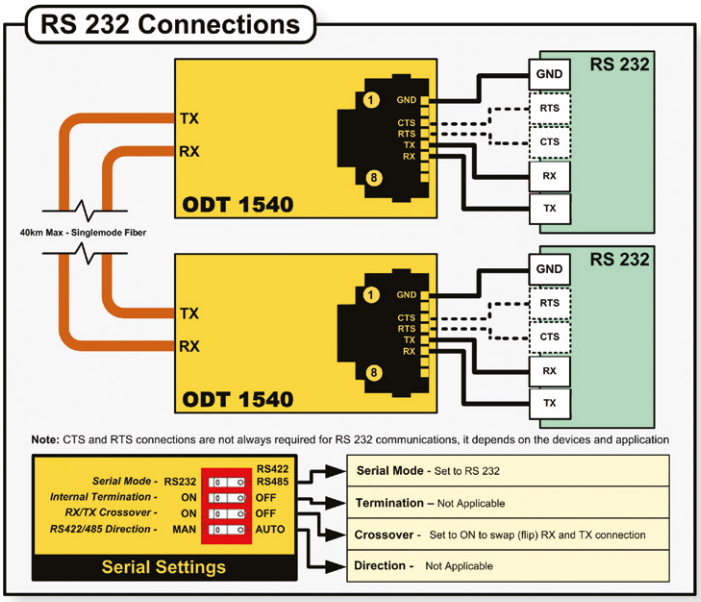
Serial I/O	EIA/ETA RS232C / RS422 / RS485 (selectable)
	Connector - RJ45
	Baud rate - Auto sense and auto adjust from 300 to 460k
	Serial setting dip switch provides settings for: • Select RS232 / RS422 / RS485 modes • Select serial termination (for end of line) • RX/TX crossover to flip the RX and TX if needed • Set RS422/485 data direction to automatic or manual if needed
	LED status indicators (under RJ45 connector) Serial TX activity + Serial RX activity
	RS422/485 Max number of electrical nodes = 25
	ESD protection for up to 26kV
GPI I/O	2x general purpose inputs + 2x general purpose outputs
	Connector RJ45
	GPI Inputs: • External passive closure between pins (short) to trigger • Max input switching frequency 25Hz (50 operations / second) • Input insulation 3.75kV
	GPI Outputs: • Internal contact closure (relay) • Max switching frequency 25Hz (50 operations / second) • Max switching power 220VDC / 0.25A or 250VAC / 0.25A • Output insulation 3.75kV
	LED status indicators (under RJ45 connector) GPI Input 1 activity / GPI Input 2 activity GPI Output 1 activity / GPI Output 2 activity
Fiber Optic	**1x fiber optic input (SMF)** (Range 1270-1610nm, Sensitivity -3dBm to -23dBm) **1x fiber optic output (SMF)** CWDM (ITU-T G.694.2) 18 selectable wavelengths (see table) Duplex (Singlemode) using LC/PC Connections
	RX and TX activity LEDs on side of module next to fiber I/O
	Max. distance approx. 40km (24.8 miles - Singlemode)
Power	+12VDC @ 1.6W nominal without SFP +12VDC @ 2.1W nominal with SFP (supports 7 - 15VDC input range)
Physical	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	ODT 1540 - (EAN# 4250479315433)
Includes	Module, AC power supply, mini USB cable

Specifications subject to change

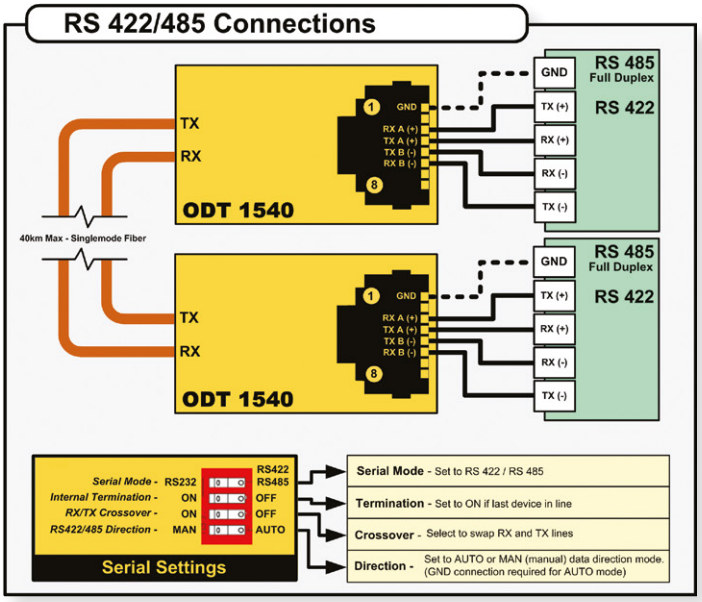
yellobrik® ODT 1540

Connection Diagrams

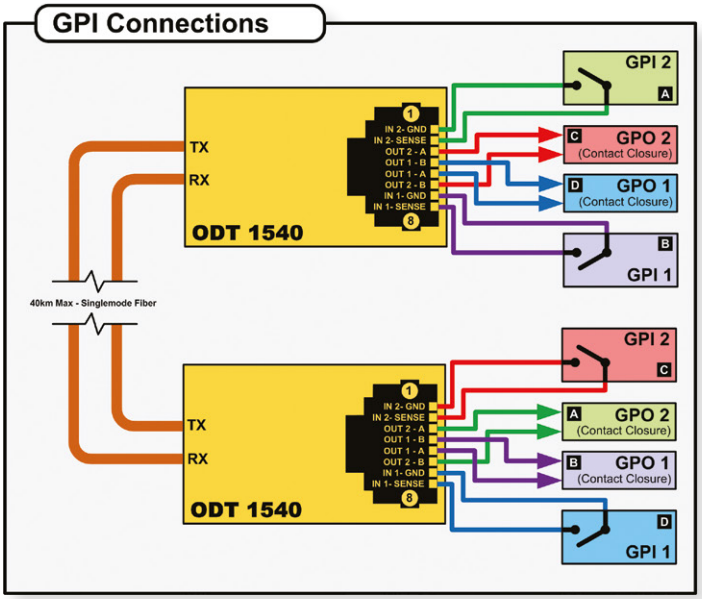
RS 232 Connections



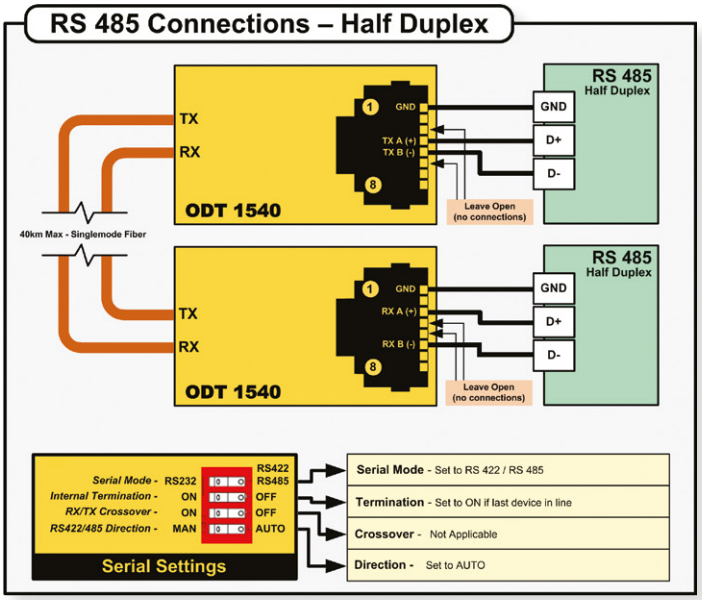
RS 422/485 Connections



GPI Connections



RS 485 Connections – Half Duplex



Power Adapter Options

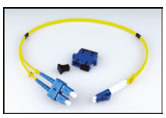
The kit INCLUDES AC power supplies. The power adapters below are optional.

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

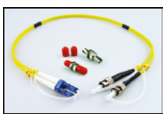
XLR 1000
Use with a standard 4 pin XLR camera battery power source.

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



LC/SC DUP
LC/PC to SC/PC Adapter



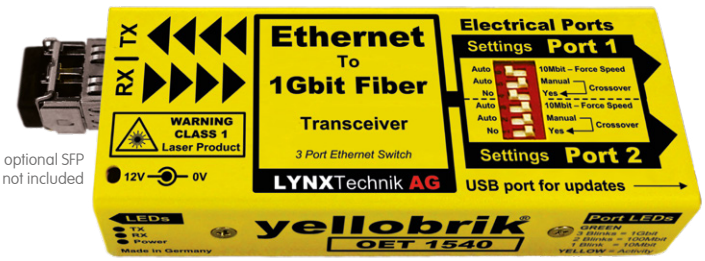
LC/ST DUP
LC/PC to ST/PC Adapter

Specifications subject to change

yellobrik® OET 1540

Ethernet to Fiber Transceiver (switch) - CWDM

- Supports standard Ethernet inputs up to 1 Gbit
- 3 port Ethernet switch (1 fiber, 2 electrical)
- Auto (10/100/1000) port speed detection
- Manually force 10Mbit electrical speed (if needed)
- Fiber transceiver speed always 1 Gbit
- Auto or manual electrical crossover selection
- Distances up to 40km (24.8 miles) over fiber
- 18 CWDM wavelength selections (ITU-T G.694.2)



Installed optional SFP shown is not included

The OET 1540 is a compact CWDM compatible Ethernet 3 port switch, designed to extend the reach of electrical Ethernet signals over long distances using a constant (fixed) high speed 1 Gbit optical transceiver speed.

18 selectable CWDM wavelengths are provided to enable the module to be used in a multiplexed CWDM environment. When paired with another OET 1540 at the receiving end (using two fiber links) you have a cost-effective Ethernet extender system for distances up to 40km - providing a stable, high speed 1Gbit error free optical connection between locations.

The OET 1540 has two standard RJ45 electrical Ethernet ports plus fiber I/O and functions as a 3 port Ethernet switch. For legacy system use; each electrical Ethernet port can be set for automatic speed detection (10/100/1000) or forced to 10Mbit, and each port can use auto crossover detection or be forced manually if needed. These functions are available using the dip switch.

Technical Specifications

Ethernet	2 x Ethernet ports, RJ 45 Connectors. 10 BaseTUTP category 3,4 or 5 cable up to 328ft/100m (2 pairs) 100 BaseTXUTP category 5 cable up to 328ft/100m (2 pairs) 1000 BaseTXUTP category 5 cable up to 328ft/100m (4 pairs)
	Auto detect bit rate (10/100/1000), or force to 10Mbit for each port (selectable)
	Automatic crossover detection or force manually for each port (selectable)
	Port speed / activity LED indication (next to Ethernet port)
Fiber Optic	**1 x fiber optic input** (Range 1270-1610nm, Sensitivity -3dBm to -23dBm) **1 x fiber optic output** CWDM (ITU-T G.694.2) 18 selectable wavelengths Duplex (Single mode) using LC/PC Connections
	IEEE 802.3z (1000BASE-X Gbit/s Ethernet over Fiber at 1 Gbit/s (125 MB/s)
	Fiber TX active and RX active LEDs on side of module
	Max. distance approx. 40km (24.8 miles - Singlemode)
Power	+12VDC @ 1.5W nominal without SFP +12VDC @ 2.3W nominal with SFP (supports 7 - 15VDC input range)
Physical	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OET 1540 - (EAN# 4250479315426)
Includes	Module, AC power supply, mini USB cable

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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.

Ordering Info:
Note: The **OET 1540** price **DOES NOT INCLUDE** the fiber transmitter SFP sub module. Please specify the required wavelength from the option list below.

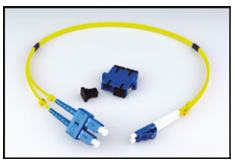
CWDM Wavelength Options. ITU-T G.694.2 (select one)

Wave-length	TX Power	RX Sensitivity	Option #
1270nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1270-LC**
1290nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1290-LC**
1310nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1310-LC**
1330nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1330-LC**
1350nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1350-LC**
1370nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1370-LC**
1390nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1390-LC**
1410nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1410-LC**
1430nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1430-LC**

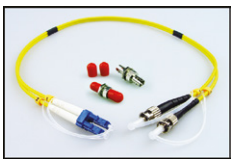
Wave-length	TX Power	RX Sensitivity	Option #
1450nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1450-LC**
1470nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1470-LC**
1490nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1490-LC**
1510nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1510-LC**
1530nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1530-LC**
1550nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1550-LC**
1570nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1570-LC**
1590nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1590-LC**
1610nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1610-LC**

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# **LC/SC DUP**
LC/PC to SC/PC Adapter



Model# **LC/ST DUP**
LC/PC to ST/SC Adapter

Specifications subject to change

yellobrik® OTR 1240

MADI / Fiber Transceiver - CWDM

- MADI Optical to MADI Coaxial converter
- Supports up to 64 channels of audio (IN and OUT)
- Real time conversion with no degradation of signal quality
- Distances up to 40km (24.8 miles) over fiber
- 18 CWDM wavelength selections (ITU-T G.694.2)
- Duplex LC singlemode optical connections
- Supports hot swapping and hot plugging

Installed optional SFP shown is not included

The OTR 1240 is a MADI fiber transmitter and receiver combined in a single package. The module is designed to convert up to 64 audio channels bidirectionally (64 IN & 64 OUT) between MADI Optical and MADI Coaxial (electrical) formats. Conversion is real time (no latency) and does not degrade the signal quality.

The OTR 1240 is compact and cost-effective solution to extend the reach of MADI audio over long distances. When paired with another OTR 1240 at the receiving end (using two fiber links) you have a cost-effective, zero latency MADI extender system for distances up to 40km.

18 selectable CWDM wavelengths are provided to enable the module to be used in a multiplexed CWDM environment.

Technical Specifications

Coax Input	1 x 75 Ohm BNC connector
	Supported standards: AES10-2008
	Cable length 250m (Belden 1694A)
Coax Output	1 x 75 Ohm BNC connector
	Amplitude: 750mV P/P
	Cable length 250m (Belden 1694A)
Fiber Optic	1 x fiber optic input (Input Range 1270-1610nm, Sensitivity -3dBm to -23dBm) 1 x fiber optic output CWDM (ITU-T G.694.2) 18 selectable wavelengths - see table Duplex connection using LC Connections
	Max. Distance approx. 40km (24.8 miles - Singlemode)
Power	+12VDC @ 2.7W nominal (with SFP installed) - (supports 7 - 16VDC input range) LED power present indicator
Physical	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	OTR 1240 - (EAN# 4250479324695)
Includes	Module, AC power supply

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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.

Ordering Info:
Note: The **OTR 1240** price **DOES NOT INCLUDE** the fiber transmitter SFP sub module. Please specify the required wavelength from the option list below.

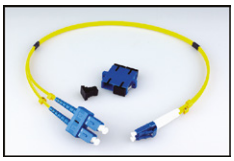
CWDM Wavelength Options. ITU-T G.694.2 (select one)

Wave-length	TX Power	RX Sensitivity	Option #
1270nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1270-LC**
1290nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1290-LC**
1310nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1310-LC**
1330nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1330-LC**
1350nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1350-LC**
1370nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1370-LC**
1390nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1390-LC**
1410nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1410-LC**
1430nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1430-LC**

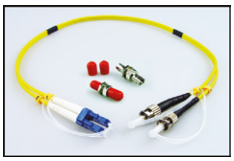
Wave-length	TX Power	RX Sensitivity	Option #
1450nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1450-LC**
1470nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1470-LC**
1490nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1490-LC**
1510nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1510-LC**
1530nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1530-LC**
1550nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1550-LC**
1570nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1570-LC**
1590nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1590-LC**
1610nm	-5 to 0 dBm	-21dBm	**OH-TR-54-1610-LC**

Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the module. SMF 0.5m (19.6") tail introduces less than 0.25dB attenuation.



Model# LC/SC DUP
LC/PC to SC/PC Adapter



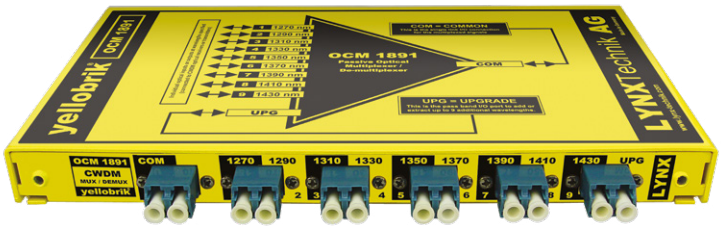
Model# LC/ST DUP
LC/PC to ST/SC Adapter

Specifications subject to change

yellobrik® OCM 1891

9 Channel CWDM Multiplexer / Demultiplexer [1270nm - 1430nm]

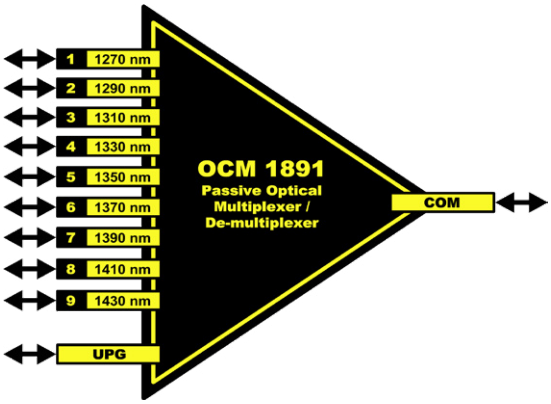
- Send / receive up to 9 channels over a single fiber
- 1270nm to 1430nm (ITU-T G.694.2)
- Passive operation (no power required)
- Combine with OCM 1892 for 18 channels
- LC/PC single mode optical connections
- Optional ½ RU 19" rack frame



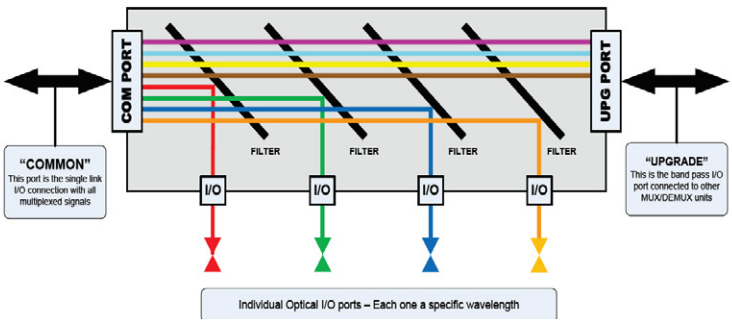
The OCM 1891 is a compact CWDM passive 9 channel optical multiplexer / demultiplexer designed to send or receive up to 9 individual signals over a single fiber link. The module has an UPG (Upgrade) port to connect to the OCM 1892, which expands the capability of the modules to 18 CWDM channels

The modules can be used standalone or integrated into the optional RFR 1018 1/2 RU 19" rack frame, ideal for system installations.

Ideally suited for use with the CWDM yellobrik fiber modules (all 18 wavelengths available).



Optical Multiplexing / Demultiplexing Principle



Example shown above has been arranged this way to show nomenclature typically used for optical multiplexer/ de-multiplexer port descriptions.

Technical Specifications

Optical I/O	9 x Fiber Optic I/O channels (1 through 9) Center frequencies taken from ITU-T G.694.2 1270,1290,1310,1330,1350,1370,1390,1410,1430 nm
	1 x COM (common) connection = multiplexed I/O
	1 x UPG (Upgrade) I/O connection (pass band connection to OCM 1892 module)
	LC/PC connectors SMF (single mode)
	Channel Insertion loss: 2.7dB UPG Insertion loss: 2.7dB
	Polarization dependant loss: max 0.2dB
	Return Loss: > 45dB
	Isolation (to adjacent channel): > 30dB
	Directivity > 55dB
	Temp. dependant loss: < 0.005dB/°C
	Temp. dependant change of wavelength: < 0.003nm/°C
	Max. input power: 500mw
	Single or full duplex operation
Power	None required (passive operation)
Physical	Size: L: 108mm x W: 198mm x H:19mm (4.25" x 7.79" x 0.75") Weight: 230g (8.1oz)
Model #	OCM 1891 - (EAN# 4250479318915)
Includes	Module

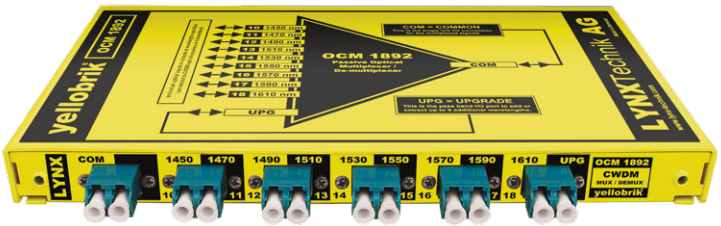
Optional RFR 1018 ½ RU 19" Rack chassis with 2 x OCM modules

Specifications subject to change

yellobrik® OCM 1892

9 Channel CWDM Multiplexer / Demultiplexer [1450nm - 1610nm]

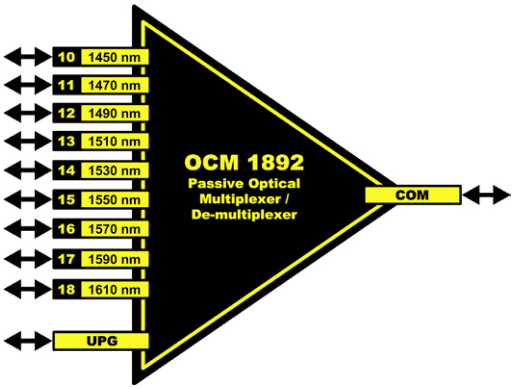
- Send / receive up to 9 channels over a single fiber
- 1450nm to 1610nm (ITU-T G.694.2)
- Passive operation (no power required)
- Combine with OCM 1891 for 18 channels
- LC/PC single mode optical connections
- Optional ½ RU 19" rack frame



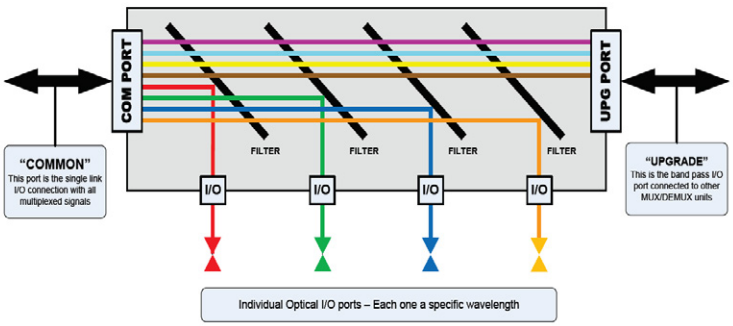
The OCM 1892 is a compact CWDM passive 9 channel optical multiplexer / demultiplexer designed to send or receive up to 9 individual signals over a single fiber link. The module has an UPG (Upgrade) port to connect to the OCM 1891, which expands the capability of the modules to 18 CWDM channels

The modules can be used standalone or integrated into the optional RFR 1018 1/2 RU 19" rack frame, ideal for system installations.

Ideally suited for use with the CWDM yellobrik fiber modules (all 18 wavelengths available).



Optical Multiplexing / Demultiplexing Principle



Example shown above has been arranged this way to show nomenclature typically used for optical multiplexer/ de-multiplexer port descriptions.

Technical Specifications

Optical I/O	9 x Fiber Optic I/O channels (10 through 18) Center frequencies taken from ITU-T G.694.2 1450,1470,1490,1510,1530,1550,1570,1590,1610 nm
	1 x COM (common) connection = multiplexed I/O
	1 x UPG (Upgrade) I/O connection (pass band connection to OCM 1892 module)
	LC/PC connectors SMF (single mode)
	Channel Insertion loss: 2.7dB UPG Insertion loss: 2.7dB
	Polarization dependant loss: max 0.2dB
	Return Loss: > 45dB
	Isolation (to adjacent channel): > 30dB
	Directivity > 55dB
	Temp. dependant loss: < 0.005dB/°C
	Temp. dependant change of wavelength: < 0.003nm/°C
	Max. input power: 500mw
	Single or full duplex operation
Power	None required (passive operation)
Pnysical	Size: L: 108mm x W: 198mm x H:19mm (4.25" x 7.79" x 0.75") Weight: 230g (8.1oz)
Model #	OCM 1892 - (EAN# 4250479318922)
Includes	Module

Optional RFR 1018 ½ RU 19" Rack chassis with 2 x OCM modules

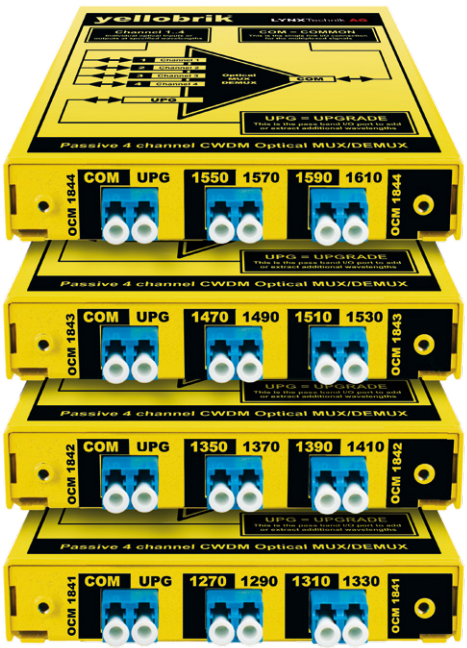
Specifications subject to change

yellobrik®

OCM 1841, OCM 1842
OCM 1843, OCM 1844

4 Channel CWDM Multiplexers / Demultiplexers

- Send / receive up to 4 channels over a single fiber link
- Passive operation (no power required)
- Combine all four modules for up to 16 channels
- LC/PC single mode optical connections
- Optional ½ RU 19" rack frame (RFR 1018)

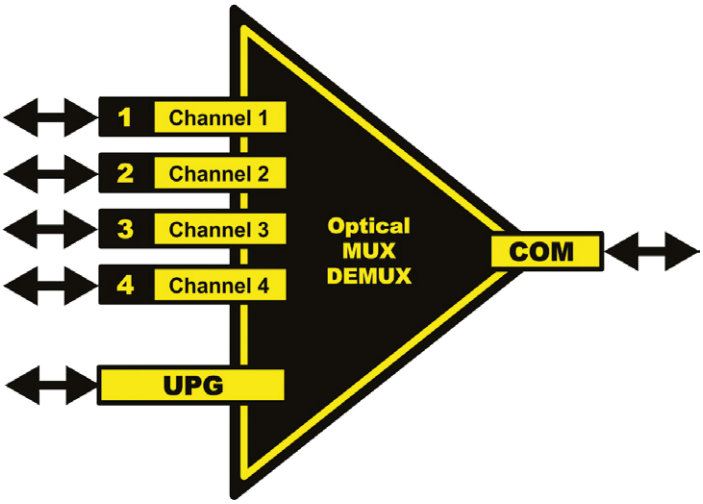


The **OCM 1841, OCM 1842, OCM 1843, OCM 1844** are compact CWDM passive 4 channel optical multiplexers / demultiplexers designed to send and receive up to 4 individual signals over a single fiber link. Each module has an UPG (Upgrade) port to cascade into the other 4 channel modules, expanding the capability of the system to a maximum of 16 channels.

The modules can be used standalone or integrated into the optional RFR 1018 1/2 RU 19" rack frame, which can accommodate all four modules. Ideal for system installations.

Ideally suited for use with the CWDM yellobrik fiber modules (all 16 wavelengths are available).

Model	Channel 1	Channel 2	Channel 3	Channel 4
OCM 1841	1270nm	1290nm	1310nm	1330nm
OCM 1842	1350nm	1370nm	1390nm	1410nm
OCM 1843	1470nm	1490nm	1510nm	1530nm
OCM 1844	1550nm	1570nm	1590nm	1610nm



Technical Specifications

Optical I/O	4 x Fiber Optic I/O channels Center frequencies taken from ITU-T G.694.2 **OCM 1841** = 1270,1290,1310,1330nm **OCM 1842** = 1350,1370,1390,1410nm **OCM 1843** = 1470,1490,1510,1530nm **OCM 1844** = 1550,1570,1590,1610nm
	1 x COM (common) connection = multiplexed I/O
	1 x UPG (Upgrade) I/O connection (pass band connection to other OCM 189x modules)
	LC/PC connectors SMF (single mode)
	Channel Insertion loss: 2.7dB , UPG Insertion loss: 1dB
	Polarization dependant loss: max 0.2dB
	Return Loss: > 45dB
	Isolation (to adjacent channel): > 30dB
	Directivity > 55dB
	Temp. dependant loss: < 0.005dB/°C
	Temp. dependant change of wavelength: < 0.003nm/°C
	Max. input power: 500mw
	Single or full duplex operation
Power	None required (passive operation)
Physical	Size: 120mm x 100mm x 19mm (4.72" x 3.93" x 0.75") Weight: 140g (4.9oz)
Model #	OCM 1841 - (EAN# 4250479319417) OCM 1842 - (EAN# 4250479319424) OCM 1843 - (EAN# 4250479319431) OCM 1844 - (EAN# 4250479319448)
Includes	Module

Specifications subject to change

yellobrik®

OSP 1812
OSP 1812 M
OSP 1814

Passive Optical Splitters / Combiners

The OSP 1812, OSP 1812 M and OSP 1814 are compact optical splitters that are used to split or combine a fiber optic signal.

Three versions are available:

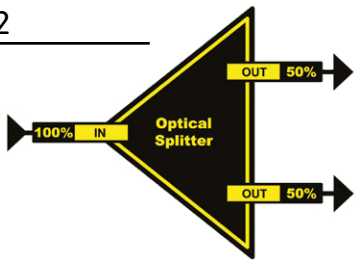
OSP 1812
One input (100%) and two outputs (each 50%)

OSP 1812 M
One input (100%) and two outputs, one at 90% power and a second at 10% power. Typically used as a monitoring output.

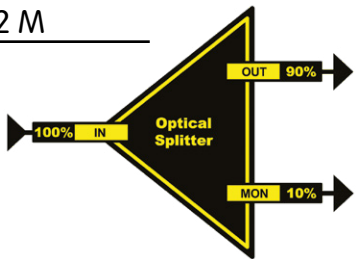
OSP 1814
One input (100%) and four outputs (each 25%)

These yellobriks are passive in operation, which means they require no power. They can be used as standalone modules or mounted into the yellobrik RFR 1018 19" rack frame.

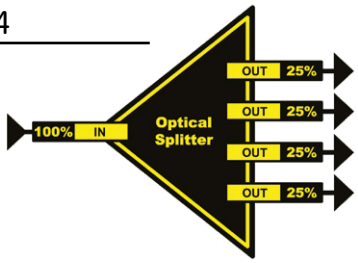
OSP 1812



OSP 1812 M



OSP 1814



Technical Specifications

OSP 1812 Optical I/O	1 x Fiber input 2 x Fiber outputs Split Ratio: 50% / 50%
OSP 1812 M Optical I/O	1 x Fiber input 2 x Fiber outputs Split Ratio: 90% / 10%
OSP 1814 Optical I/O	1 x Fiber input 4 x Fiber outputs Split Ratio: 25% / 25% / 25% / 25%
Optical Connections	LC/PC (singlemode) Operating wavelength 1260nm - 1650nm
Performance	Insertion loss (including connector) OSP 1812 and OSP 1812M = 4.0 dB OSP 1814 = 7.6dB
	Polarization dependant loss: max 0.3dB
	Return loss: > 55dB
	Directivity: > 55dB
	Max input power: 500mW
Power	None required (passive operation)
Physical	Size: L: 125mm x W: 100mm x H:19mm (4.92" x 3.93" x 0.75") Weight: 120g (4.3oz)
Ambient	-40°C to +70°C (-41 to 185°F) 90% Humidity (non condensing)
Model #	OSP 1812 - (EAN# 4250479359796) OSP 1812 M - (EAN# 4250479359802) OSP 1814 - (EAN# 4250479359819)
Includes	Module

Specifications subject to change

yellobrik®

RCT 1012

yellobrik Rack Controller

- One slot yellobrik module
- Supports control up to 12 yellobriks
- Provides 12 USB A ports for connection
- 4 x GPI connections for monitoring power supply status of RFR 1000-1
- 1 x Ethernet 10/100/1000
- 1 x Reset button for changing the settings to default values
- 1 x mini USB for maintenance
- LED Status for power, USB overcurrent, and high temperature warning
- APPolo GUI / Server compatible to access module settings

The RCT 1012 is a compact one slot yellobrik module designed to combine the control of up to 12 yellobrik modules to an ethernet port. It is a one-stop solution for the management and control of several yellobriks in an easy, fast, and efficient manner without requiring an individual connection to each module for setting parameters or updating the firmware. All connected yellobrik modules are visible on the network remotely.

RCT 1012 automatically discovers the connected yellobrik modules and displays them in the device tree below the controller node. It allows bulk firmware updates of all the selected yellobrik modules and facilitates the configuration of all the connected yellobriks via the IP network.

RCT 1012, when mounted on an RFR 1000-1 rack frame, will provide status information of the primary and redundant power supply via 4 GPI contacts.

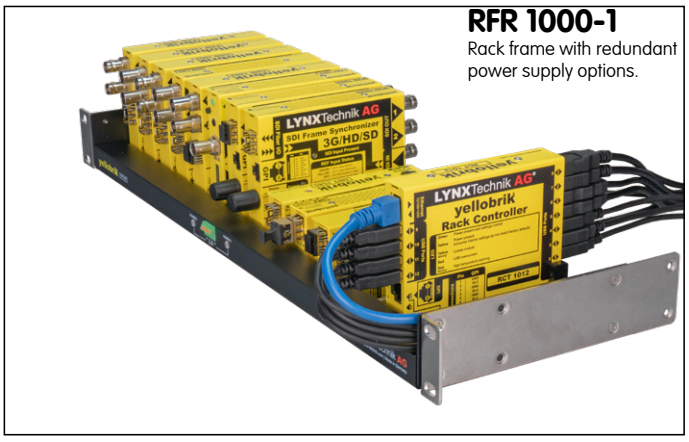
Technical Specifications

Network	10/100/1000 Ethernet (RJ-45)
USB	12x USB Type A 1 x mini USB type B
GPI	Connector: RJ45 with 4x External GPI inputs GPI 1 to GPI 4: used for monitoring RFR 1000 primary and redundant power supplies
Power	+12VDC @ 4 W nominal - (supports 7 - 24VDC input range)
Physical	Size: 108 mm x 90mm x 22mm (4.25" x 3.54" x 0.86") including connectors Weight: 125g (4.4oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	RCT 1012- (EAN# 4250479326675)
Includes	Module, AC power supply

Note: When connected to mini USB type B, all other connections including USB Type A and network will be disabled. Care must be taken to avoid any undesirable loss of network and yellobrik connectivity for remote monitoring.

Rack Frame Options

OPTIONAL rack mount solutions are available.



RFR 1000-1
Rack frame with redundant power supply options.

Power Adapter Options

The kit **INCLUDES** AC power supplies. The power adapters below are optional.

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.

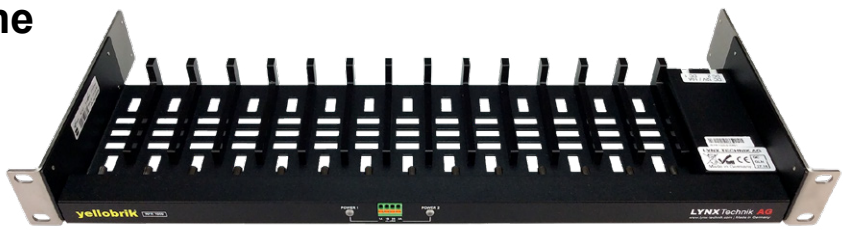
Specifications subject to change

yellobrik®

RFR 1000-1

yellobrik 19” 1RU Rack Frame

- Compact 1 RU design
- Will accommodate up to 14 yellobriks
- External 12VDC power inputs
- Primary and redundant power options
- Power failure alarm GPO outputs
- Adjustable 19” mounting brackets to recess frame



The RFR 1000-1 is a compact 1 RU high mounting frame designed for yellobriks. Up to 14 yellobriks can be vertically mounted and are mechanically clamped securely in place. Each slot has its own integrated power connector on a central power bus.

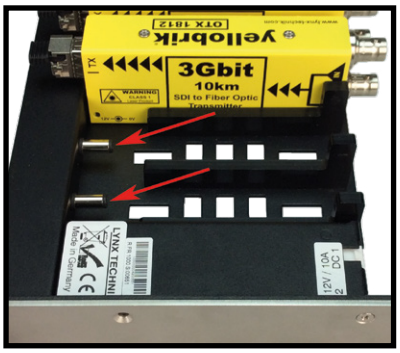
The rack has two external 12VDC inputs for power, one for primary power, the second for redundant backup. An optional external power brick is available which provides enough power for any combination of yellobriks. A second unit can be used for redundant backup.

Primary and redundant power LEDs are located in the front panel as well as GPO connections for the power supply failure alarms.

While the frame will accommodate all yellobriks, it is ideally suited for the yellobrik fiber converters, which are typically used in larger numbers. Fiber connections are on the front and the SDI copper connection in the rear. A space is left open on one side to route the fiber loops from front to rear making for a very clean installation. The module fiber RX and TX activity LEDs can be seen clearly from the front with the modules installed. To protect the fiber cables and connections the 19” mounting brackets can be repositioned to recess the rack frame.

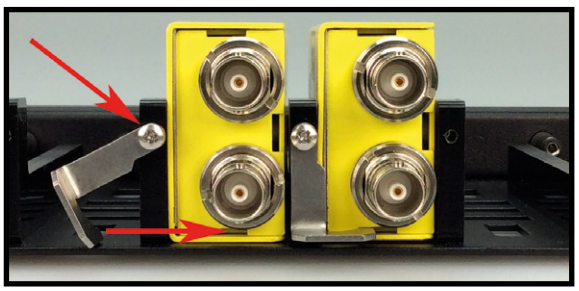
Technical Specifications

Power Inputs	External +12VDC primary power input External +12VDC redundant power input Connector: Molex Mini Fit Series5557 Power LED’s on front of chassis Primary and redundant power failure GPO alarm outputs
Size	19” Rack mount x 1RU high x 145mm deep (5.7”)
Weight	1.6 Kg (3.52 Lbs) - with no modules installed
Model #	RFR 1000-1 (EAN# 4250479324725)
Options	RPS 1000-1 EU external power supply with EU power cord RPS 1000-1 UK external power supply with UK power cord RPS 1000-1 US external power supply with US power cord (use 2 units for primary and redundant power protection)
Includes	Rack Frame assembly (empty) and qty 14 module securing brackets



Power connectors on integrated power bus

Rear of rack frame showing power connectors and one optional external power brick (use second brick for redundant protection)



Modules are clamped securely into position

yellobrik®

RFR 1001

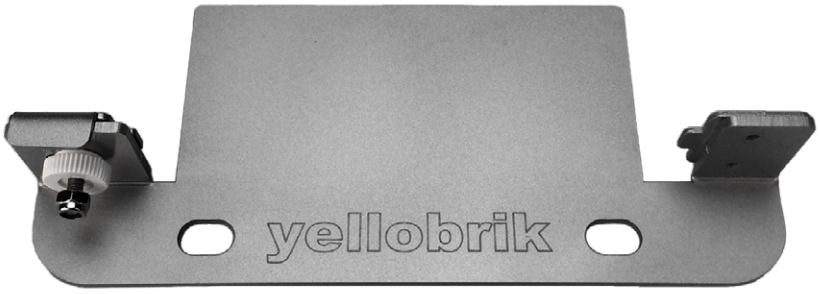
Module Mounting Bracket for Single Yellobrik

- Robust metal mounting bracket
- Mount on any flat surface
- Ideal for mounting on 19" rack rails
- No tools needed for module installation

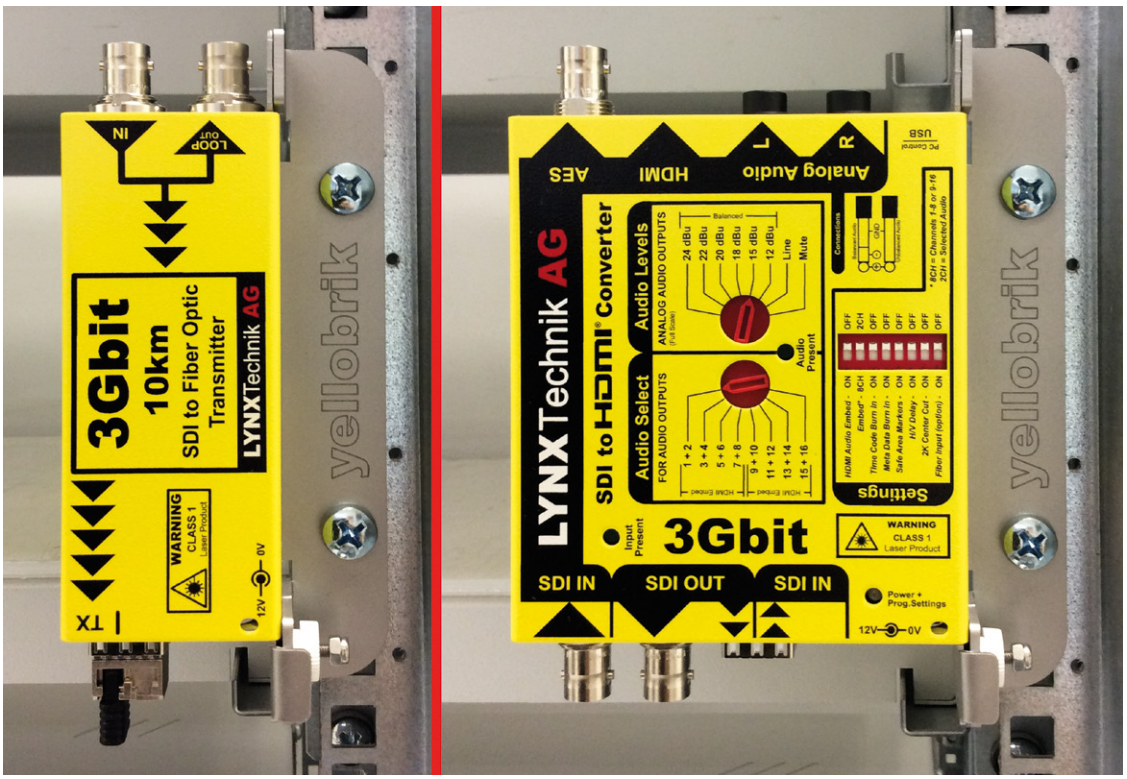
The RFR 1001 is a robust metal mounting solution for a single yellobrik. The bracket can accommodate the smaller and larger modules using the mounting slots provided in the yellobrik.

The bracket can be mounted on any flat surface using suitable screws or bolts (not supplied). The mounting holes are on 19" rack rail centers which makes it ideal for mounting yellobriks in the rear of equipment rack frames; keeping them secure and out of the way.

No tools are required for module installation and removal, this is accomplished using a nylon thumbscrew.



Bracket shown mounted on 19" rack rails



yellobrik®

RFR 1018

19” 0.5RU Mounting Tray

- Small footprint only 0.5 RU High x 19” Rack mount
- For use with: OCM 1891 / 1892
  OCM 1841 / 1842 / 1843 / 1844
  OSP 1812 / 1812M / 1814
  OTX 1441 / ORX 1441
  OTX 1442 / ORX 1442
- Easy module mounting - no tools needed
- Combine with RFR 1000-1 frame for system use

Specifications

Size	L 400mm (19”) x D 135mm (5.3”) x H 0.5RU
Material	Aluminum
Weight	0.4kg (0.9Lbs)
Model #	RFR 1018 - (EAN# 4250479310186)
Includes	Mounting Chassis

The RFR 1018 Mounting Tray is designed to accommodate a variety of LYNX yellobrik modules providing a secure mounting platform in any standard 19” rack.

Modules are easily installed from the front and held securely in place a thumbscrew.

When combined with the RFR 1000-1 Chassis (which can accommodate up to 14 fiber yellobriks) a fully featured 18 channel modular CWDM system can be accommodated in a total of 1.5RU rack space - see below.

Specifications subject to change

yellobrik®

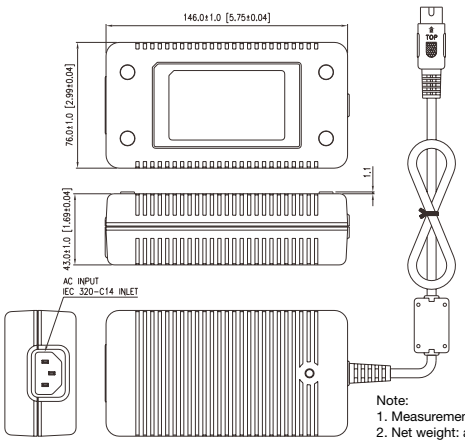
RPS 1000-1

External power supply for RFR 1000-1

- Wide Operating Voltage 90 to 264 VAC,47 to 63 Hz
- IEC-320-C14 Input Inlet
- Single Output
- Active power factor correction

The RPS 1000-1 AC/DC switching mode power supply unit provides 100 watts of continuous output power. This power supply unit is meant to be used with RFR 1000-1, the yellobrik 19" 1RU Rack Frame. The power supply is UL 94V-1 min compliant. It meets FCC part-15 class B and CISPR-22 class B emission limits.

RPS 1000-1



Note:
1. Measurements are in mm [inch]
2. Net weight: approx. 490g~670g

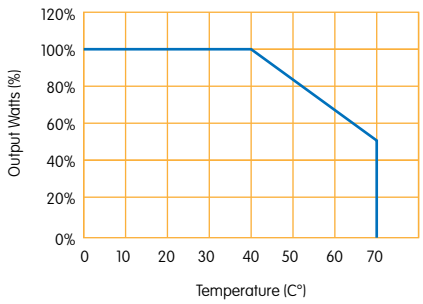
Electrical Characteristics

Vin	Safety Approvals Input Voltage Range		100~240 VAC
	Input Operate Voltage Range		90~260 VAC
fin	Input Frequency		47~63 Hz
Po	Output Power Range		100 W (max.)
Vo	Output Voltage Range		11 ~ 13 VDC
Io	Output Current Range		7.69~ 9.09 A
Iil	Input Current (Low Line)	Io=Full load, Vin=100VAC	1.2 A (typ..)
Iih	Input Current (High Line)	Io=Full load, Vin=240VAC	0.5 A (typ.)
Ir	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=-100VAC	50 A (max.)
	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=-240VAC	120 A (max.)
Eff	Efficiency	Io=Full Load, Vin=230VAC	88 (typ.)
REG-i	Line Regulation	Io=Full Load, Vin=100~120VAC	1 %
REG-o	Load Regulation	Vin=230VAC	3~5 %
OVP	Over Voltage Protection		112%(min) - 132% (max)
OLP	Over Load Protection	Recovers automatically after fault condition is removed	110%(min) - 150% (max)
Ttr	Time of Transient Response	Io=Full Load to Half Load, Vin=110VAC	4 ms (max.)
Th	Hold-Up Time	Io=Full Load, Vin=100VAC	16 ms (min.)
Ts	Start Up Time	Io=Full Load, Vin=100~240VAC	2 s (max.)
Vp-p	Ripple & Noise(Peak to Peak)	Full Load, Vin=90VAC	130mV$_{p-p}$
Ilk	Leakage Current	Vin=240VAC/60Hz	0.75 mA (max.)
TC	Temperature Coefficient	All output	±0.04 %/ °C
Pno	No-Load Power Consumption	No load, Vin=230VAC	0.075W (typ.)
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242 VDC (min.)

Enviromental

To	Operating Temperature	See derating curve
Ts	Storage Temperature	-40~85°C
Ho	Operating Humidity	0~95%
Hr	Storage Humidity	0~95%
MTBF	Operating Temperature at 25 C Calculated per MIL-HDBK-217F	0.1M Hrs (min.)
Pd	Derate linearly from 100% load at 40°C to 50% load at 70°C	

Derating Curve



Ordering Information

EAN / UPC	Model	Description
4250479325722	RPS 1000-1 EU	External power supply for R FR 1000-1 incl. EU power cord
4250479325739	RPS 1000-1 UK	External power supply for R FR 1000-1 incl. UK power cord
4250479325746	RPS 1000-1 US	External power supply for R FR 1000-1 incl. US power cord

Rev 1.0 Specifications subject to change

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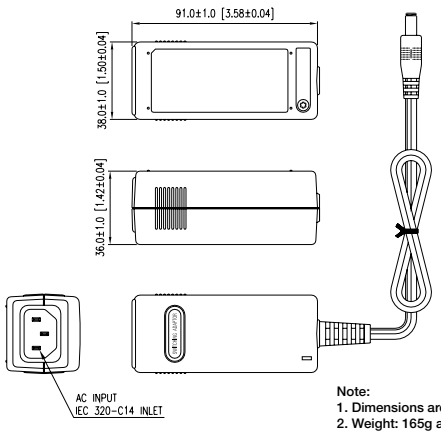
RPS 1003

Inline brick power supply for single yellobrik

- Wide Operating Voltage 90 to 264 VAC,47 to 63 Hz
- IEC-320-C14 Input Inlet
- Single Output
- Class I system

The RPS 1003 AC/DC switching mode power supply unit provides 15 watts of continuous output power. This power supply unit is meant to be used with a single yellobrik module. The power supply is UL 94V-1 min compliant. It meets FCC part-15 class B and CISPR-22 class B emission limits.

RPS 1003



Note:
1. Dimensions are shown in mm.
2. Weight: 165g approx

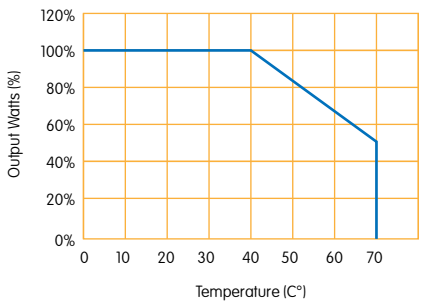
Electrical Characteristics

Vin	Safety Approvals Input Voltage Range		100~240 VAC
	Input Operate Voltage Range		90~264 VAC
fin	Input Frequency		47~63 Hz
Po	Output Power Range		15 W (max.)
Vo	Output Voltage Range		11 ~ 13 VDC
Io	Output Current Range		1.15 ~ 1.36 A
Iil	Input Current (Low Line)	Io=Full load, Vin=100VAC	0.4 A (max.)
Iih	Input Current (High Line)	Io=Full load, Vin=240VAC	0.16 A (typ.)
Ir	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=100VAC	35~45 A
	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=240VAC	70~90 A
Eff	Efficiency	Io=Full Load, Vin=230VAC	84.5% (typ.)
REG-i	Line Regulation	Io=Full Load	0.5~1 %
REG-o	Load Regulation	Vin=230VAC	3~7 %
OVP	Over Voltage Protection		Nil
OCP	Over Current Protection	Nil.But,Output protected to short circuit conditions	
Ttr	Time of Transient Response	Io=Full Load to Half Load, Vin=110VAC	4 ms (max.)
Th	Hold-Up Time	Io=Full Load, Vin=100VAC	8 ms (min.)
Ts	Start Up Time	Io=Full Load, Vin=100~240VAC	2 s (max.)
Vp-p	Ripple & Noise(Peak to Peak)	Full Load, Vin=90VAC	100mV$_{p-p}$
Ilk	Leakage Current	Vin=240VAC/60Hz	0.75 mA (max.)
TC	Temperature Coefficient	All output	±0.04 %/ °C
Pno	No-Load Power Consumption	No load, Vin=230VAC	0.075W (typ.)
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242 VDC (min.)

Enviromental

To	Operating Temperature	See derating curve
Ts	Storage Temperature	-40~85°C
Ho	Operating Humidity	0~95%
Hr	Storage Humidity	0~95%
MTBF	Operating Temperature at 25 C Calculated per MIL-HDBK-217F	0.1M Hrs (min.)
Pd	Derate linearly from 100% load at 40°C to 50% load at 70°C	

Derating Curve



Ordering Information

EAN / UPC	Model	Description
4250479310032	RPS 1003	In line brick power supply for single yellobrik

yellobrik®

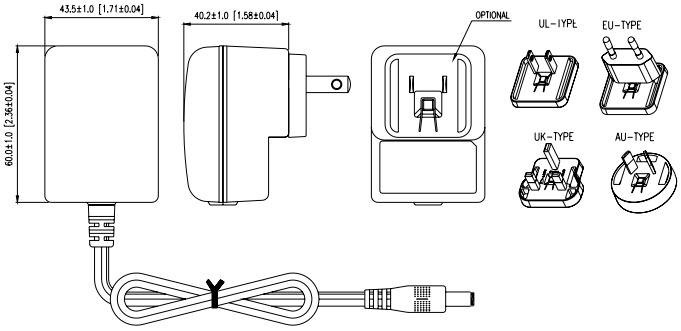
RPS 1001

External wall plug power supply for single yellobrik

- Wide Operating Voltage 90 to 264 VAC,47 to 63 Hz
- Interchangeable Plug
- Single Output
- Class II
- Energy Star 2.0, Efficiency level V

The RPS 1001 AC/DC switching mode external wall plug power supply unit provides 15 watts of continuous output power. This power supply unit is meant to be used with a single yellobrik module.

RPS 1001 with interchangeable wall plugs



Note :
1. Dimensions are shown in mm.
2. Weight: 165g approx.
3. Optional output connector: See page Appendix.

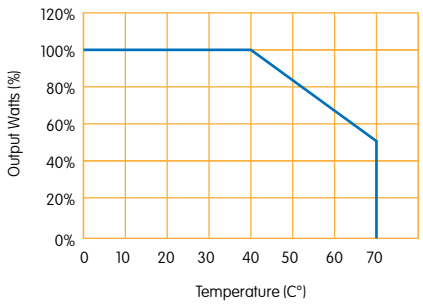
Electrical Characteristics

Vin	Safety Approvals Input Voltage Range		100~240 VAC
	Operate Voltage Range		90~264 VAC
fin	Input Frequency		47~63 Hz
Po	Output Power Range		15 W (max.)
Vo	Output Voltage Range		11 ~ 13 VDC
Io	Output Current Range		1.15 ~ 1.36 A
Iil	Input Current (Low Line)	Io=Full load, Vin=100VAC	0.4 A (max.)
Iih	Input Current (High Line)	Io=Full load, Vin=240VAC	0.16 A (max.)
Ir	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=100VAC	35~45 A
	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=240VAC	70~90 A
Eff	Efficiency	Io=Full Load, Vin=230VAC	84.2%
REG-i	Line Regulation	Io=Full Load	0.5~1 %
REG-o	Load Regulation	Vin=230VAC	4~5 %
OVP	Over Voltage Protection		Nil
OCP	Over Current Protection	Nil.But,Output protected to short circuit conditions	
Ttr	Time of Transient Response	Io=Full Load to Half Load, Vin=100VAC	4 ms (max.)
Th	Hold-Up Time	Io=Full Load, Vin=110VAC	8 ms (min.)
Ts	Start Up Time	Io=Full Load, Vin=100~240VAC	3 s (max.)
Vp-p	Ripple & Noise(Peak to Peak)	Full Load, Vin=90VAC	200mV$_{p-p}$
Ilk	Leakage Current	Vin=240VAC/60Hz	0.25 mA (max.)
TC	Temperature Coefficient	All output	±0.04 %/ °C
Pno	No-Load Power Consumption	No load, Vin=230VAC	0.1 W
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242 VDC (min.)

Enviromental

To	Operating Temperature	See derating curve
Ts	Storage Temperature	-40~85°C
Ho	Operating Humidity	0~95%
Hr	Storage Humidity	0~95%
MTBF	Operating Temperature at 25 C Calculated per MIL-HDBK-217F	0.1M Hrs (min.)
Pd	Derate linearly from 100% load at 40°C to 50% load at 70°C	

Derating Curve



Ordering Information

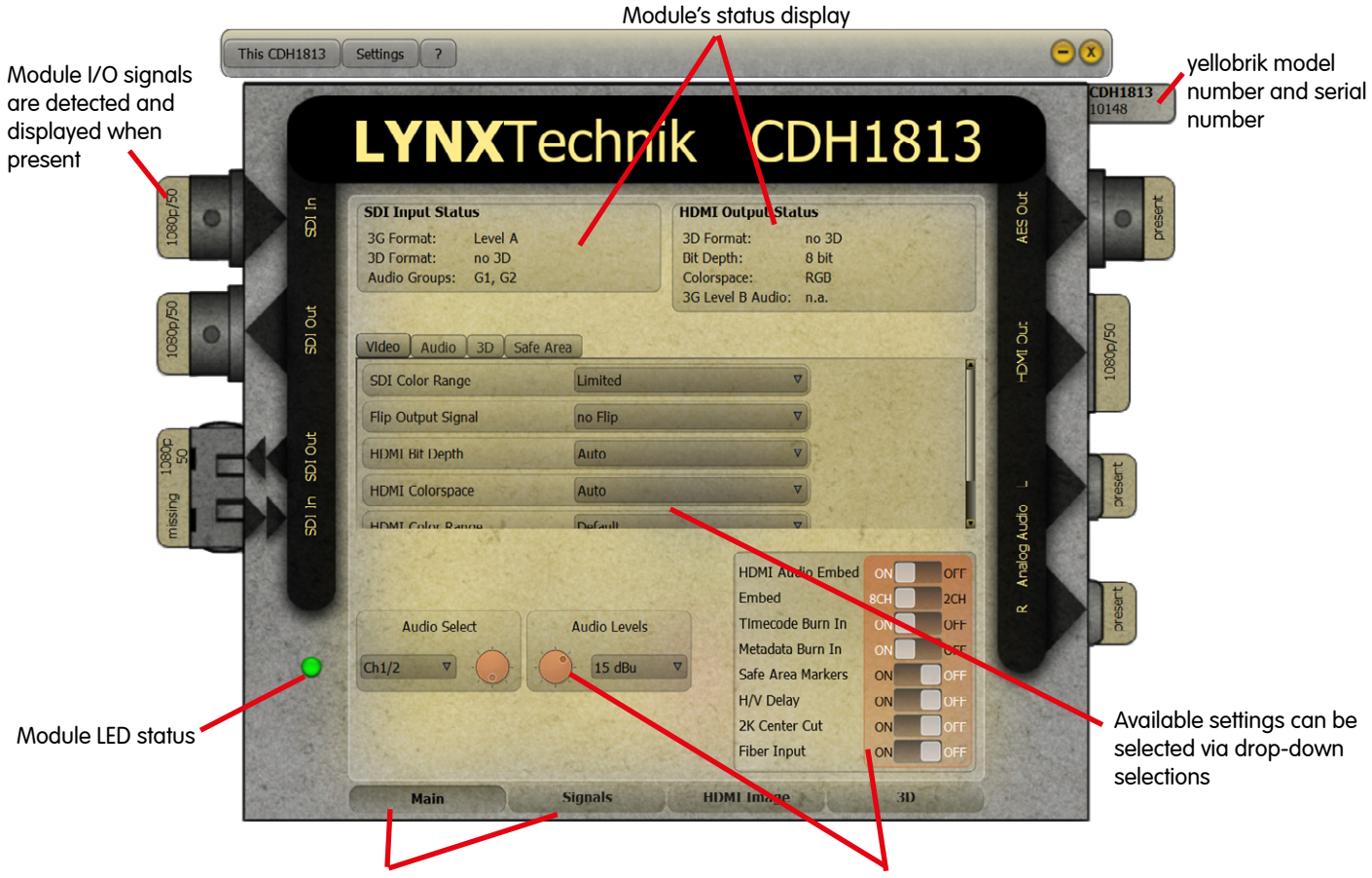
EAN / UPC	Model	Description
4250479310018	RPS 1001	External wall plug power supply for single yellobrik

Specifications subject to change

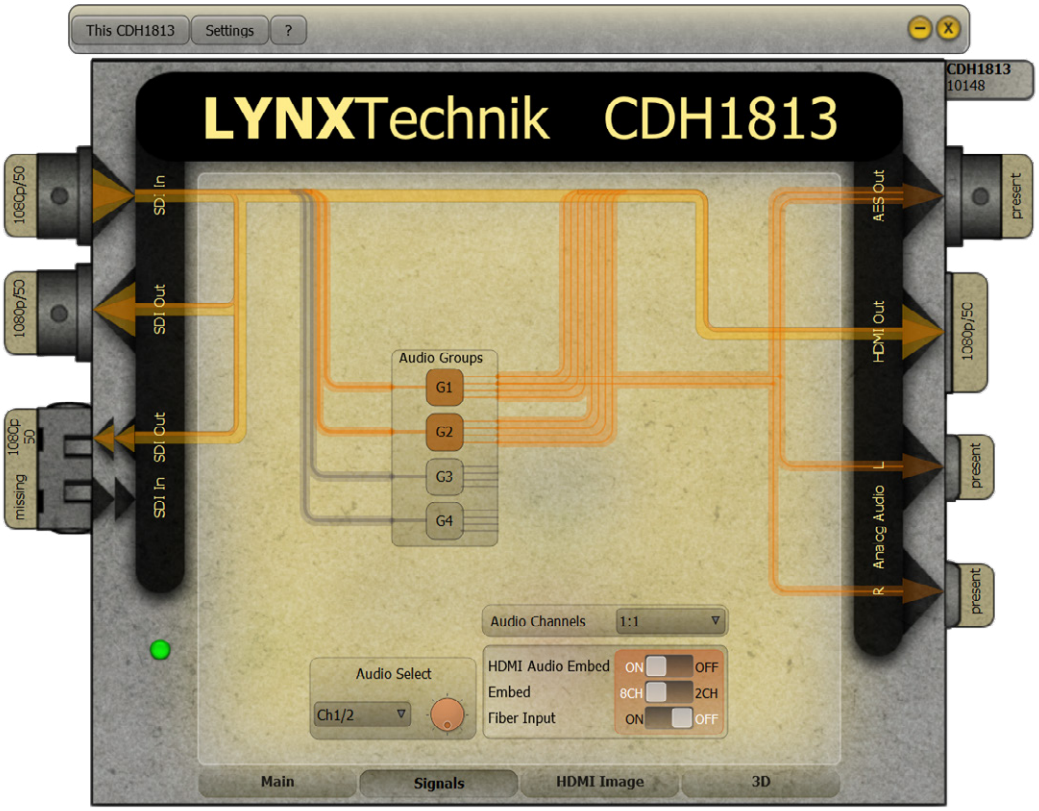
yelloGUI - Overview

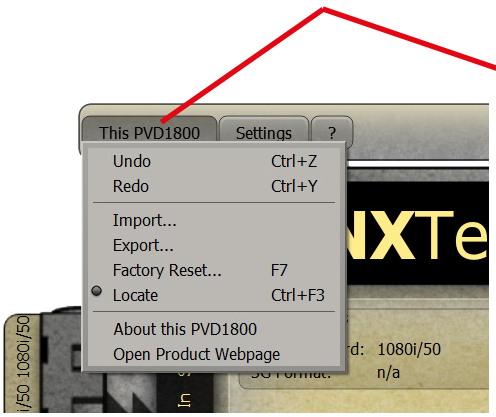
yelloGUI is a complimentary software application. It allows users to access the yellobrik module controls and extended features via a PC or MAC.

The software will scan the USB ports to detect the connected module. When a module is connected, the appropriate user interface is automatically displayed. The display is a graphical representation of the module's layout for connections and I/O. The yelloGUI software application is designed to be intuitive and easy to use. Theoretically a USB hub or a 'daisy chain' will allow up to 127 yellobrik to be connected to a single PC or Mac. (A powered USB hub may be required)



The signal flow screen (selected using the button at the bottom of the GUI) offers a useful graphical representation of the video and/or audio signal flow through the module. Relevant controls are also placed in the signal paths so you can see exactly what signal the setting is changing. The signal path only illuminates when signals are present.

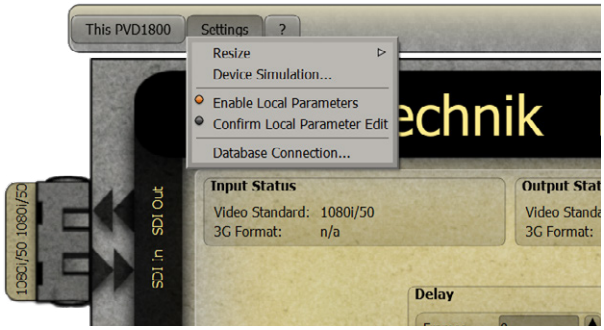




Click on the model number to bring up additional selections.

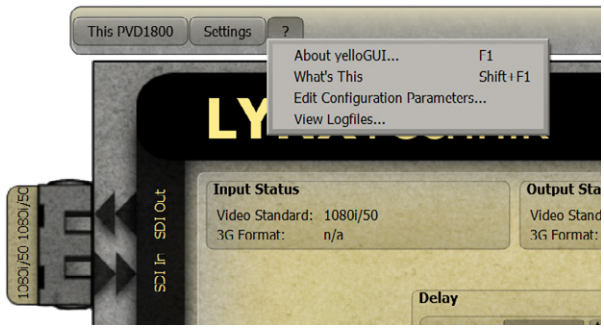
The additional selections are used to undo or redo settings, import and export stored settings, and perform a factory reset.

The "about" option is useful to determine the module's firmware version.



Some modules will have a "settings" button, which allows the user to override the local switch settings and change them using the GUI controls. The LED on the yellobrik will turn RED indicating that at least one of the local switch settings has been overwritten by the software.

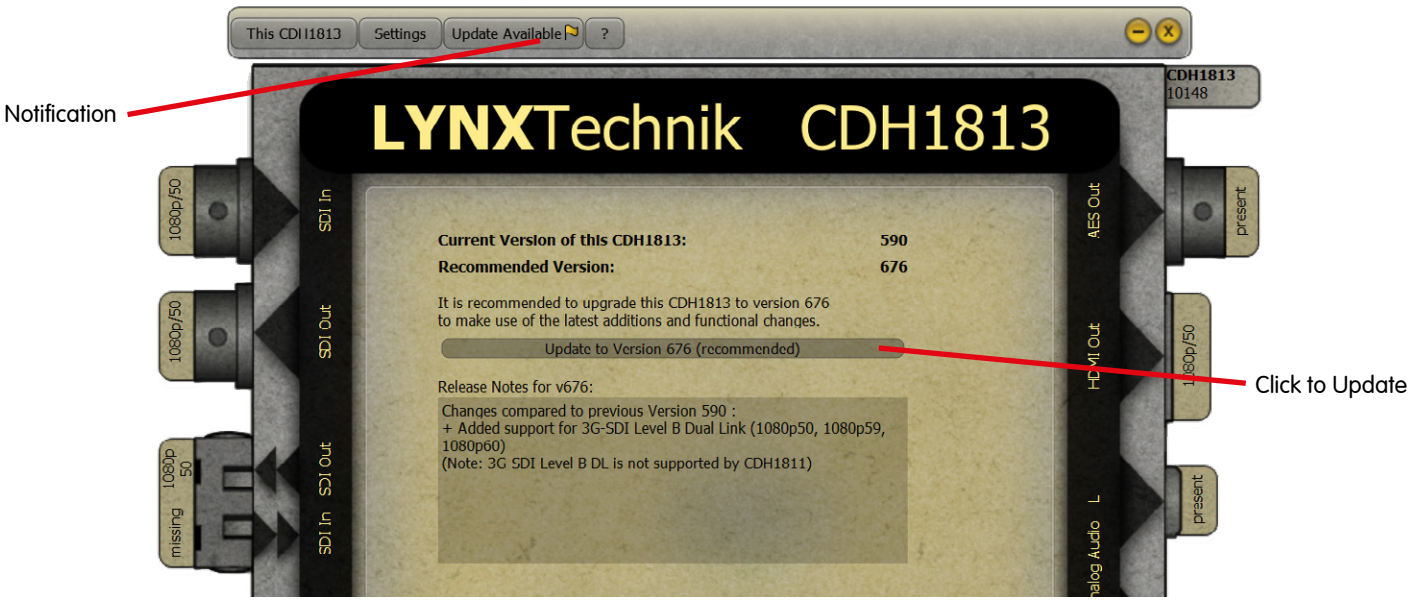
Note: As soon as any local switch is changed, the settings revert back to the physical switch settings.



The GUI offers contextual help for many of the module's functions. For enhanced help, click on the "question mark" and select "what's this." A small question mark will now appear on the mouse cursor. Simply click on the parameter you wish to know more about and more details will be provided.

Get Connected

Register for a direct connection to our update server and yelloGUI will automatically let you know when a new release of the firmware is available for download. Simply click and install the firmware update directly from the application. The new "simulate mode" will let you explore the GUI controls for all supported modules.



Downloading yelloGUI

The yelloGUI application is a free download from the LYNX website.

www.lynx-technik.com > downloads > yelloGUI

yelloGUI can be run in simulation mode to show and adjust all parameters and settings of all applicable yellobriks. (Setings/ Device Simulation)

We are constantly adding yelloGUI compatibility to modules. Please check the website for a complete list of currently supported modules. If the yellobrik has a USB port, then the firmware is upgradeable. We also have all firmware releases available for download from the LYNX website.

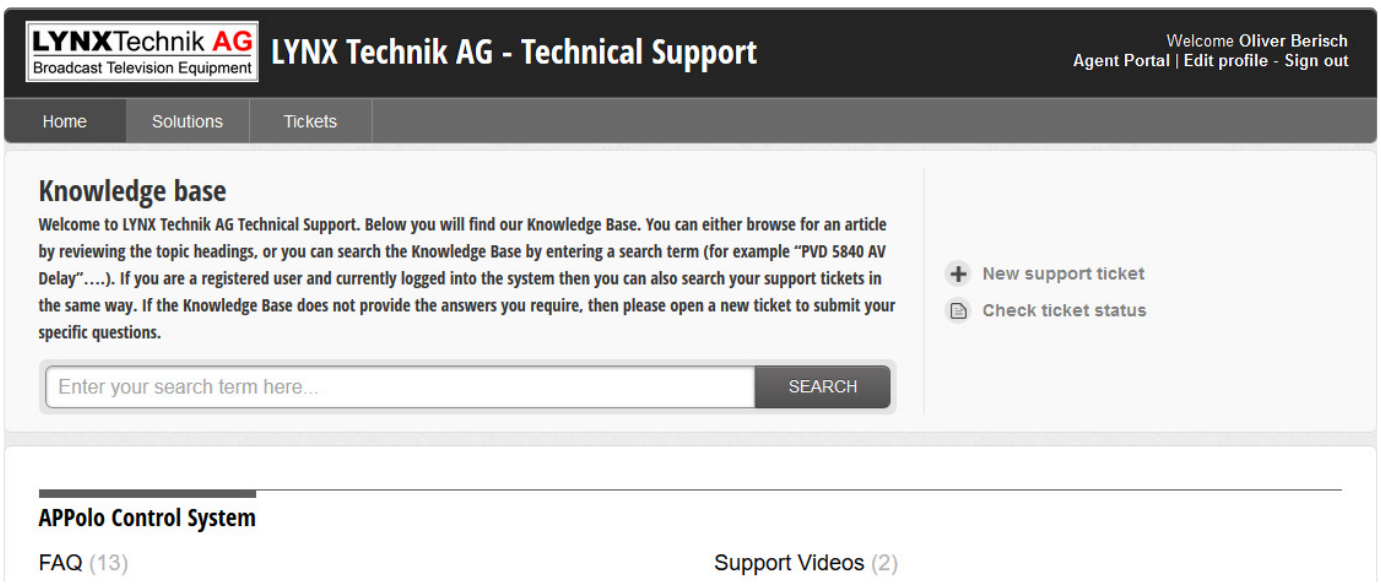
Register Your Product to Stay Informed

Please register your product on the LYNX Technik website. This activates the warranty coverage and provides you with access to any technical support you may need.. You can also save a list of all your purchased LYNX Technik products, which will help you to keep track of your products and warranty status. It also allows us to notify you with important firmware updates or service bulletins related to your products.

Have Questions? Need Technical Support?

Visit and search the knowledge base on the LYNX Technik website. We have a lot of articles, tips and suggestions which should answer most of your questions. If you need further assistance or technical support, open a support ticket and we will respond quickly.

www.lynx-technik.com > support > Tech. support



Warranty

LYNX Technik AG warrants that the product will be free from defects in materials and workmanship for a period of three (3) years from the date of shipment. If this product proves defective during the warranty period, LYNX Technik AG at its option will either repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product.

In order to obtain service under this warranty, customer must notify LYNX Technik of the defect before expiration of the warranty period and make suitable arrangements for the performance of service. Customer shall be responsible for packaging and shipping the defective product to the service center designated by LYNX Technik, with shipping charges prepaid. LYNX Technik shall pay for the return of the product to the customer if the shipment is within the country which the LYNX Technik service center is located. Customer shall be responsible for payment of all shipping charges, duties, taxes and any other charges for products returned to any other locations.

This warranty shall not apply to any defect, failure, or damage caused by improper use or improper or inadequate maintenance and care. LYNX Technik shall not be obligated to furnish service under this warranty a) to repair damage resulting from attempts by personnel other than LYNX Technik representatives to install, repair or service the product; b) to repair damage resulting from improper use or connection to incompatible equipment; c) to repair any damage or malfunction caused by the use of non LYNX Technik supplies; or d) to service a product which has been modified or integrated with other products when the effect of such modification or integration increases the time or difficulty servicing the product.

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Specifications subject to change