

A close-up photograph of a brick wall. The wall is made of reddish-brown bricks with grey mortar. In the center, one brick is replaced by a bright yellow brick. The word "yellobrik" is printed in a bold, black, sans-serif font on the yellow brick. The lighting is dramatic, with the yellow brick and the text being the brightest elements, while the surrounding bricks and mortar are in deep shadow.

**yellobrik<sup>®</sup>**

finally, bricks done right..

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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 con's, we started the development of a complete new family of bricks, different and more feature rich than the rest - **yellobrik's**.

We all know how annoying and frustrating it can be when changing a connection or setting 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.

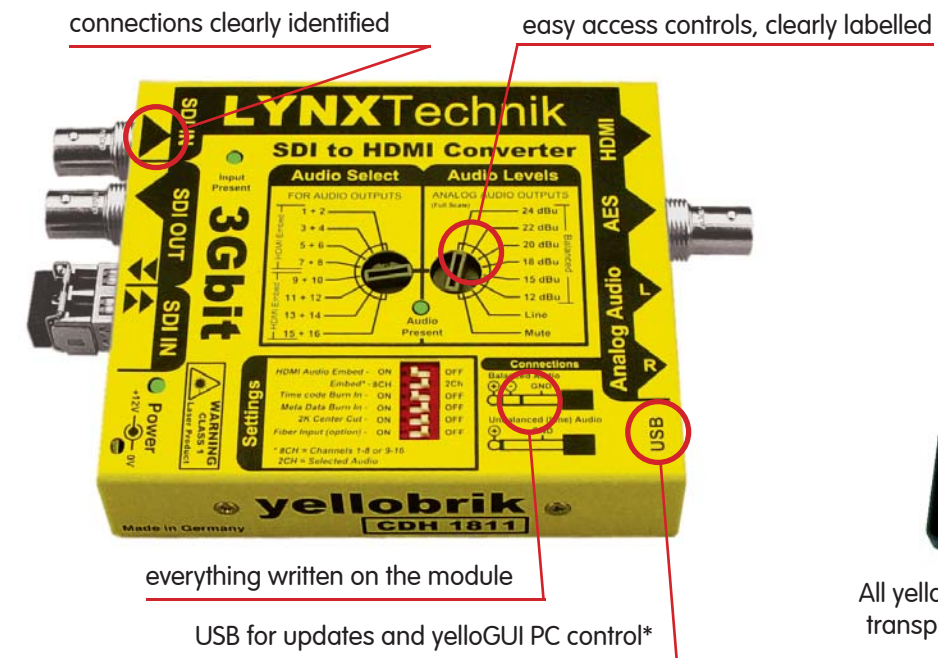
Even though yellobrik's are low cost utility products, reliability and technical performance are key to their functionality. Yellobrik's are the most stable and technically proficient bricks available and are backed by excellent after sales service and support.

We include all the accessories needed: The module, power supply, AC plug adapters plus a USB cable, audio adapters and HDMI cables if required. All of this is supplied in a small plastic transport case - all included in the price.

Some yellobrik's are field upgradeable. When we release new firmware, updates are always free to download and install. Simply download the update from our website, plug in a USB cable and click.. **Nothing could be easier.**

We offer a complimentary PC or MAC desktop application - **yelloGUI**, which can be used to access extended feature sets and settings within select yellobrik's. With yelloGUI, you will also receive push notifications of new firmware releases and with a simple click the module can be updated.

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.



All yellobrik's are supplied in a custom plastic transport case with power supply and other accessories

\*on select modules

### SDI to HDMI® Converter

- Support for SDI video inputs up to 3Gbit/s (1080P)
- 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 burn in windows
- 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. In addition 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. 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.

### Technical Specifications

<b>SDI Input</b>	1 x SDI video on 75 Ohm BNC connector  SMPTE ST 259M (SDTV) SMPTE ST 292-1 (HDTV 1.5 Gb/s) SMPTE 424 M (3Gb/s) supporting ST 425-1 Level A and ST 425-2 <small>For a detailed list of supported formats please refer to the article in our knowledge base ( www.lynx-technik.com &gt; support &gt; tech.support )</small>  Support for 'single link' 3D modes: "side by side", "top-bottom" and "dual stream (SMPTE ST-423-2)"  Return Loss: > 15dB to 1.5GHz and > 10dB up to 3GHz  Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s
<b>Fiber Input</b>	1 x fiber optic SDI input. SMPTE 297M - 2006 (Optional- see fiber options table)
<b>SDI Output</b>	1 x reclocked SDI video output on 75 Ohm BNC connector
<b>Fiber Output</b>	1 x reclocked fiber optic SDI output. SMPTE 297M - 2006 (Optional- see fiber options table)
<b>HDMI Output</b>	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"  24 bit (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)  Balanced 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 (phono) to RCA connection adapters supplied
<b>AES Output</b>	AES3id on 75 Ohm BNC, 2 channels (selectable)
<b>Audio Output</b>	Left and right analog audio using 1/4 inch jack sockets (phono sockets)  Balanced 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 (phono) to RCA connection adapters supplied
<b>USB</b>	Standard USB port for yelloGUI interface and firmware updates (Mini Type "B" plug)
<b>Power</b>	+12VDC @ 3.7W nominal - ( supports 10 - 14VDC input range )
<b>Physical</b>	Size: 138mm x 90mm x 22mm (5.13" x 3.54" x 0.86") including connectors Weight: 230g (8.11oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	CDH 1813 - ( EAN# 4250479359833 )
<b>Includes</b>	Module, AC power supply, RCA adapters, HDMI + USB cable, transport case

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

### 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

- Display up to three timecode values (if present) ( 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



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

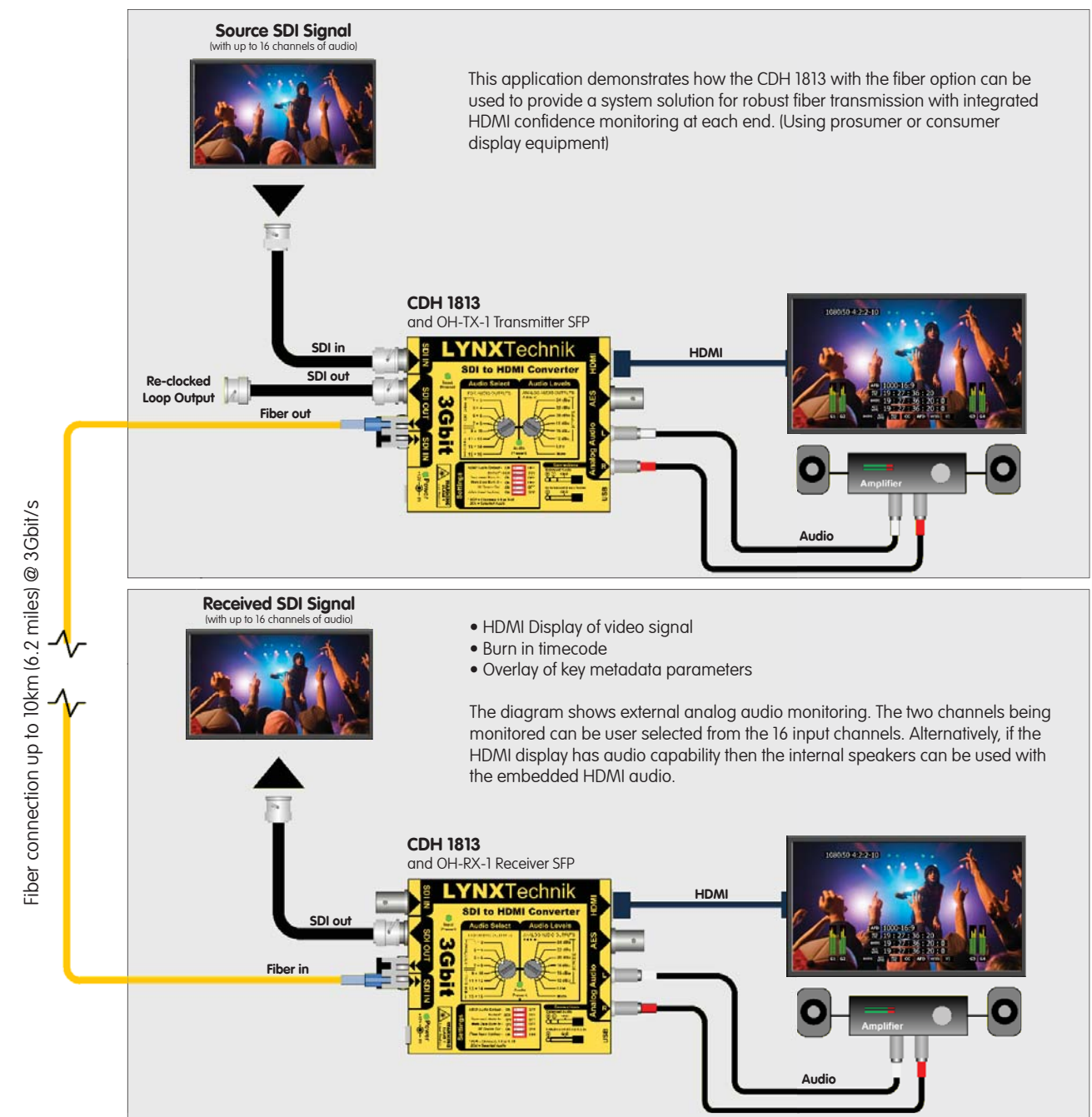
The on screen markers can be custom configured to suit any application. This includes various "standard" safe area markers, aspect ratio markers with adjustable curtain transparency. The color of the markers may also be changed.

Parameter	Settings	Parameter	Settings	Parameter	Settings
<b>SDI input RGB Range</b>	SMPTE Limited	<b>HDMI Color Range</b>	SMPTE Limited	<b>Audio Channels</b>	1:1
	Full Range		Full Range		Convert*
<b>HDMI Input Bit Depth</b>	AUTO	<b>HDMI Color Space</b>	AUTO	*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)	
	8 bit		RGB		
	10 bit		Y,Cr,Cb 4:2:2		
	12 bit		Y,Cr,Cb 4:4:4		
Parameter	Settings	Parameter	Settings	Parameter	Settings
<b>3D HDMI Output Format</b>	AUTO	<b>3D SDI Input Format</b>	AUTO	<b>Swap SDI Streams</b>	Regular
	Frame Packing (FP)		Side by Side (SS)		Inverted
	Side by Side (SS)		Top and Bottom (TB)	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.	
	Top and Bottom (TB)		Dual Stream (3G/LevelB)		
			2D (no 3D)		
<b>3D Flip Left Eye</b>	NO FLIP	<b>3D Flip Right Eye</b>	NO FLIP	<b>Horizontal Flip</b>	NO FLIP
	Horizontal		Horizontal		FLIP
	Vertical		Vertical	This mode flips the input signal horizontally to show a mirror image on the HDMI output. Useful for Virtual Set (Green Screen) on set monitoring.	
	Both		Both		

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.



### 3Gbit HDMI® to SDI Converter + Frame Synchronizer

- Supports SD/HD/3G -SDI formats
- 3D support
- 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

#### Technical Specifications

<b>HDMI Input</b>	3D compatible input using type A connector  Up to 8 channels embedded audio in HDMI is passed transparently or replaced with external analog audio input
<b>Reference Input</b>	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
<b>Frame Synchronizer</b>	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
<b>SDI Outputs</b>	2 x SDI video, 75 Ohm BNC. (both have the same signal - NOT dual link) SMPTE ST 259M (SDTV), SMPTE ST 292-1 (HDTV 1.5Gb/s) SMPTE ST 424M (3Gb/s) supporting ST 425-1 Level A and ST 425-2 (3D)  Multi-standard output. SDTV (525/625) 720p and 1080p (23.98/24/25/29.97/30/50/59.94/60 Hz) 1080i (50/59.94/60 Hz)
<b>Fiber Output</b>	Optional plug in SFP for optical SDI output (see fiber options table)
<b>Audio Inputs</b>	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: <math>\pm 0.2\text{dB}</math> 20Hz to 20KHz  48kHz A/D sample rate (free run or frequency locked to reference input)
<b>Power</b>	+12VDC @ 4.7W nominal - (supports 10 - 14VDC input range)
<b>Physical</b>	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") including connectors Weight: 230g (8.11oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	CHD 1812 - (EAN# 4250479318335)
<b>Includes</b>	Module, AC power supply, RCA adapters, HDMI + USB cable, transport case

Specifications subject to change

The CHD 1812 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)
OH-TX-0-850-MM	SFP Fiber TX- Multimode - LC conn. - 300m	-5dBm (850nm)
SDI CWDM Fiber Transmitter Options		
Model	Description	Power
OH-TX-4-XXXX	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.)

### 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=Cut and H=Box / V=Vertical and H=Horizontal)

SDI Output	HDMI Input Resolution								
	SDTV 720x [56]25	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			24Hz		
	29.97Hz	30Hz	25Hz	29.97Hz	30Hz	25Hz
	59.94Hz	60Hz	50Hz	59.94Hz	60Hz	50Hz
HDMI Input	SDI Output Formats					
525 / 59.94Hz	525 / 59.94Hz	525 / 60Hz	625 / 50Hz	525 / 59.94Hz	525 / 60Hz	625 / 50Hz
720p / 59.94Hz	720p / 59.94Hz	720p / 60Hz	720p / 50Hz	720p / 59.94Hz	720p / 60Hz	720p / 50Hz
720p / 29.97Hz	720p / 29.97Hz	720p / 30Hz	720p / 25Hz	720p / 29.97Hz	720p / 30Hz	720p / 25Hz
720p / 23.98Hz	720p / 23.98Hz	720p / 30Hz	720p / 24Hz	720p / 23.98Hz	720p / 30Hz	720p / 24Hz
1080i / 59.94Hz	1080i / 59.94Hz	1080i / 60Hz	1080i / 50Hz	1080i / 59.94Hz	1080i / 60Hz	1080i / 50Hz
1080p / 59.94Hz	1080p / 59.94Hz	1080p / 60Hz	1080p / 50Hz	1080p / 59.94Hz	1080p / 60Hz	1080p / 50Hz
1080p / 29.97Hz	1080p / 29.97Hz	1080p / 30Hz	1080p / 25Hz	1080p / 29.97Hz	1080p / 30Hz	1080p / 25Hz
1080p / 23.98Hz	1080p / 23.98Hz	1080p / 30Hz	1080p / 24Hz	1080p / 23.98Hz	1080p / 30Hz	1080p / 24Hz

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

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

HDMI inputs with @ 24/25/50Hz Frame Rates

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

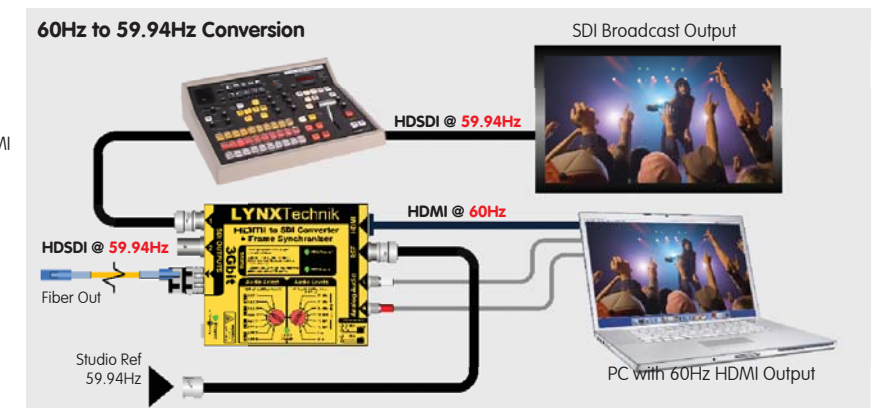
### CHD 1812 Frame Rate Conversion Applications

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 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.



## 3Gbit HDMI® to SDI Converter

- Supports SD/HD/3G -SDI formats
- 3D support
- 2 x SDI outputs
- Optional SDI fiber output
- HDMI embedded audio passed transparently
- HDMI present LED indication
- yelloGUI compatible to access additional internal settings

The CHD 1802 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.



Shown with Fiber SFP Option Installed

### Technical Specifications

<b>HDMI Input</b>	3D compatible input using type A connector
	Up to 8 channels embedded audio in HDMI is passed transparently
<b>SDI Outputs</b>	2 x SDI video, 75 Ohm BNC. (both have the same signal - NOT dual link) SMPTE ST 259M (SDTV), SMPTE ST 292-1 (HD-TV 1.5Gb/s) SMPTE ST 424M (3Gb/S) supporting ST 425-1 Level A and ST 425-2 (3D)
	Multi-standard output. SDTV (525/625) 720p and 1080p (23.98/24/25/29.97/30/50/59.94/60 Hz) 1080i (50/59.94/60 Hz)
<b>Fiber Output</b>	Optional plug in SFP for optical SDI output (see fiber options table)
<b>Power</b>	+12VDC @ 4W nominal - ( supports 10 - 14VDC input range )
<b>Physical</b>	Size: 123mm x 90mm x 22mm (4.84" x 3.54" x 0.86") - including connectors Weight: 175g (6.17oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	CHD 1802 - ( EAN# 4250479318328 )
<b>Includes</b>	Module, AC power supply, HDMI + USB cable, transport case

### 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-0-850-MM	SFP Fiber TX- Multimode - LC conn. - 300m	-5dBm (850nm)

### SDI CWDM Fiber Transmitter Options

Model	Description	Power
OH-TX-4-XXXX	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, etc.)

### 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)

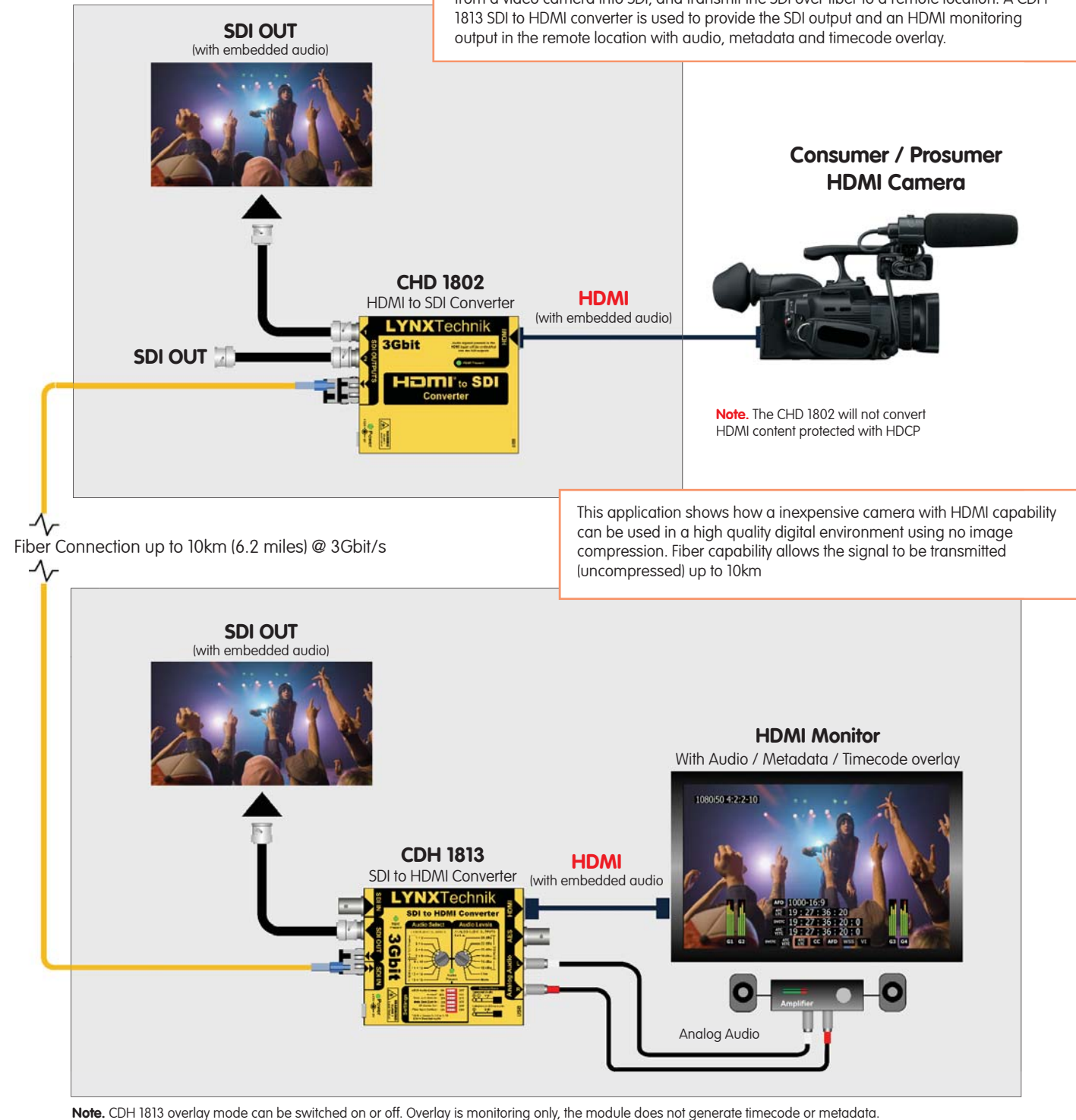
The table below shows the input to output resolution settings that are applied is AUTOMATIC mode. The yelloGUI interface provides the ability to manually set the output resolution independently of the input resolution. For these cases the table below also lists the conversion mode applied to optimally fit the manually selected SDI output format by either cropping or boxing the image ( C=Cut and H=Box / V=Vertical and H=Horizontal )

SDI Output	HDMI Input Resolution									
	SDTV 720x [56]25	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	

Specifications subject to change

## CHD 1802 Application

An example application is shown below, using the CHD 1802 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.



Consumer / Prosumer  
HDMI Camera

**Note.** The CHD 1802 will not convert HDMI content protected with HDCP

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 10km

HDMI Monitor

With Audio / Metadata / Timecode overlay

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

### 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
- yelloGUI compatible to access additional internal settings

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 it's 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.



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

<b>SDI Input</b>	1 x SDI video on 75 Ohm BNC connector SMPT 424M, SMPT 292M, SMPT 259M 3G Level A & B-DL & B-DS according to SMPT ST 425-1 with image formats 1280 x 720 and 1920 x 1080 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) 1080p (23.98/24/25/29.97/30 Hz) 1080i (50/59.94/60 Hz) Return Loss: > 15dB to 1.5Gbit/s and > 10dB up to 3Gbit/s Automatic cable EQ (Belden 1694A cable) 250m @ 270Mbit/s, 140m @ 1.5Gbit/s, 80m @ 3Gbit/s
<b>Fiber I/O</b>	(optional) 1 x fiber optic input and output (see table) SMPT 297M - 2006
<b>SDI Output</b>	1 x SDI video on 75 Ohm BNC connector SMPT 424M, SMPT 292M, SMPT 259M 3G Level A & B-DL & B-DS according to SMPT ST 425-1 with image formats 1280 x 720 and 1920 x 1080
<b>AES I/O (switchable)</b>	4 x AES3id unbalanced inputs or outputs on 75 Ohm BNC connectors AES group selection provided via rotary switch
<b>Power</b>	+12VDC @ 4.2W nominal - (supports 8 - 14VDC input range)
<b>Physical</b>	Size: 140mm x 90mm x 22mm (5.51" x 3.54" x 0.86") including connectors Weight: 200g (7.05oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	PDM 1284 B - (EAN# 4250479312845)
<b>Includes</b>	Module, AC power supply, transport case

Specifications subject to change

#### 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-0-850-MM	SFP Fiber TX - Multimode - LC conn. - 300m	-5dBm (850nm)

#### SDI Fiber Receiver Options

Model	Description	Sensitivity
OH-RX-1-LC / ST / SC	SFP Fiber RX - Singlemode - LC, ST or SC connector	-16dBm
OH-RX-0-MM	SFP Fiber RX - Multimode - LC connector	-15dBm

#### SDI Fiber Transceiver Options

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

#### SDI CWDM Fiber Transmitter Options

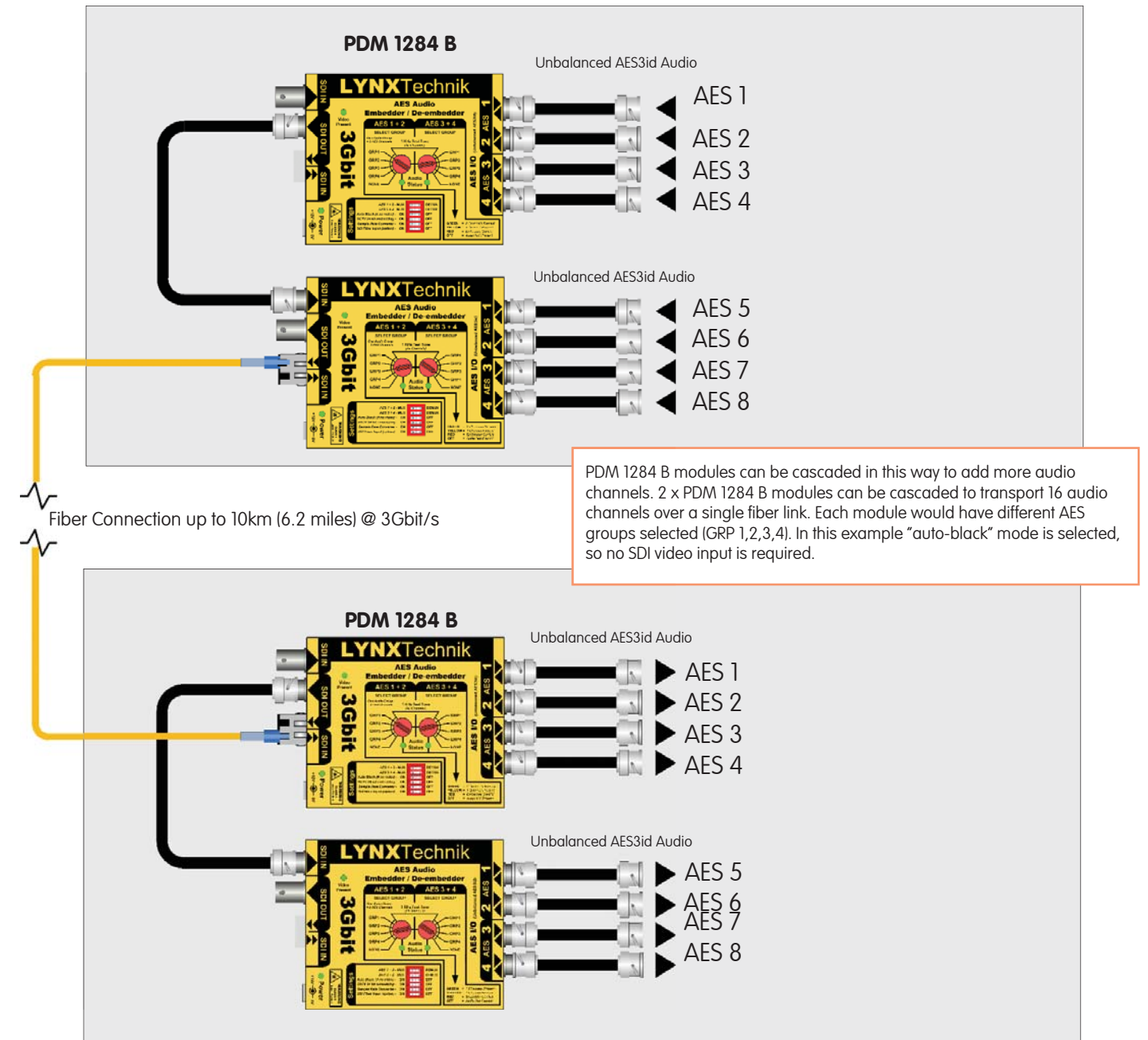
Model	Description	Power
OH-TX-4-XXXX	CWDM SFP Fiber TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm

#### SDI CWDM Fiber Transceiver Options

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

### 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.



### 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
- yelloGUI compatible to access additional internal settings

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



Shown with Fiber SFP Option Installed

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.



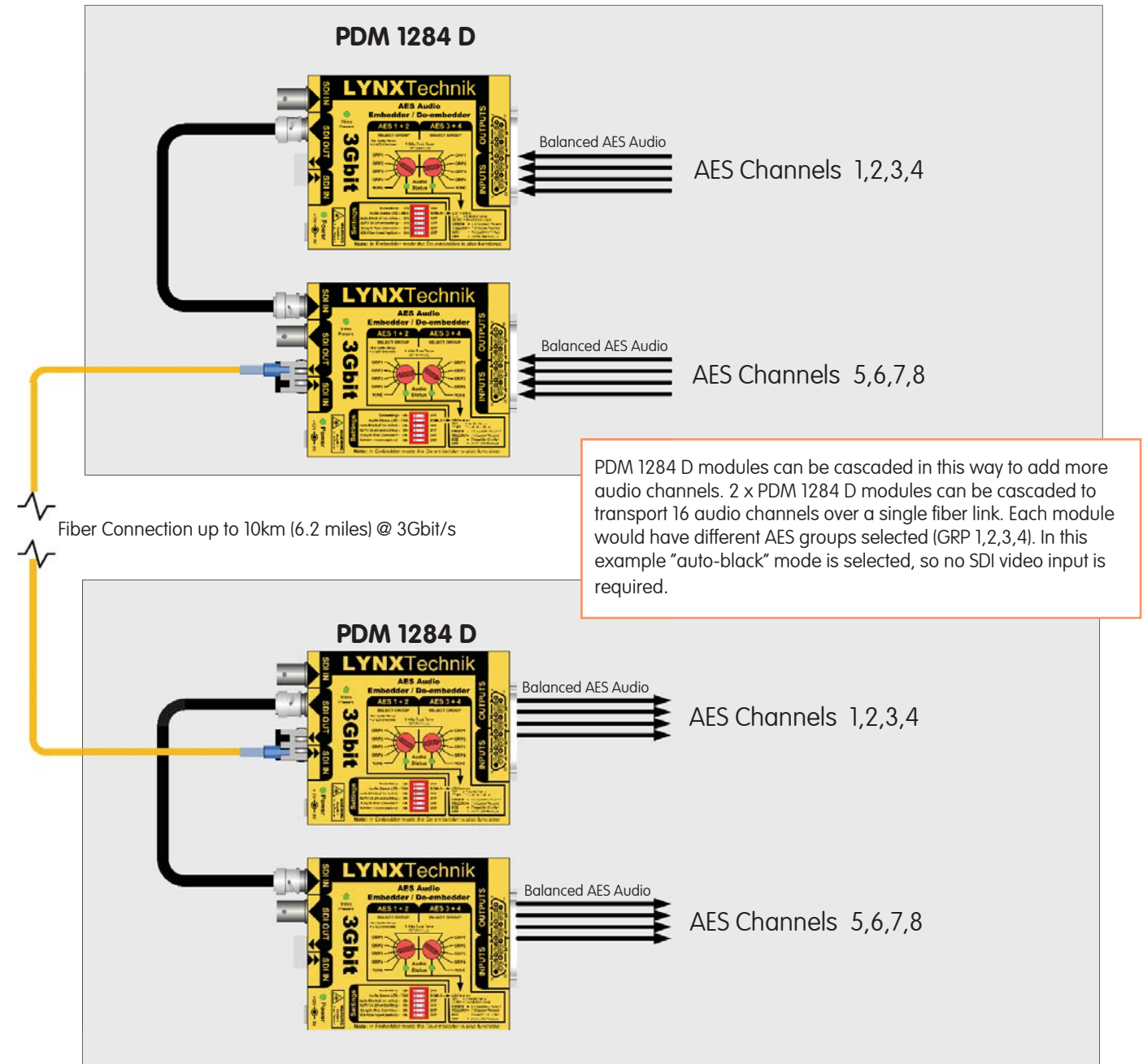
#### Technical Specifications

<b>SDI Input</b>	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 with image formats 1280 x 720 and 1920 x 1080 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) Return Loss: > 15dB to 1.5Gbit/s and > 10dB up to 3Gbit/s Automatic cable EQ (Belden 1694A cable) 250m @ 270Mbit/s, 140m @ 1.5Gbit/s, 80m @ 3Gbit/s
<b>Fiber I/O</b>	(optional) 1 x fiber optic input and output (see table) SMPTE 297M - 2006
<b>SDI Output</b>	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 with image formats 1280 x 720 and 1920 x 1080
<b>AES Inputs</b>	4 x AES3 balanced inputs on 25 pin SubD Connector (110 Ohm) AES group selection provided via rotary switch
<b>AES Outputs</b>	4 x AES3 balanced outputs on 25 pin SubD Connector (110 Ohm) AES group selection provided via rotary switch
<b>Power</b>	+12VDC @ 4.2W nominal - ( supports 8 - 14VDC input range )
<b>Physical</b>	Size: 128mm x 90mm x 22mm (5.04" x 3.54" x 0.86") including connectors Weight: 200g (7.05oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	PDM 1284 D - ( EAN# 4250479312852 )
<b>Includes</b>	Module, AC power supply, SubD adapter PCB, transport case

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.





### 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
- yelloGUI compatible to access additional internal settings

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.

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



Shown with Fiber SFP Option Installed

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

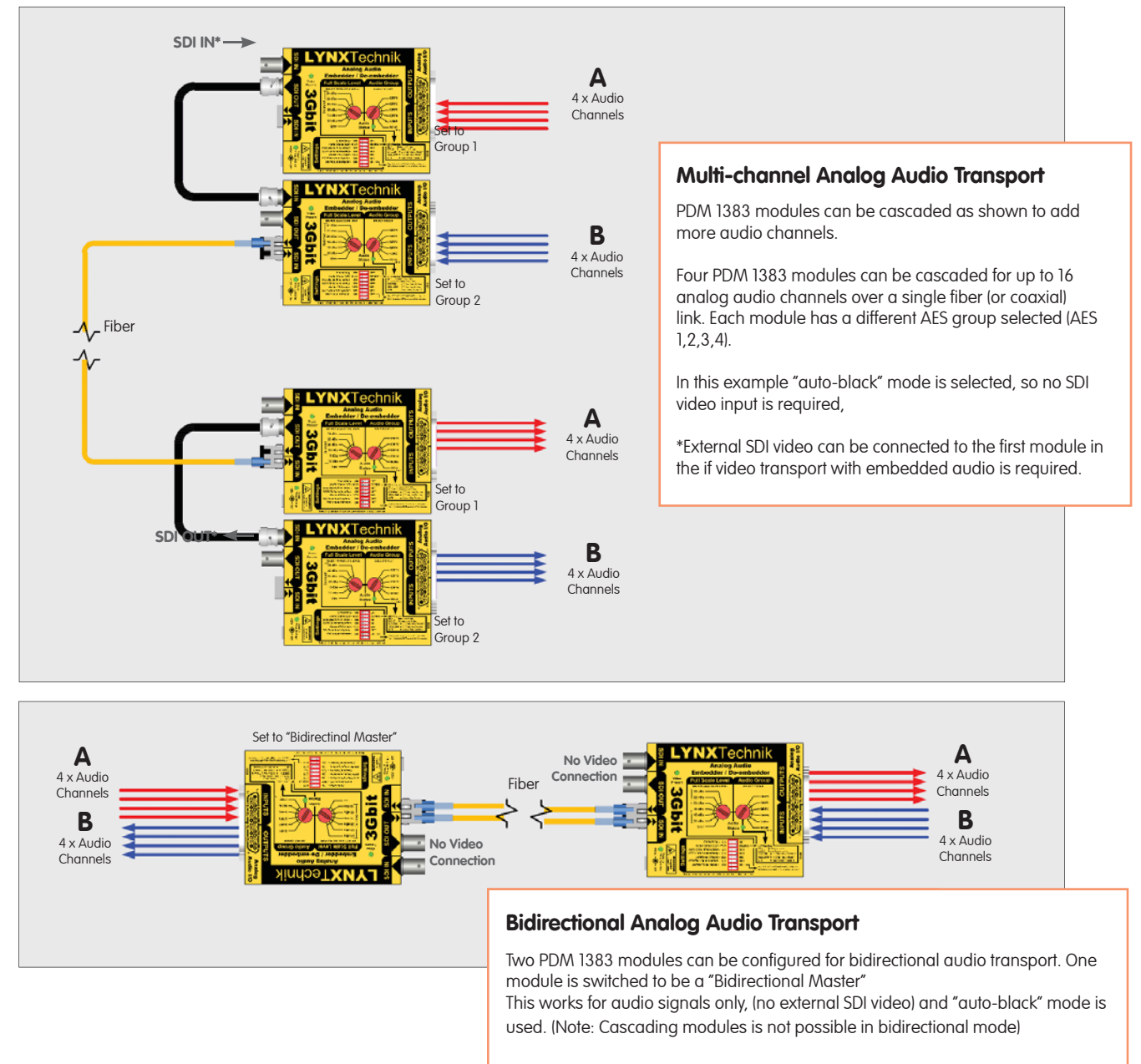
<b>SDI Input</b>	1 x SDI video on 75 Ohm BNC connector  SMPT 424M, SMPT 292M, SMPT 259M 3G Level A & B-DL & B-DS according to SMPT ST 425-1 with image formats 1280 x 720 and 1920 x 1080  Multi-standard operation from 270Mbit/s to 3Gbit/s SDTV (525/625) 720p and 1080p (23.98/24/25/29.97/30/50/59.94/60 Hz) 1080psf (23.98/24/25/29.97/30 Hz) 1080i (50/59.94/60 Hz)  Return Loss: > 15dB to 1.5Gbit/s and > 10dB up to 3Gbit/s
<b>Fiber I/O</b>	Automatic cable EQ (Belden 1694A cable) 250m @ 270Mbit/s, 140m @ 1.5Gbit/s, 80m @ 3Gbit/s  (optional) 1 x fiber optic input and output (see table)  SMPT 297M - 2006
<b>SDI Output</b>	1 x SDI video on 75 Ohm BNC connector  SMPT 424M, SMPT 292M, SMPT 259M 3G Level A & B-DL & B-DS according to SMPT ST 425-1 with image formats 1280 x 720 and 1920 x 1080
<b>Audio Inputs</b>	4 x analog audio inputs on 25 pin SubD Connector (10K Ohm)  AES group selection provided via rotary switch
<b>Audio Outputs</b>	4 x analog audio outputs on 25 pin SubD Connector (150 Ohm)  AES group selection provided via rotary switch
<b>Power</b>	+12VDC @ 4.8W nominal - ( supports 8 - 15VDC input range )
<b>Physical</b>	Size: 128mm x 90mm x 22mm (5.04" x 3.54" x 0.86") including connectors Weight: 200g (7.05oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	PDM 1383 - [ EAN# 4250479359826 ]
<b>Includes</b>	Module, AC power supply, SubD adapter PCB, transport case

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 utilised for "audio only" transport over fiber.



# yellobrik<sup>®</sup> 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 indications are provided for signal presence and power.



### Technical Specifications

<b>Input</b>	1 x 75 Ohm BNC connector
	<b>Compatible Input Sources</b> 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)
<b>Outputs</b>	4 x Analog Video / Sync Outputs
	75 Ohm BNC connectors
	Return loss > 22dB to 30MHz
<b>Performance</b>	Frequency Response: -3dB @ 30MHz (EQ min) -3dB @ 37MHz (EQ max) +/- 0.1dB to 10MHz
	Signal to noise > 60dB (RMS)
<b>Power</b>	+12VDC @ 1.3W nominal - ( supports 8 - 24VDC input range )
<b>Physical</b>	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") - including connectors Weight: 220g (7.8oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model#</b>	DVA 1714 - ( GTN 4250479321182 )
<b>Includes</b>	Module, AC Power supply, transport case

### 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<sup>®</sup> 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

<b>Input</b>	1 x SDI 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 2.97Gbit/s
	Multi-rate reclocking
	Input present LED indication
	Return Loss: > 15dB to 1.5Gbit/s and > 10dB up to 3Gbit/s
	Automatic cable EQ (Belden 1694A cable) 320m @ 270Mbit/s, 160m @ 1.5Gbit/s, 120m @ 3Gbit/s
<b>Outputs</b>	7 x multi-rate reclocked SDI outputs
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	75 Ohm BNC connectors
	Return Loss: > 15dB to 1.5GHz > 10dB to 3GHz
	Alignment Jitter < 0.2 UI @ 270Mbit/s, < 0.2 UI @ 1.5Gbit/s, < 0.3 UI @ 2.97Gbit/s
	Timing Jitter < 0.2 UI @ 270Mbit/s, < 1.0 UI @ 1.5Gbit/s, < 2.0 UI @ 2.97Gbit/s
<b>Power</b>	+12VDC @ 1.3W nominal - ( supports 7 - 16VDC input range )
<b>Physical</b>	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") including connectors Weight: 240g (8.46oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	DVD 1817 - ( EAN# 4250479359628 )
<b>Includes</b>	Module, AC power supply, transport case

### 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

<b>Inputs</b>	2 x SDI - 75 Ohm BNC connector SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI Multi-standard operation from 270Mbit/s to 2.97Gbit/s Multi-rate reclocking Input present LED indication for each channel Return Loss: > 15dB to 1.5Gbit/s and > 10dB up to 3Gbit/s Automatic cable EQ (Belden 1694A cable) 320m @ 270Mbit/s, 160m @ 1.5Gbit/s, 120m @ 3Gbit/s
<b>Outputs</b>	3 x multi-rate reclocked SDI outputs per channel SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI 75 Ohm BNC connectors Return Loss: > 15dB to 1.5GHz > 10dB to 3GHz Alignment Jitter < 0.2 UI @ 270Mbit/s, < 0.2 UI @ 1.5Gbit/s, < 0.3 UI @ 2.97Gbit/s Timing Jitter < 0.2 UI @ 270Mbit/s, < 1.0 UI @ 1.5Gbit/s, < 2.0 UI @ 2.97Gbit/s
<b>Power</b>	+12VDC @ 2.1W nominal - (supports 7-16V input range)
<b>Physical</b>	Size: 138mm x 90mm x 22mm (5.43" x 3.54" x 0.86") including connectors Weight: 240g (8.46oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	DVD 1823 - (EAN 4250479359635)
<b>Includes</b>	Module, AC power supply, transport case

### 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® 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
- 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, 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

<b>HDTV Sync</b>	3 x Tri-level HD Analog Sync outputs Standards: <b>1080i</b> / 50Hz / 59.94Hz / 60Hz <b>1080p</b> / 23.98Hz / 24Hz / 25Hz / 29.97Hz / 30Hz <b>720p</b> / 23.98Hz / 24Hz / 25Hz / 29.97Hz / 50Hz / 59.94Hz <b>1080psf</b> / 23.98Hz/24Hz <b>Note:</b> 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
<b>SDTV Sync</b>	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
<b>Ref Sync Input</b>	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
<b>Audio Ref.</b>	Selectable 48KHz Word Clock or DARS DARS: SMPTE 276M unbalanced AES (24-bits) - Grade 2 48KHz Word Clock: 0 - 5.0V
<b>Accuracy</b>	2 ppm
<b>Power</b>	+12VDC @ 2.3W nominal - ( supports 8 - 17VDC input range )
<b>USB</b>	USB port for firmware upgrades
<b>Physical</b>	Size: 140mm x 90mm x 22mm (5.51" x 3.34" x 0.86") including connectors Weight: 300g (10.6oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	SPG 1707 - ( EAN# 4250479317079 )
<b>Includes</b>	Module, AC power supply, transport case

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<sup>®</sup> 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 relocking 270Mbit / 1.5Gbit / 2.97Gbit
- Error free optical transmission
- Relocked 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



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 an LC 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.

### 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.



OTX 1812 LC Version Shown

### Technical Specifications

<b>SDI Input</b>	1 x SDI video input and 1 x SDI relocked loop output 75 Ohm BNC connectors
	SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
	Multi-standard operation from 270Mbit/s to 3Gbit/s
	Multirate relocking : 270Mbit/s - 1.48Gbit/s - 2.97Gbit/s
	Return Loss: > 15dB to 1.5Gbit and > 10dB up to 3Gbit
	Automatic cable EQ (Belden 1694A cable) 250m @ 270Mbit/s, 140m @ 1.5Gbit/s, 80m @ 3Gbit/s
<b>Fiber out Singlemode</b>	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)
<b>Fiber out Multimode</b>	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)
<b>Power</b>	+12VDC @ 1.7W nominal - ( supports 7 - 17VDC input range )
<b>Physical</b>	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OTX 1812 LC - ( EAN# 4250479359642 ) OTX 1812 ST - ( EAN# 4250479359666 ) OTX 1812 SC - ( EAN# 4250479359659 ) OTX 1812 MM (Multimode) - ( EAN# 4250479359673 )
<b>Includes</b>	Module, AC power supply, transport case

Specifications subject to change

# yellobrik<sup>®</sup> OTT 1812

## 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 relocking 270Mbit / 1.48Gbit / 2.97Gbit
- 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 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) 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 has two completely independent channels and each will auto-detect and re-clock any 270Mbit / 1.48Gbit and 2.97Gbit SDI source prior to optical transmission. The module is fully compatible with 3Gbit Level A and Level B formats.

### Technical Specifications

<b>Input</b>	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 relocking 270Mbit/s - 1.48Gbit/s - 2.97Gbit/s
	Return Loss: > 15dB to 1.5GHz and > 10dB up to 3GHz
	Automatic cable EQ (Belden 1694A cable) 250m @ 270Mbit/s, 140m @ 1.5Gbit/s, 80m @ 3Gbit/s
<b>Optical Outputs</b>	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)
<b>Power</b>	+12VDC @ 2.5W nominal - ( supports 7 - 16VDC input range )
<b>Physical</b>	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OTT 1812 - ( EAN# 4250479318229 )
<b>Includes</b>	Module, AC power supply, transport case

### 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 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.

Specifications subject to change

# yellobrik® ORX 1802

## 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 relocking 270Mbit / 1.5Gbit / 2.97Gbit
- 2 x SDI outputs
- Versions for LC, ST or SC fiber connections
- Multimode version available
- Input range 1260nm to 1620nm (singlemode)
- Input range 780nm to 880nm (multimode)
- Supports hot swapping and hot plugging



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 LC Version Shown

### Technical Specifications

<b>Fiber Input singlemode</b>	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
<b>Fiber Input multimode</b>	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
<b>SDI Output</b>	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
	Return Loss: > 15dB to 1.5GHz and > 10dB up to 3GHz
<b>Power</b>	+12VDC @ 1.3W nominal - ( supports 7 - 16VDC input range )
<b>Physical</b>	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	ORX 1802 LC - ( EAN# 4250479359697 ) ORX 1802 ST - ( EAN# 4250479359710 ) ORX 1802 SC - ( EAN# 4250479359703 ) ORX 1802 MM (Multimode) - ( EAN# 4250479359727 )
<b>Includes</b>	Module, AC power supply, transport case

### 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.

Specifications subject to change

# yellobrik® ORR 1802

## 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 relocking 270Mbit / 1.48Gbit / 2.97Gbit
- Error free optical reception
- 1260nm to 1620nm wavelength input range
- Duplex LC/PC singlemode optical connection
- Supports hot swapping and hot plugging



The ORR 1802 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, 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.

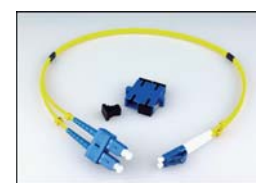
The ORR1802 has two completely independent channels and each will auto-detect and re-clock any 270Mbit / 1.48Gbit and 2.97Gbit SDI fiber source prior to electrical conversion. The module is fully compatible with 3Gbit Level A and Level B formats.

### Technical Specifications

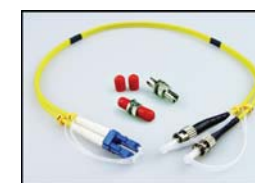
<b>Fiber Inputs</b>	2 x fiber optic Inputs (one for each channel) Duplex (single mode) using LC/PC Connections
	SMPTE 297M - 2006
	Hot pluggable
	Input range (wavelength) 1260nm to 1620nm
	RX sensitivity -3dBm to -16dBm
	RX active LED on side of module
	(SMF) Singlemode fiber
<b>SDI Outputs</b>	2 x SDI 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
	Return Loss: > 15dB to 1.5GHz and > 10dB up to 3GHz
<b>Power</b>	+12VDC @ 2.2W nominal - ( supports 7 - 16VDC input range )
<b>Physical</b>	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	ORR 1802 - ( EAN# 4250479318021 )
<b>Includes</b>	Module, AC power supply, transport case

### 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 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.

Specifications subject to change

### 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 relocking 270Mbit / 1.5Gbit / 2.97Gbit
- 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 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 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 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.

### 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



### Technical Specifications

<b>SDI Video</b>	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 relocking 270Mbit/s - 1.48Gbit/s - 3Gbit/s
	Return Loss: > 15dB to 1.5GHz and > 10dB up to 3GHz
	Automatic cable EQ (Belden 1694A cable) 250m @ 270Mbit/s, 140m @ 1.5Gbit/s, 80m @ 3Gbit/s
<b>Fiber Optic</b>	1 x fiber optic input 1 x fiber optic output Duplex using LC Connections
	SMPTE 297M - 2006
	<b>Singlemode Version: OTR 1810</b> Transmitter: 1310nm (-5dBm) Receiver: 1260nm to 1620nm (-3dBm to -19dBm) Max. distance 10km (6.2 miles) @ 3Gbit/s
	<b>Multimode Version: OTR 1810 MM</b> 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
<b>Power</b>	+12VDC @ 2.6W nominal - ( supports 7 - 16VDC input range )
<b>Physical</b>	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OTR 1810 (Singlemode) - ( EAN# 4250479318144 ) OTR 1810 MM (Multimode) - ( EAN# 4250479359840 )
<b>Includes</b>	Module, AC power supply, transport case

### 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.

Specifications subject to change

### 3Gbit Bidirectional SDI/Fiber Transceiver

- Supports SDI video up to 3Gbit/s (1080p60)
- 3Gbit Level A and Level B support (all formats)
- Auto relocking 270Mbit / 1.48Gbit / 2.97Gbit
- 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 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.

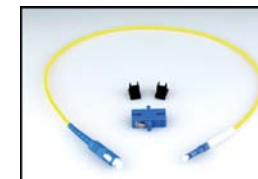
The OBD 1810 modules are supplied in pairs, one Type A and one Type B which work together in a WDM closed loop application. Each module has an electrical SDI in and SDI out connection and uses a single fiber link between the two.

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.

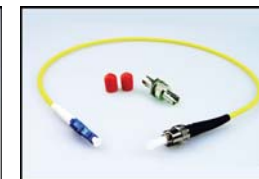
**Note.** This system used WDM optical multiplexing and should only be used in point to point applications. This solution cannot be integrated into a CWDM multiplexed system.

### Fiber Adapter Options

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



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

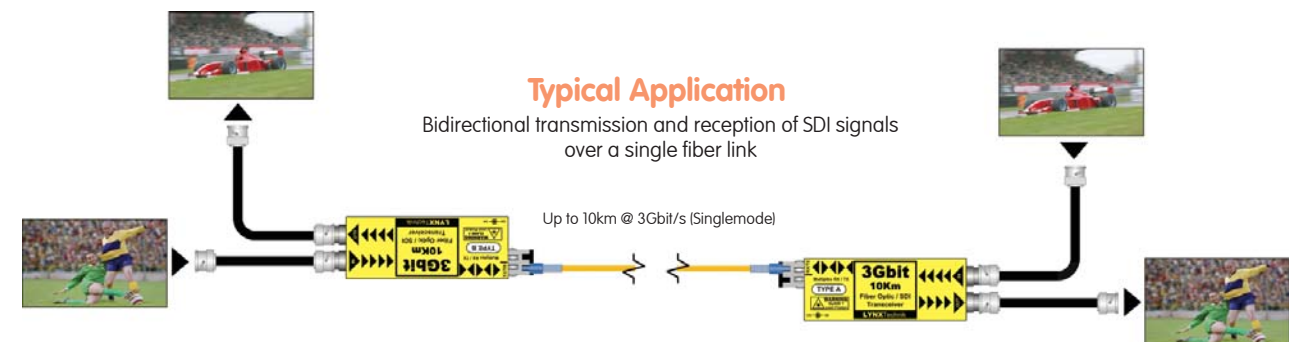


Model# LC/ST SIM  
LC/PC to ST/SC Adapter



### Technical Specifications

<b>SDI Video</b>	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 relocking 270Mbit/s - 1.48Gbit/s - 3Gbit/s
	Return Loss: > 15dB to 1.5GHz and > 10dB up to 3GHz
	Automatic cable EQ (Belden 1694A cable) 250m @ 270Mbit/s, 140m @ 1.5Gbit/s, 80m @ 3Gbit/s
<b>Fiber Optic</b>	1 x Bidirectional fiber connection (LC/PC Connection)
	SMPTE 297M - 2006
	1310nm and 1550nm (WDM)
	14dB Optical Budget
	TX and RX active LEDs on side of module
	Max. distance 10km (6.2 miles) @ 3Gbit/s (single mode)
<b>Power</b>	+12VDC @ 2.7W nominal for each module - ( supports 7 - 16VDC input range )
<b>Physical (each module)</b>	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OBD 1810 (pair) - ( EAN# 4250479318175 )
<b>Includes</b>	2 x OBD 1810 modules (Type A and Type B), 2 x AC power supplies, plastic transport case.

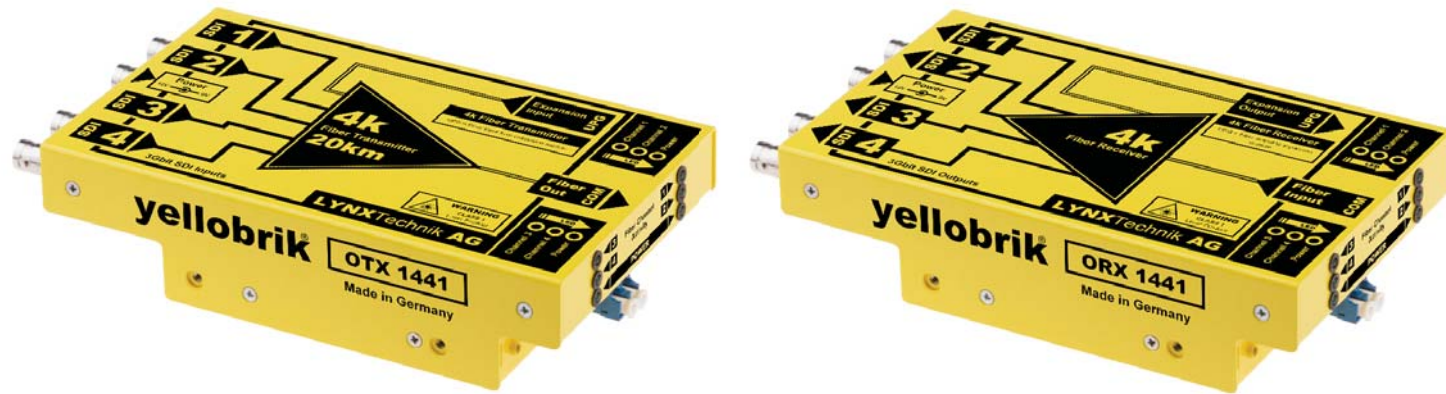


### Typical Application

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

Up to 10km @ 3Gbit/s (Singlemode)

Specifications subject to change



### 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 relocked
- Embedded audio / metadata support
- Integrated expansion port for future use
- LED indicators for channel activity and power
- Kit includes transmitter, receiver and power supplies
- Optional 19" Rack tray to mount (max) 4 modules

The OTR 1441 is a self contained fiber transmission kit for the transport of 4 x SDI signals (12G uncompressed) over a single fiber link for distances up to 20km (12miles). The kit includes the fiber transmitter, fiber receiver and power supplies. This is an ideal solution for the transmission of multiple uncompressed SDI streams over long distances 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 4K resolution at 60fps. The system can also be used for any combination of SDI signals each with a different format and bit-rate if required. Each channel will automatically detect and relock SDI bit rates of 270Mbit, 1.48Gbit and 2.97Gbit.

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

### Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the modules. 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/PC Adapter

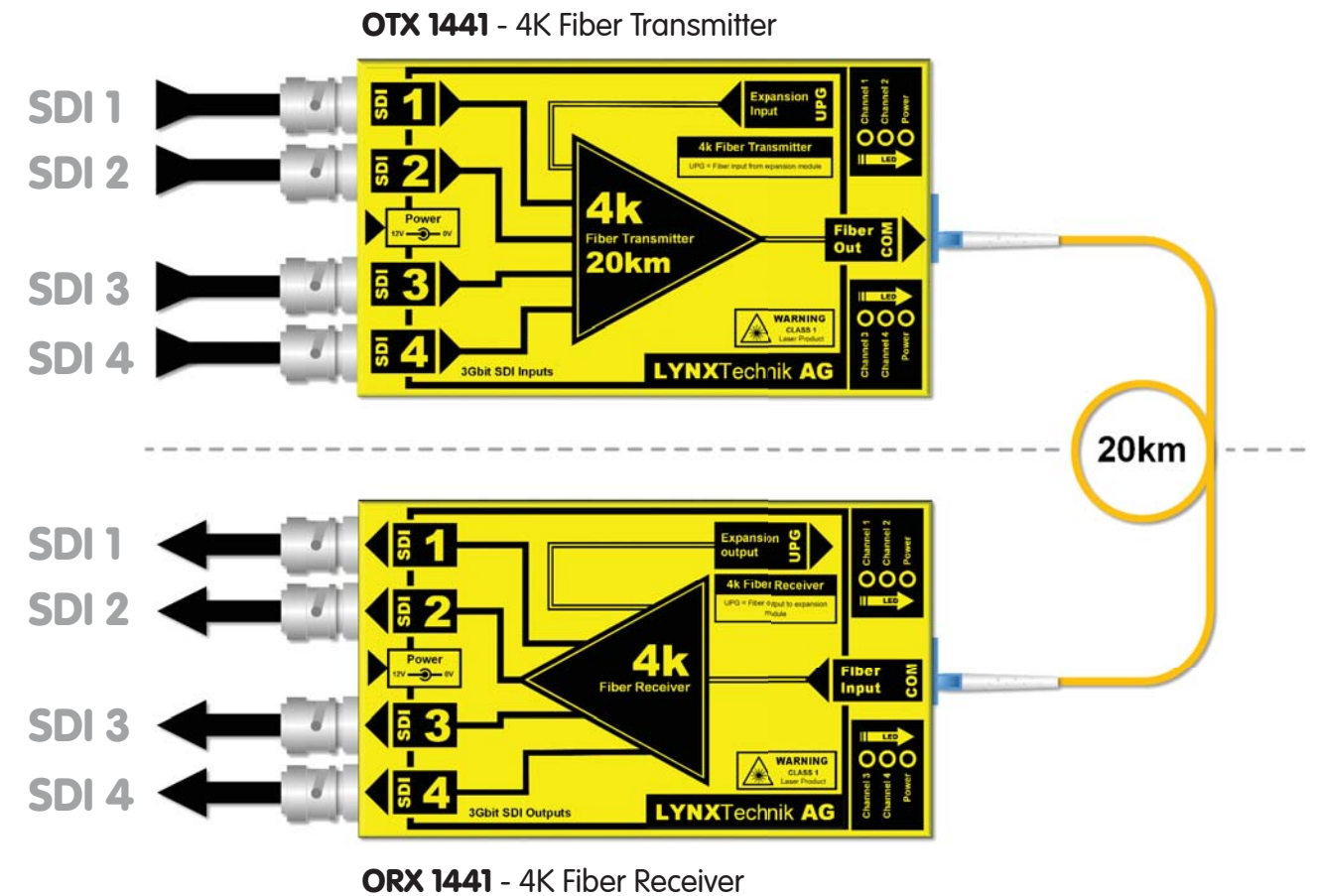
### Technical Specifications

<b>SDI I/O</b>	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 relocking: 270Mbit / 1.48Gbit / 2.97Gbit
	Return Loss: > 15dB to 1.5Gbit and > 10dB to 2.97Gbit
	Automatic Cable EQ (Belden 1694A cable) 250m@270Mbit, 140m@1.58Gbit, 80m@3Gbit
<b>Fiber I/O</b>	1 x Fiber optic I/O port (COM port) 1 x Fiber optic expansion port (UPG port) for future use LC/PC connections - Single Mode
	SMPTE 297M - 2006
	Internal CWDM Multiplexing Wavelengths : 1270nm, 1290nm, 1310nm, 1330nm Optical budget: 10.6dB Maximum distance (typical): 20km (12 miles)
	Fiber activity LEDs for each channel
<b>Power</b>	+12VDC nominal. ORX1441 = 4.4W, OTX 1441 = 5.4W Supports external power input from 9 - 17 VDC 2 x Power LEDs provided
<b>Physical</b>	170 x 99.7 x 40.5mm (6.7" x 3.9" x 1.6) - (each Module) Weight: 600g (21.1oz) net - (each module)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OTR 1441 LC - ( EAN# 4250479321151 )
<b>Includes</b>	OTX 1441 - 4K Fiber Transmitter module ORX 1441 - 4K Fiber Receiver module 2 x 12VDC [brick] power supplies

**Note.** Internal CWDM optical multiplexing is utilized within the modules. This kit should be considered a self contained point to point solution and should not be integrated into external CWDM systems. An expansion port is included on each module (for future use) which will can be used to add additional SDI channels.

Specifications subject to change

The modules can be used to transport up to 4 x 3G/HD/SD uncompressed SDI signals, each channel is fully independent, with full auto-detect and SDI relocking. SDI inputs and fiber connections support hot plugging. Combine all 4 channels for 12G (4K) transport over a single fiber link for up to 20km (12 miles)



### Options



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



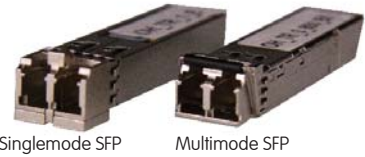
**XLR 1000**  
Use with a standard 4 pin XLR camera battery power source



**RFR 1018**  
19" Rack frame to mount up to 4 modules. No tools required, modules are clipped securely in place.

### 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)



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

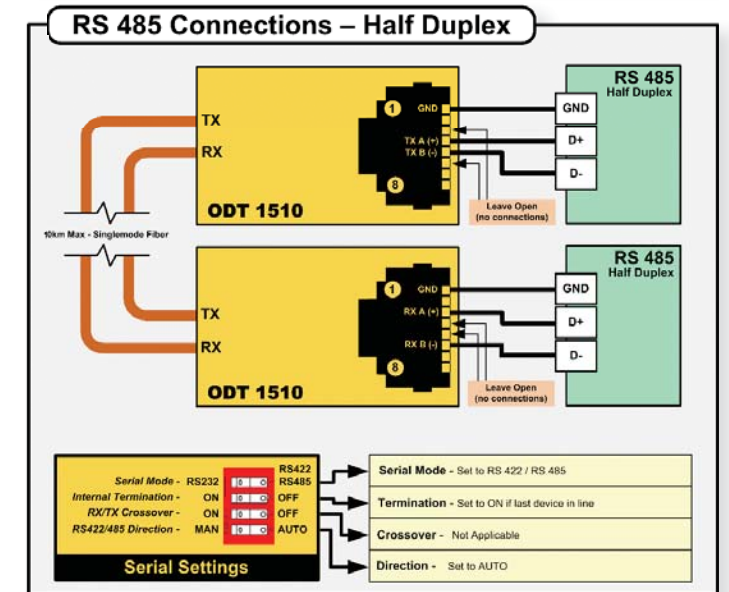
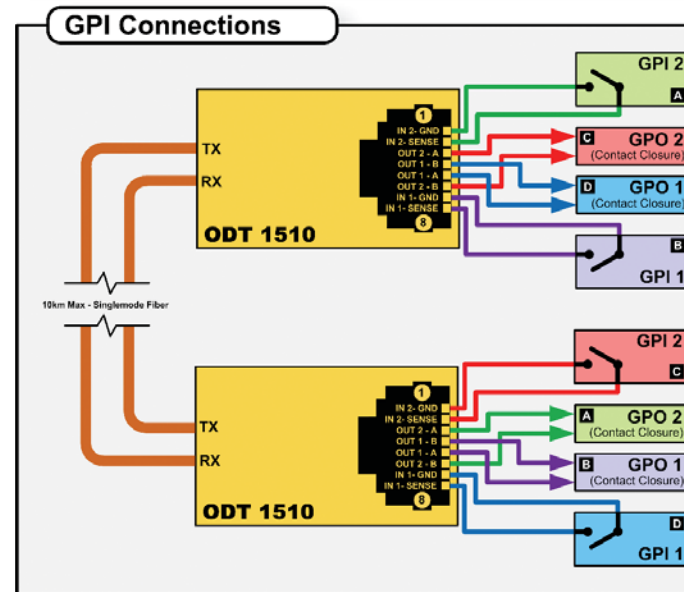
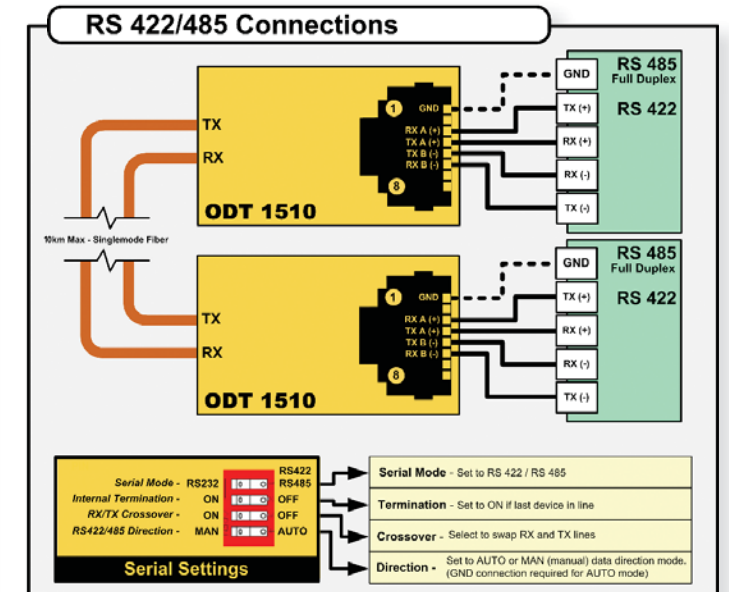
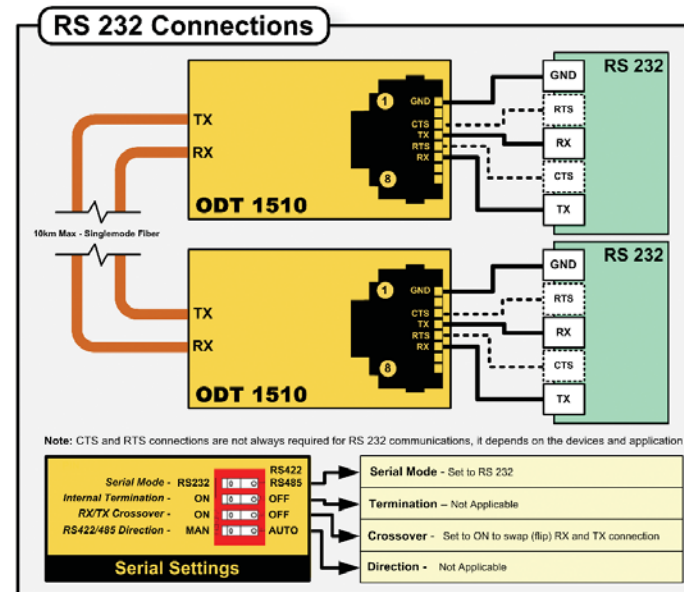


### Technical Specifications

<b>Serial I/O</b>	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: <ul style="list-style-type: none"> <li>• Select RS232 / RS422/485 modes</li> <li>• Select serial termination (for end of line)</li> <li>• RX/TX crossover to flip the RX and TX if needed</li> <li>• Set RS422/485 data direction to automatic or manual if needed</li> </ul>
	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
<b>GPI I/O</b>	2 x general purpose inputs + 2 x general purpose outputs
	Connector - RJ45
	GPI Inputs: <ul style="list-style-type: none"> <li>• External passive closure between pins (short) to trigger</li> <li>• Max input switching frequency 25Hz (50 operations / second)</li> <li>• Input insulation 3.75kV</li> </ul>
	GPI outputs: <ul style="list-style-type: none"> <li>• Internal contact closure (relay)</li> <li>• Max switching frequency 25Hz (50 operations / second)</li> <li>• Max switching power 220VDC / 0.25A or 250VAC / 0.25A</li> <li>• Output insulation 3.75kV</li> </ul>
	LED status indicators (under RJ45 connector) GPI Input 1 activity / GPI Input 2 activity GPI Output 1 activity / GPI Output 2 activity
<b>Fiber I/O</b>	1 x Fiber output (TX) and 1 x Fiber input (RX) Singlemode fiber or Multimode fiber. LC/PC connections
	<b>Singlemode Version</b> TX wavelength 1310nm, power -3dBm RX input range 1260nm to 1620nm, sensitivity -3dBm to -21dBm Max distance 10km (6.2miles)
	<b>Multimode Version</b> TX wavelength 850nm, power -2dBm to -7dBm RX input 850nm sensitivity 0dBm to -15dBm Max distance approx 550m (1804 feet)
	RX and TX activity LEDs on side of module next to fiber I/O
<b>Power</b>	+12VDC @ 2.0W nominal - ( supports 7 - 15VDC input range )
<b>Size</b>	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	ODT 1510 singlemode - ( EAN# 4250479315136 ) ODT 1510 MM Multimode - ( EAN# 4250479321144 )
<b>Includes</b>	Module, AC power supply, transport case

Specifications subject to change

### Connection Diagrams



### Power Adapter Options

The module **INCLUDES** an 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



## 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)



### Technical Specifications

<b>Serial I/O</b>	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 / RS422/485 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 RX and TX activity RS422/485 Maximum number of electrical nodes = 25 ESD protection for up to 26kV
<b>GPI</b>	2 x general purpose inputs + 2 x 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
<b>Fiber I/O</b>	1 x fiber optic I/O port (bidirectional) Simplex (single mode) using LC/PC Connection WDM using 1310nm and 1550nm wavelengths Optical budget = 18dB Maximum distance approx. 10km (6.2miles) RX and TX activity LEDs on side of module next to fiber I/O
<b>Power</b>	+12VDC @ 2.0W nominal for each module - ( supports 7 - 15VDC input range )
<b>Physical (each module)</b>	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OB D 1510 D - (EAN# 4250479319103)
<b>Includes</b>	2 x OB D 1510 D modules (Type A and Type B), 2 x AC power supplies, plastic transport case

The OB D 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 OB D 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 OB D 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.

### Fiber Adapter Options

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



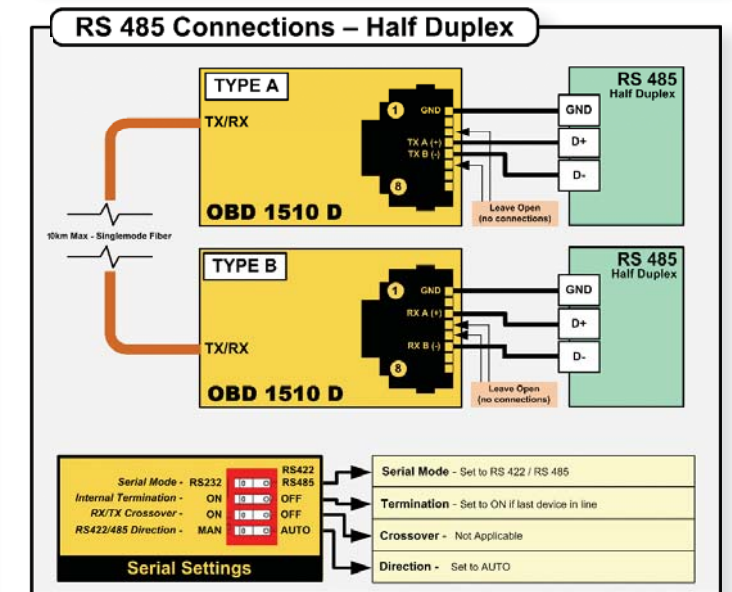
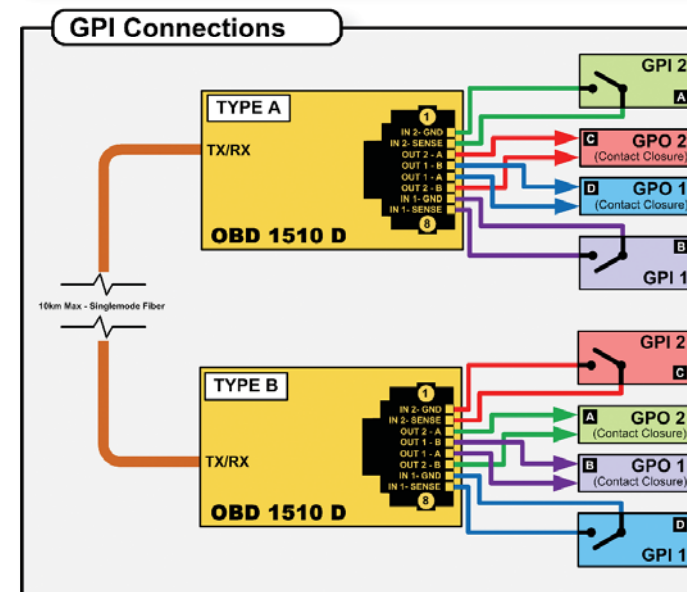
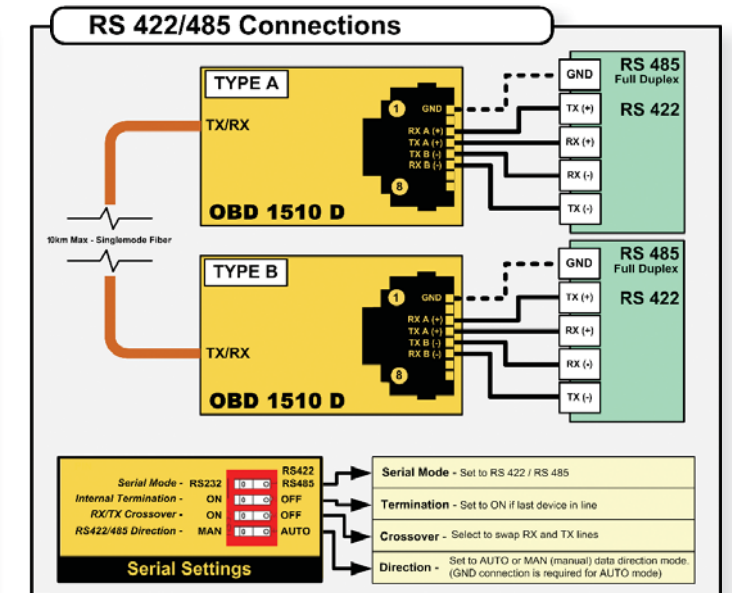
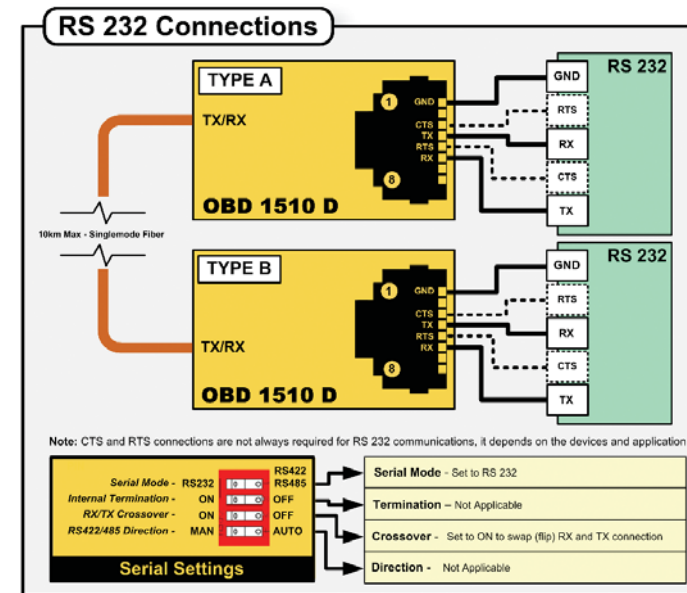
Model# LC/SC SIM  
LC/PC to SC/PC Adapter



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

Specifications subject to change

## Connection Diagrams



### 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

### 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



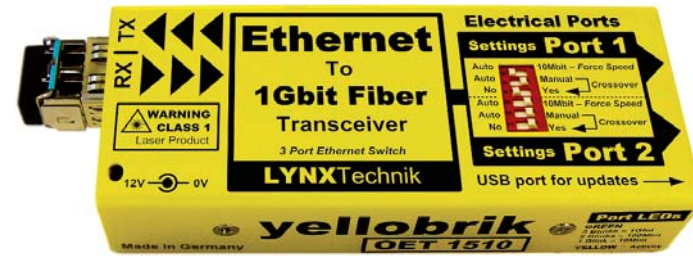
Singlemode SFP Multimode SFP

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

<b>Ethernet</b>	2 x Ethernet ports, RJ 45 Connectors. 10 BaseT/UTP category 3,4 or 5 cable up to 328ft/100m (2 pairs) 100 BaseTX/UTP category 5 cable up to 328ft/100m (2 pairs) 1000 BaseTX/UTP 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)
<b>Fiber Optic</b>	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))
	<b>Singlemode Version</b> TX wavelength 1310nm, power -3dBm RX input range 1260nm to 1620nm, sensitivity -3dBm to -21dBm Max distance 10km (6.2miles)
	<b>Multimode Version</b> 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
<b>Power</b>	+12VDC @ 2.2W nominal - ( supports 7 - 15VDC input range )
<b>Physical</b>	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OET 1510 (singlemode) - ( EAN# 4250479315129 ) OET 1510 MM (multimode) - ( EAN # 4250479321144 )
<b>Includes</b>	Module, AC power supply, transport case

### 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 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.

Specifications subject to change

### 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 1Gbit speed.

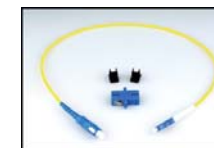
This pair of modules uses WDM fiber technology in a closed loop arrangement and essentially functions as an Ethernet extender solution. The fiber link supports distances up to 10Km and provides a single, high speed 1Gbit error-free optical connection between the two locations.

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 modules. 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

### 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



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 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 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 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 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 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.



OTX 1712 LC Version Shown

### Technical Specifications

<b>Analog Input</b>	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 276
	Multi-standard operation, auto-detect
	Return loss: 31dB to 10MHz
<b>Fiber Out Singlemode</b>	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)
<b>Fiber Out Multimode</b>	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)
<b>Power</b>	+12VDC @ 3.4W nominal - ( supports 8 - 24VDC input range )
<b>Physical</b>	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OTX 1712 LC - ( EAN# 4250479320345 ) OTX 1712 ST - ( EAN# 4250479320352 ) OTX 1712 SC - ( EAN# 4250479320369 ) OTX 1712 MM (multimode) - ( EAN# 4250479320376 )
<b>Includes</b>	Module, 12V DC power supply and plastic transport case

### 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.

Specifications subject to change

### 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
- Multimode version available
- Supports hot swapping and hot plugging
- yelloGUI compatible to access additional internal settings



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 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 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 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 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 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 LC Version Shown

### Technical Specifications

<b>Fiber Input Singlemode</b>	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
<b>Fiber Input Multimode</b>	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
<b>Analog Output</b>	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 276
	Return loss: 46.5dB to 10MHz
<b>Power</b>	+12VDC @ 3.5W nominal - ( supports 8 - 24VDC input range )
<b>Physical</b>	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	ORX 1702 LC - ( EAN# 4250479320383 ) ORX 1702 ST - ( EAN# 4250479320390 ) ORX 1702 SC - ( EAN# 4250479320406 ) ORX 1702 MM (multimode) - ( EAN# 4250479320413 )
<b>Includes</b>	Module, 12V DC power supply and plastic transport case

### 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.

Specifications subject to change

# yellobrik® OTX 1910

## L-Band to Fiber Transmitter

- Input frequency 700MHz - 2300MHz
- L-Band output
- LNB power selectable 13V/18V
- 22kHz on/off for LNB local oscillator control
- Simplex LC/PC singlemode optical connection
- Up to 10km (6.2 miles)

The OTX 1910 is an effective solution for transporting analog RF L-Band signals over long distances. The module supports RF signals within the extended L-Band range of 700MHz to 2300MHz.

The module is configured using the integrated dip switch. This allows the LNB power to be activated and switched to 13V or 18V to select horizontal or vertical polarization. Additionally, the internal 22kHz tone generator can be turned on and off to select the high or low frequency range.

When paired with the fiber optic receiver for RF signals (yellobrik ORX 1900) you have a very cost effective optical RF transmitter/receiver system for distances up to 10km.



### Technical Specifications

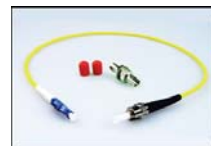
<b>RF Input</b>	Connector: 1 x 75 Ohm F-Type Frequency Range L-Band: 950MHz - 2150MHz Frequency Range Ext. L-Band: 700MHz - 2300MHz Return Loss: >14dB Input Power Range: -10dBm to -65dBm
<b>LNB Power</b>	Voltage: (13V/18V) DC, On/Off Current max.: 450mA Protection: Short Circuit LO Control: 22kHz / 0kHz
<b>RF Output</b>	Connector: 1x 75 Ohm F-Type Frequency Range: 700MHz - 2300MHz Return Loss: >14dB Flatness L-Band: +/- 1.5dB Flatness Ext. L-Band: +/- 2.0dB Output Level: Within +/- 2.0dB of input signal
<b>Fiber output</b>	Connector: 1 x LC/PC singlemode Wavelength: 1310nm Optical Power: 1dBm (+/- 1dBm)
<b>Power</b>	+12VDC @ 3.5W nominal - (supports 9-14V input range)
<b>Physical</b>	Size: 137mm x 42mm x 22mm (5.41" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OTX 1910 - (EAN# 4250479359741)
<b>Includes</b>	Module, 12V DC power supply and plastic transport case

## Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the modules. 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 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.

Specifications subject to change

# yellobrik® ORX 1900

## Fiber to L-Band Receiver

- Support L-Band frequencies 700MHz - 2300MHz
- Dual L-Band RF outputs
- Fiber input range 1270nm - 1610nm
- Simplex LC/PC singlemode optical connection

The ORX 1900 is a compact fiber optic receiver for RF signals within the extended L-Band range of 700MHz to 2300MHz.

When paired with the OTX 1910 L-Band transmitter you have a very cost effective L-Band optical transmitter/receiver system for long distance applications.

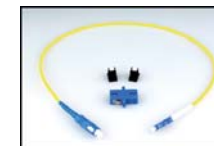


### Technical Specifications

<b>Fiber Input</b>	Connector: 1 x LC/PC singlemode Frequency Range: 1270nm to 1610nm Input Range: +4 dBm to -6dBm
<b>RF Output</b>	Connector: 2 x 75 Ohm F-Type Frequency Range: 700MHz - 2300MHz Return Loss: >14dB
<b>Power</b>	+12VDC @ 2.9W nominal - (supports 9-14V input range)
<b>Physical</b>	Size: 137mm x 42mm x 22mm (5.41" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	ORX 1900 - (EAN# 4250479359734)
<b>Includes</b>	Module, 12V DC power supply and plastic transport case

## Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the modules. 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 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.

Specifications subject to change

# yellobrik<sup>®</sup> 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 / 2.97Gbit
- 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

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.

### 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.

### 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

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

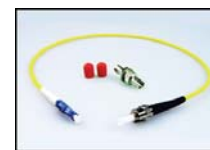
Wavelength	Power	Option #	Wavelength	Power	Option #
1270nm	-1dBm	<b>OH-TX-4-1270</b>	1450nm	-1dBm	<b>OH-TX-4-1450</b>
1290nm	-1dBm	<b>OH-TX-4-1290</b>	1470nm	-1dBm	<b>OH-TX-4-1470</b>
1310nm	-1dBm	<b>OH-TX-4-1310</b>	1490nm	-1dBm	<b>OH-TX-4-1490</b>
1330nm	-1dBm	<b>OH-TX-4-1330</b>	1510nm	-1dBm	<b>OH-TX-4-1510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

### Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the modules. 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/PC Adapter

Specifications subject to change

# yellobrik<sup>®</sup> OTT 1842

## 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 / 2.97Gbit
- 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

The OTT 1842 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, 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 has two completely independent channels and each will auto-detect and re-clock any 270Mbit / 1.48Gbit and 2.97Gbit 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 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.

### Ordering Info:

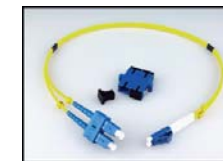
Note. The **OTT 1842** price **DOES NOT INCLUDE** the dual fiber transmitter SFP sub module. Please specify the required wavelengths from the option list below when ordering.

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

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

### 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/PC Adapter

Specifications subject to change

# yellobrik® OTR 1840

## 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 relocking 270Mbit / 1.5Gbit / 2.97Gbit
- 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

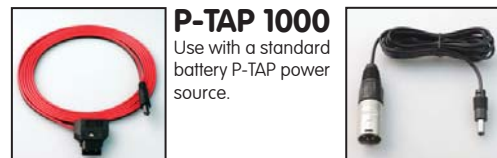
The OTR 1840 is a CWDM Fiber Optic to SDI transmitter and receiver combined in a compact self contained package. It is a convenient and cost effective solution to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances.

Each OTR 1840 CWDM 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. Select from 18 transmitter wavelengths for full CWDM compatibility (ITU-T G.694.2)

The OTR 1840 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 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.

### Ordering Info:

Note. The OTR 1840 price **DOES NOT INCLUDE** the fiber transmitter SFP sub module. Please specify the required wavelength from the option list below when ordering.

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

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



### Technical Specifications

<b>SDI Video</b>	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 relocking 270Mbit/s - 1.48Gbit/s - 3Gbit/s
	Return Loss: > 15dB to 1.5GHz and > 10dB up to 3GHz
	Automatic cable EQ (Belden 1694A cable) 250m @ 270Mbit/s, 140m @ 1.5Gbit/s, 80m @ 3Gbit/s
<b>Fiber Optic</b>	<b>1 x fiber optic input</b> (Range 1260-1620nm, Sensitivity -3dBm to -19dBm) <b>1 x fiber optic output</b> (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)
<b>Power</b>	+12VDC @ 1.9W nominal without SFP +12VDC @ 2.7W nominal with SFP (supports 7 - 16VDC input range)
<b>Physical</b>	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OTR 1840 - (EAN# 4250479318403)
<b>Includes</b>	Module, AC power supply, transport case

### 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/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)

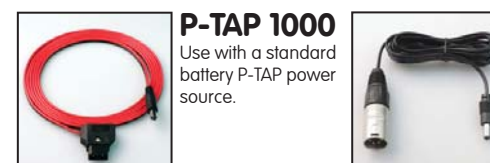
The OET 1540 is a compact CWDM compatible Ethernet 3 port switch, designed to extend the reach of electrical Ethernet signals over long distances using a constant (fixed) high speed 1 Gbit optical transceiver speed.

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.

### 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

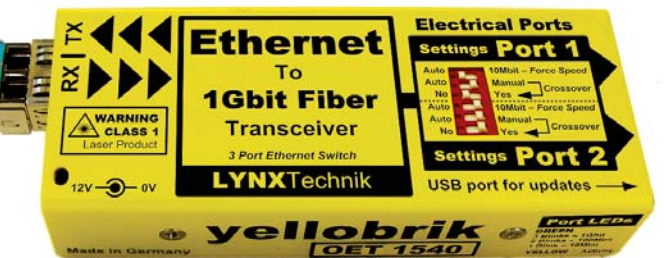
Use with a standard 4 pin XLR camera battery power source.

### Ordering Info:

Note. The OET 1540 price **DOES NOT INCLUDE** the fiber transceiver SFP sub module. Please specify the required wavelength from the option list below when ordering.

### CWDM TX Wavelength Options (select one)

Wavelength	Power	Option #	Wavelength	Power	Option #
1270nm	+2dBm	<b>OH-TR-54-1270</b>	1450nm	+2dBm	<b>OH-TR-54-1450</b>
1290nm	+2dBm	<b>OH-TR-54-1290</b>	1470nm	+2dBm	<b>OH-TR-54-1470</b>
1310nm	+2dBm	<b>OH-TR-54-1310</b>	1490nm	+2dBm	<b>OH-TR-54-1490</b>
1330nm	+2dBm	<b>OH-TR-54-1330</b>	1510nm	+2dBm	<b>OH-TR-54-1510</b>
1350nm	+2dBm	<b>OH-TR-54-1350</b>	1530nm	+2dBm	<b>OH-TR-54-1530</b>
1370nm	+2dBm	<b>OH-TR-54-1370</b>	1550nm	+2dBm	<b>OH-TR-54-1550</b>
1390nm	+2dBm	<b>OH-TR-54-1390</b>	1570nm	+2dBm	<b>OH-TR-54-1570</b>
1410nm	+2dBm	<b>OH-TR-54-1410</b>	1590nm	+2dBm	<b>OH-TR-54-1590</b>
1430nm	+2dBm	<b>OH-TR-54-1430</b>	1610nm	+2dBm	<b>OH-TR-54-1610</b>

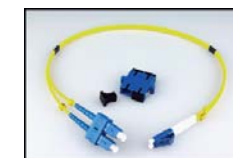


### Technical Specifications

<b>Ethernet</b>	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)
<b>Fiber Optic</b>	<b>1 x fiber optic input</b> (Range 1270-1610nm, Sensitivity -3dBm to -23dBm) <b>1 x fiber optic output</b> 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)
<b>Power</b>	+12VDC @ 1.5W nominal without SFP +12VDC @ 2.3W nominal with SFP (supports 7 - 15VDC input range)
<b>Physical</b>	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OET 1540 - (EAN# 4250479315426)
<b>Includes</b>	Module, AC power supply, transport case

### 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/PC Adapter

Specifications subject to change

# yellowbrik® 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)

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 TX Wavelength Selections

Wavelength	Power	Option #	Wavelength	Power	Option #
1270nm	+2dBm	OH-TR-54-1270	1450nm	+2dBm	OH-TR-54-1450
1290nm	+2dBm	OH-TR-54-1290	1470nm	+2dBm	OH-TR-54-1470
1310nm	+2dBm	OH-TR-54-1310	1490nm	+2dBm	OH-TR-54-1490
1330nm	+2dBm	OH-TR-54-1330	1510nm	+2dBm	OH-TR-54-1510
1350nm	+2dBm	OH-TR-54-1350	1530nm	+2dBm	OH-TR-54-1530
1370nm	+2dBm	OH-TR-54-1370	1550nm	+2dBm	OH-TR-54-1550
1390nm	+2dBm	OH-TR-54-1390	1570nm	+2dBm	OH-TR-54-1570
1410nm	+2dBm	OH-TR-54-1410	1590nm	+2dBm	OH-TR-54-1590
1430nm	+2dBm	OH-TR-54-1430	1610nm	+2dBm	OH-TR-54-1610



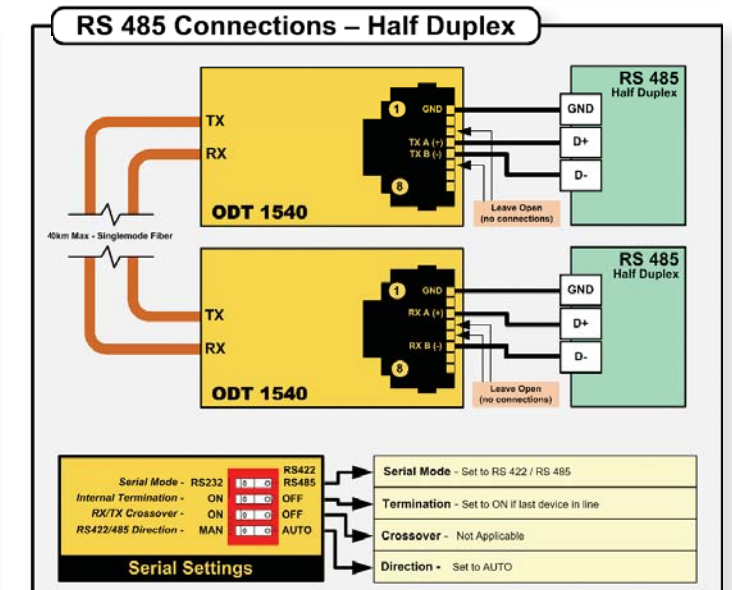
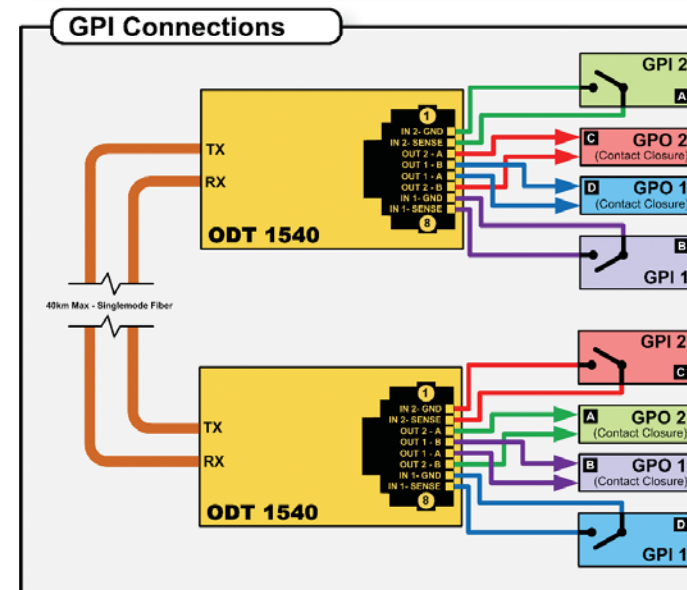
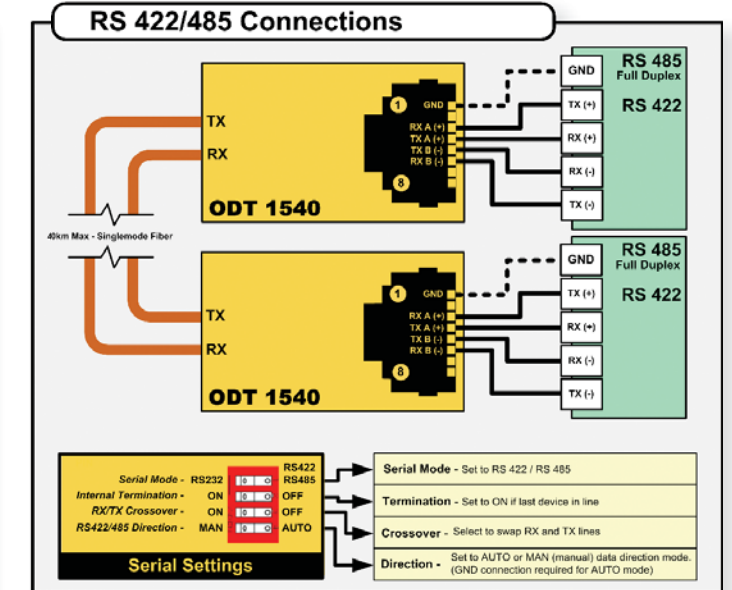
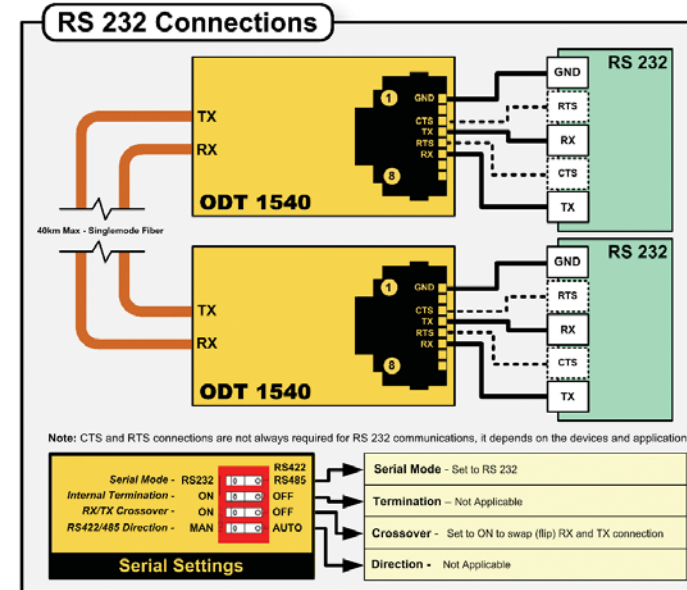
### Technical Specifications

<b>Serial I/O</b>	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: <ul style="list-style-type: none"> <li>• Select RS232 / RS422/485 modes</li> <li>• Select serial termination (for end of line)</li> <li>• RX/TX crossover to flip the RX and TX if needed</li> <li>• Set RS422/485 data direction to automatic or manual if needed</li> </ul>
	LED status indicators (under RJ 45 connector) <ul style="list-style-type: none"> <li>Serial TX activity</li> <li>Serial RX activity</li> </ul>
	RS422/485 Max number of electrical nodes = 25
	ESD protection for up to 26kV
<b>GPI I/O</b>	2 x general purpose inputs + 2 x general purpose outputs
	Connector - RJ45
	GPI Inputs: <ul style="list-style-type: none"> <li>• External passive closure between pins (short) to trigger</li> <li>• Max input switching frequency 25Hz (50 operations / second)</li> <li>• Input insulation 3.75kV</li> </ul>
	GPI outputs: <ul style="list-style-type: none"> <li>• Internal contact closure (relay)</li> <li>• Max switching frequency 25Hz (50 operations / second)</li> <li>• Max switching power 220VDC / 0.25A or 250VAC / 0.25A</li> <li>• Output insulation 3.75kV</li> </ul>
	LED status indicators (under RJ45 connector) <ul style="list-style-type: none"> <li>GPI Input 1 activity, GPI Input 2 activity</li> <li>GPI Output 1 activity, GPI Output 2 activity</li> </ul>
<b>Fiber I/O</b>	1 x fiber optic input (SMF) (Range 1270-1610nm, Sensitivity -3dBm to -23dBm)
	1 x fiber optic output (SMF) CWDM (ITU-T G.694.2) 18 selectable wavelengths (see table) Duplex (Single mode) using LC/PC Connections
	Fiber TX active and RX active LEDs on side of module
	Max. distance approx. 40km (24.8 miles - Singlemode)
<b>Power</b>	+12VDC @ 1.6W nominal without SFP +12VDC @ 2.1W nominal with SFP (supports 7 - 15VDC input range)
<b>Physical</b>	Size: 120mm x 42mm x 22mm (4.73" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	ODT 1540 - (EAN# 4250479315433)
<b>Includes</b>	Module, AC power supply, transport case

Specifications subject to change

# yellowbrik® ODT 1540

## Connection Diagrams



### Power Adapter Options

The module **INCLUDES** an 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

### Fiber Adapter Options

These adapters enable 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

### 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

The OTX 1742 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 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 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 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).



#### Technical Specifications

<b>Analog Input</b>	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 CCR624 Analog tri-level sync SMPTE ST 274, ST 276
	Multi-standard operation, auto-detect
	Return loss: 31dB to 10MHz
<b>Fiber Out Singlemode</b>	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)
<b>Power</b>	+12VDC @ 3.5W nominal ( supports 8 - 24VDC input range )
<b>Physical</b>	Size: 140mm x 42mm x 22mm (5.51" x 1.65" x 0.86") including connectors Weight: 125g (4.4oz)
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
<b>Model #</b>	OTX 1742 - ( EAN# 4250479320420 )
<b>Includes</b>	Module, 12V DC power supply and plastic transport case

#### Ordering Info:

Note. The OTX 1742 price **DOES NOT INCLUDE** the fiber transmitter SFP sub module. Please specify the required wavelength from the option list below when ordering.

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

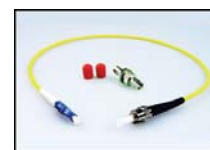
Wavelength	Power	Option #	Wavelength	Power	Option #
1270nm	-1dBm	OH-TX-4-1270	1450nm	-1dBm	OH-TX-4-1450
1290nm	-1dBm	OH-TX-4-1290	1470nm	-1dBm	OH-TX-4-1470
1310nm	-1dBm	OH-TX-4-1310	1490nm	-1dBm	OH-TX-4-1490
1330nm	-1dBm	OH-TX-4-1330	1510nm	-1dBm	OH-TX-4-1510
1350nm	-1dBm	OH-TX-4-1350	1530nm	-1dBm	OH-TX-4-1530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

#### Fiber Adapter Options

These adapter kits allow the use of ST or SC fiber connections on the modules. 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/PC Adapter

Specifications subject to change

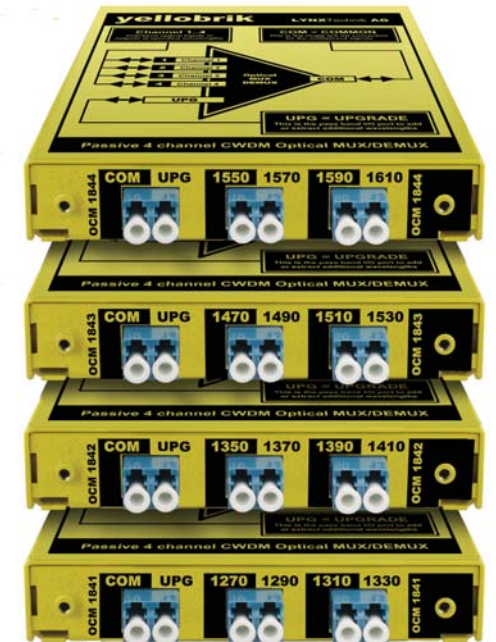
### 4 Channel CWDM Multiplexers / Demultiplexers

- 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 1/2 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).

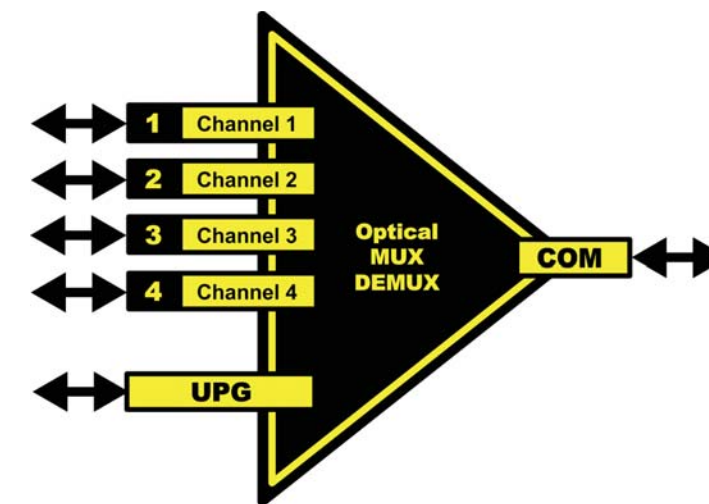


Model	Channel 1	Channel 2	Channel 3	Channel 4
OCM 1841	1270nm	1290nm	1310nm	1330nm
OCM 1842	1350nm	1370nm	1390nm	1410nm
OCM 1843	1470nm	1490nm	1510nm	1530nm
OCM 1844	1550nm	1570nm	1590nm	1610nm

#### Technical Specifications

<b>Optical I/O</b>	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: 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
<b>Power</b>	None required (passive operation)
<b>Physical</b>	Size: 120mm x 100mm x 18mm (4.72" x 3.93" x 0.75") Weight: 140g (4.9oz)
<b>Model #</b>	OCM 1841 - ( EAN# 4250479319417 ) OCM 1842 - ( EAN# 4250479319424 ) OCM 1843 - ( EAN# 4250479319431 ) OCM 1844 - ( EAN# 4250479319448 )
<b>Includes</b>	Module and transport case

Specifications subject to change





# yellobrik<sup>®</sup> 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 1/2 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

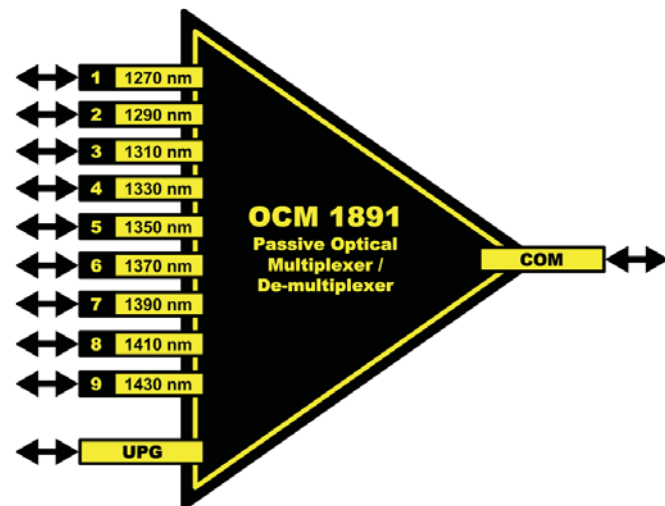
The modules can be used standalone or integrated into the optional RFR 1018 1/2 RU 19" rack frame, ideal for system installations.

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



### Technical Specifications

<b>Optical I/O</b>	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
<b>Power</b>	None required (passive operation)
<b>Physical</b>	Size: L: 108mm x W: 198mm x H:19mm (4.25" x 7.79" x 0.75") Weight: 230g (8.1oz)
<b>Model #</b>	OCM 1891 - ( EAN# 4250479318915 )
<b>Includes</b>	Module and plastic transport case



Optional **RFR 1018** 1/2 RU 19" Rack chassis with 2 x OCM modules

Specifications subject to change

# yellobrik<sup>®</sup> 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 1/2 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

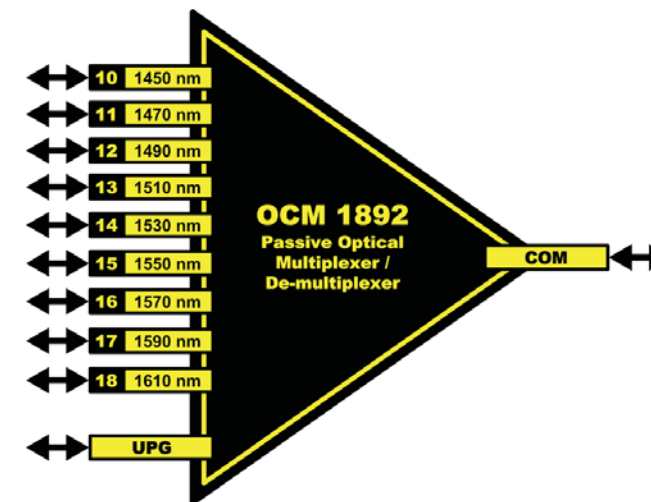
The modules can be used standalone or integrated into the optional RFR 1018 1/2 RU 19" rack frame, ideal for system installations.

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



### Technical Specifications

<b>Optical I/O</b>	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
<b>Power</b>	None required (passive operation)
<b>Physical</b>	Size: L: 108mm x W: 198mm x H:19mm (4.25" x 7.79" x 0.75") Weight: 230g (8.1oz)
<b>Model #</b>	OCM 1892 - ( EAN# 4250479318922 )
<b>Includes</b>	Module and plastic transport case



Optional **RFR 1018** 1/2 RU 19" Rack chassis with 2 x OCM modules

Specifications subject to change

## 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%)

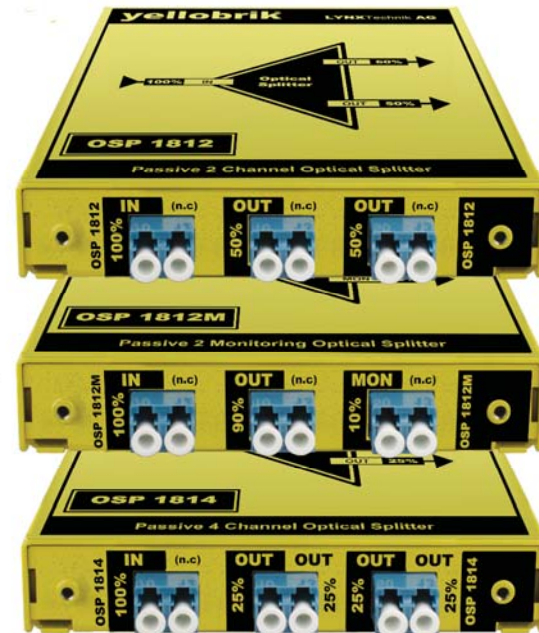
### OSP 1812 M

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

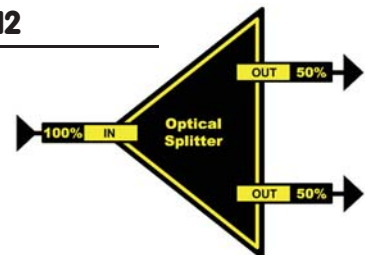
### OSP 1814

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

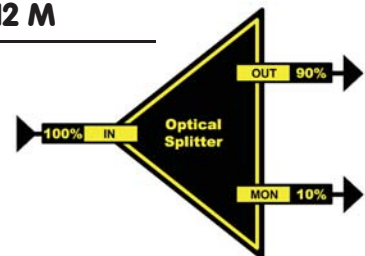
These yellobriks are passive in operation, which means they require no power. They can be used as standalone modules or mounted into the yellobrik RFR 1018 19" rack frame.



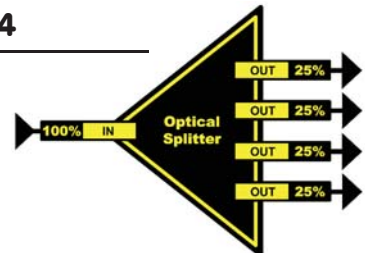
### OSP 1812



### OSP 1812 M



### OSP 1814



## Technical Specifications

<b>OSP 1812</b> Optical I/O	1 x Fiber input 2 x Fiber outputs <b>Split Ratio: 50% / 50%</b>
<b>OSP 1812 M</b> Optical I/O	1 x Fiber input 2 x Fiber outputs <b>Split Ratio: 90% / 10%</b>
<b>OSP 1814</b> Optical I/O	1 x Fiber input 4 x Fiber outputs <b>Split Ratio: 25% / 25% / 25% / 25%</b>
<b>Optical Connections</b>	LC/PC (singlemode) Operating wavelength 1260nm - 1650nm
<b>Performance</b>	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
<b>Power</b>	None required (passive operation)
<b>Physical</b>	Size: L: 125mm x W: 100mm x H:19mm (4.92" x 3.93" x 0.75") Weight: 120g (4.3oz)
<b>Model #</b>	OSP 1812 - (EAN# 4250479359796 ) OSP 1812 M - (EAN# 4250479359802 ) OSP 1814 - (EAN# 4250479359819 )
<b>Includes</b>	Module and plastic transport case

Specifications subject to change

## 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



Specifications subject to change

# yellobrik® RFR 1000

## 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



The RFR 1000 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.

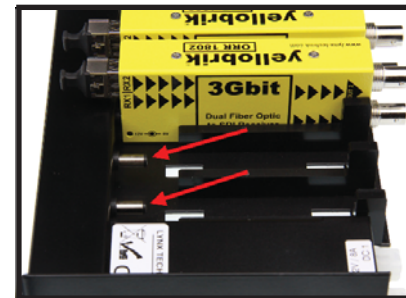
Primary and redundant power LED's are located in the front panel as well as GPO connections for the power supply failure alarms.

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 LED's can be seen clearly from the front with the modules installed.

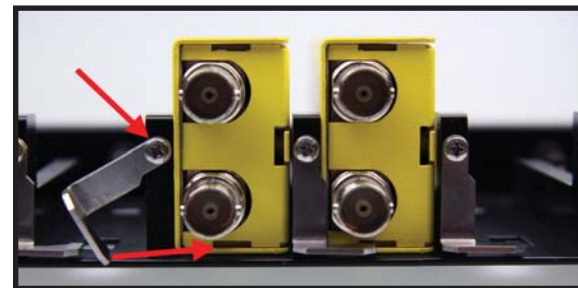


### Technical Specifications

<b>Power Inputs</b>	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
<b>Size</b>	19" Rack mount x 1RU high x 145mm deep (5.7")
<b>Weight</b>	1.6 Kg (3.52 Lbs) - with no modules installed
<b>Model #</b>	RFR 1000 - ( EAN# 4250479310001 )
<b>Options</b>	<b>RPS 1000</b> external power supply (12V 8A) (use 2 units for primary and redundant power protection)
<b>Includes</b>	Rack Frame assembly (empty) and qty 14 module securing brackets



Power connectors on integrated power bus



Modules are clamped securely into position

Specifications subject to change

# 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 1842 / 1843 / 1844  
OSP 1812 / 1812M / 1814  
OTX 1441 / OTR 1441
- Easy module mounting - no tools needed
- Combine with RFR 1000 frame for system use

### Specifications

<b>Size</b>	L 400mm (19") x D 135mm (5.3") x H 0.5RU
<b>Material</b>	Aluminum
<b>Weight</b>	0.4kg (0.9Lbs)
<b>Model #</b>	RFR 1018 - ( EAN# 4250479310186 )
<b>Includes</b>	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 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.

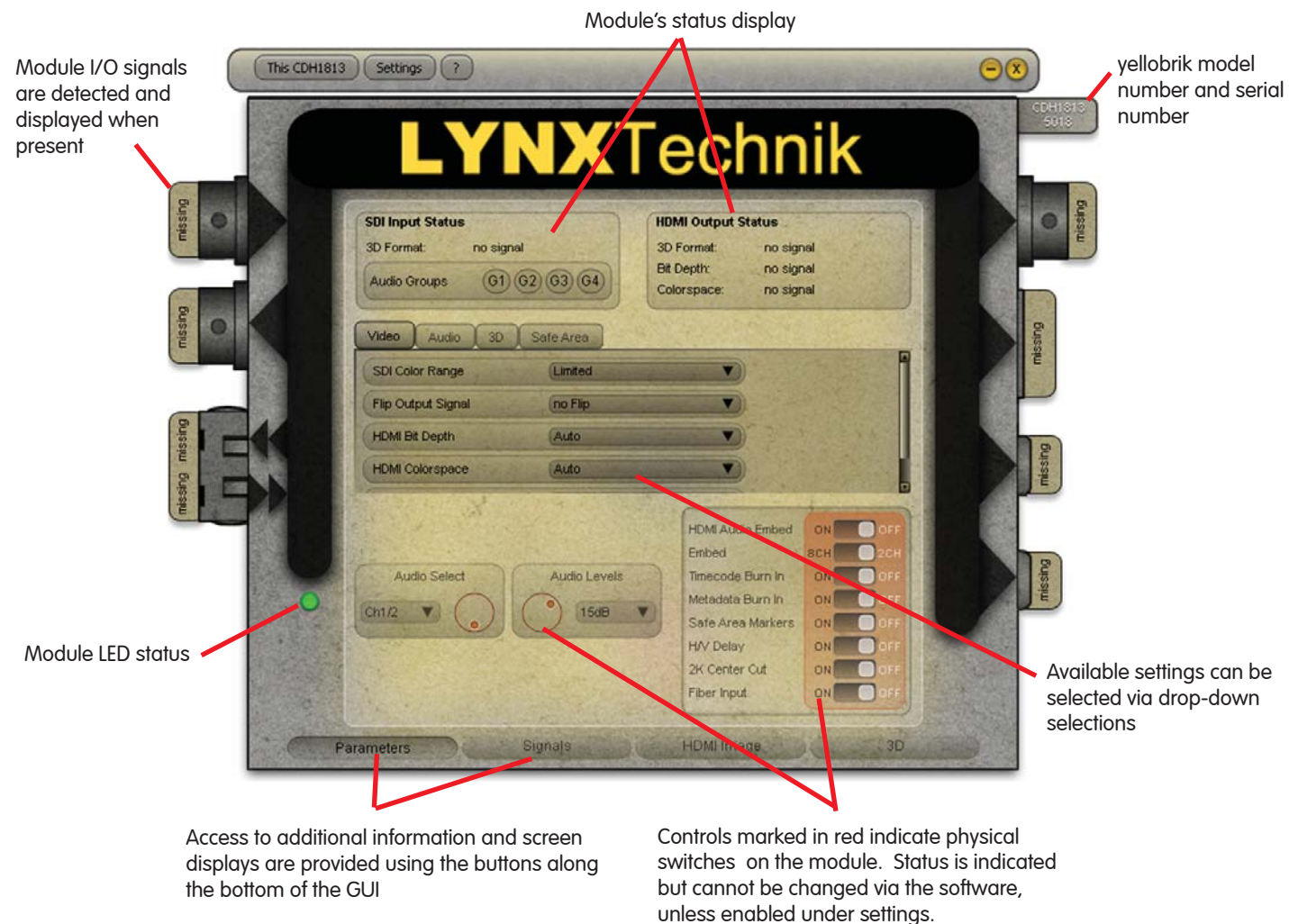


Specifications subject to change

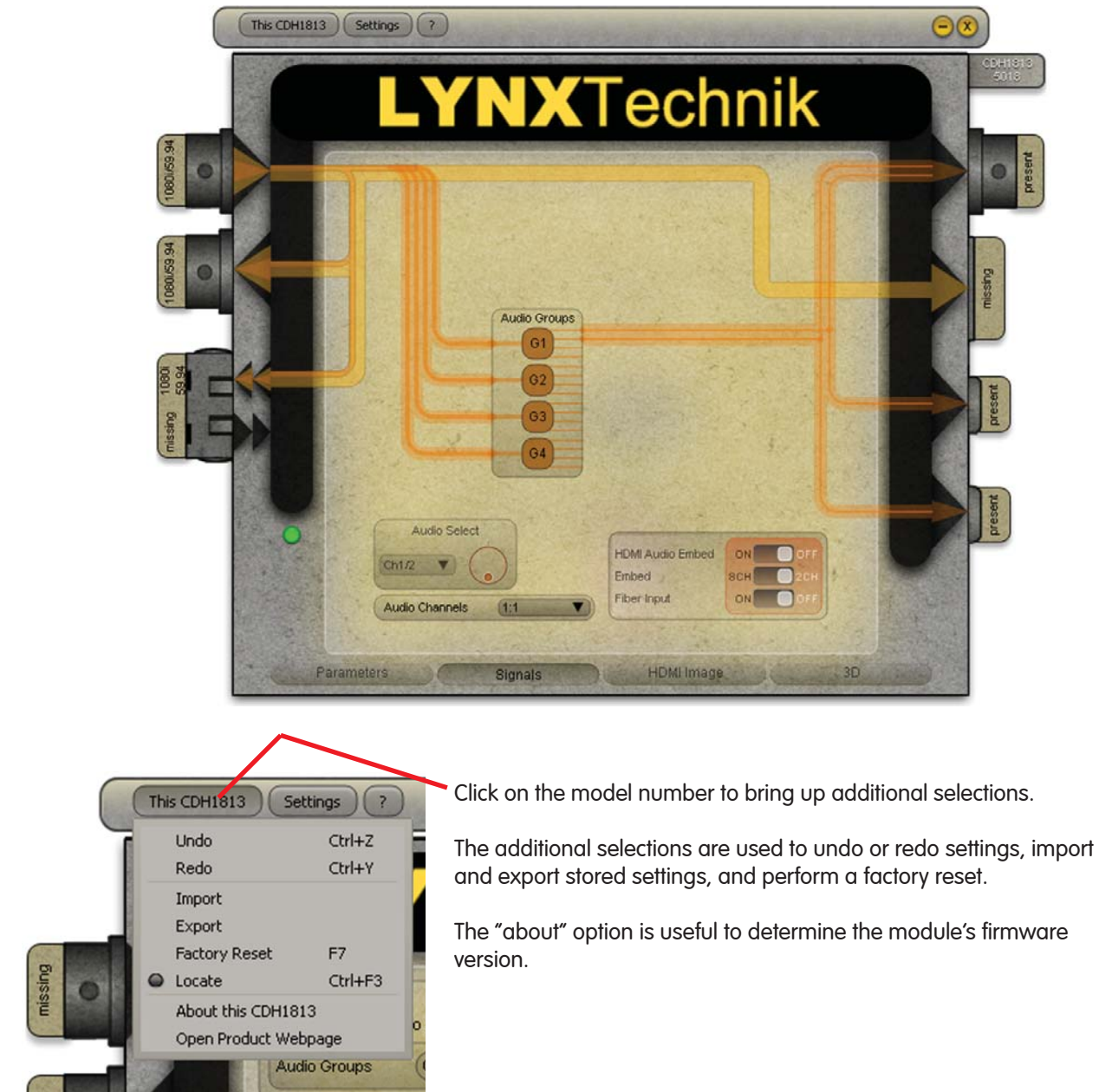
## yelloGUI - Overview

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

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.



The signal flow screen (selected using the button at the bottom of the GUI) offers a useful graphics 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.





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.

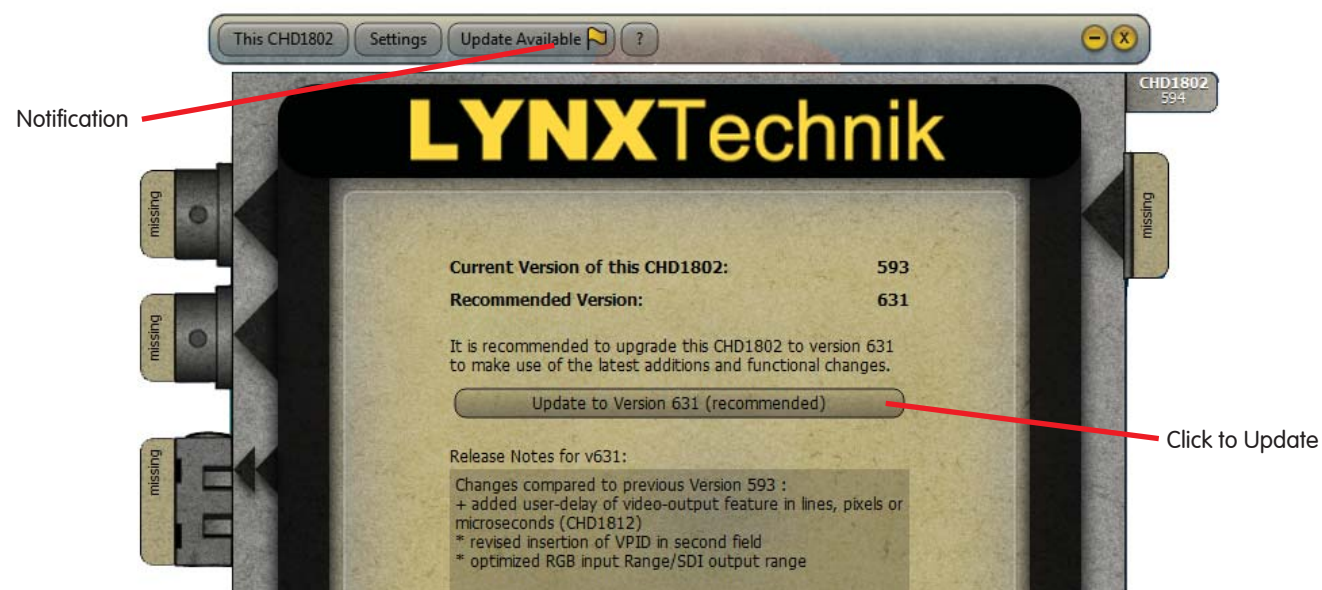
**Note.** As soon as any local switch is changed, the settings revert back to the physical switch settings.



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](http://www.lynx-technik.com) > support > download area > yelloGUI software

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.

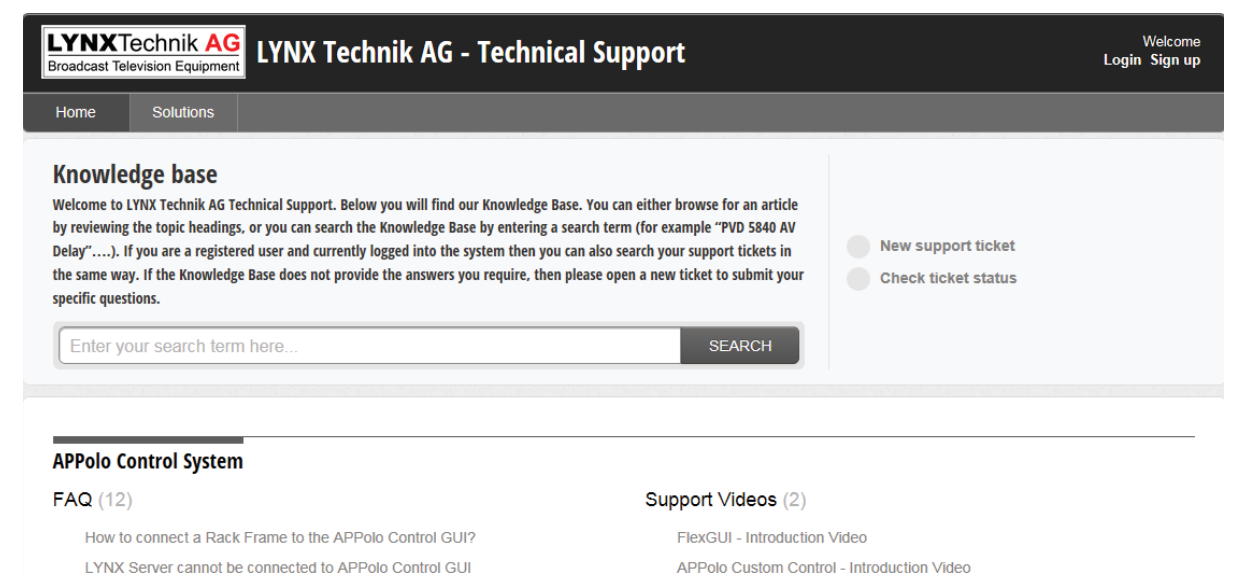
## Register Your Product to Stay Informed

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 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](http://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.

THIS WARRANTY IS GIVEN BY LYNX TECHNIK WITH RESPECT TO THIS PRODUCT IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED. LYNX TECHNIK AND ITS VENDORS DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. LYNX TECHNIK'S RESPONSIBILITY TO REPAIR AND REPLACE DEFECTIVE PRODUCTS IS THE SOLE AND EXCLUSIVE REMEDY PROVIDED TO THE CUSTOMER FOR BREACH OF THIS WARRANTY. LYNX TECHNIK AND ITS VENDORS WILL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IRRESPECTIVE OF WHETHER LYNX TECHNIK OR THE VENDOR HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

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