

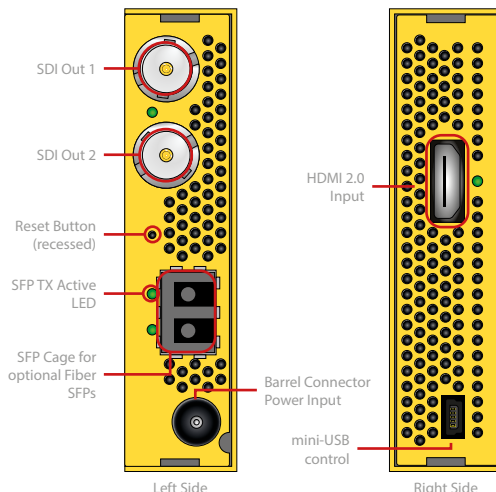
## HDMI to 12G-SDI Converter

LYNX | Centraal™

yelloGUI



Shown with optional fiber SFP installed



## Features

- Supports video inputs from 1.5G-SDI up to 12G-SDI
- 3G-SDI Level A And Level B support
- 2x 12G-SDI outputs with optional Fiber Transmitter
- 1x HDMI 2.0b input
- HDMI Embedded Audio pass-through transparently.
- Support for Dolby Digital Plus and Dolby Atmos
- LED indicator for HDMI presence
- LynxCentraal & yelloGUI compatible for internal settings

## Description

The CHD 1402 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. PCM, Dolby Digital (AC3), Dolby Digital Plus (E-AC-3) and Dolby Atmos (JOC) audio formats present in the HDMI stream are passed through to the SDI output.

The module is compatible with yelloGUI and LynxCentraal for monitoring and configuration.

An optional SDI SFP transmitter can be installed to enable fiber transmission. See SDI Fiber Transmitter table.

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

## Technical Specifications

<b>Supported Formats</b>	4K 4096x2160p	23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
	UHD 3840x2160p	23.98, 24, 25, 29.97, 30, 50, 59.94, 60
	2K 1920x1080p	23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
	HD 1920x1080p	23.98, 24, 25, 29.97, 30, 50, 59.94, 60
	HD 1920x1080PsF	23.98, 24, 25, 29.97, 30
	HD 1920x1080i	50, 59.94, 60
	HD 1280x720p	23.98, 24, 25, 29.97, 30, 50, 59.94, 60
	SD 720x625i	50
	SD 720x525i	59.94
<b>Supported Standards</b>	SMPTE 259M, SMPTE 292M, SMPTE 424M, SMPTE 2081-1, SMPTE 2082-1	
<b>Color Precision</b>	YCbCr 4:2:2	10-bit
	YCbCr/RGB 4:4:4	10, 12-bit
<b>Audio Formats</b>	PCM Dolby Digital (AC-3) Dolby Digital Plus (E-AC-3), including Dolby Atmos (JOC)	
<b>HDMI Input</b>	Type A 2.0b connector for up to 2160p60 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)	
	Electrical Return Loss:	to 1.5GHz >15dB    to 3GHz >10dB    to 6GHz >7dB    to 12GHz >4dB
<b>Fiber Output</b>	Optional plug in SFP for optical SDI output (see fiber options table)	
<b>Power</b>	+12V DC @ 9.3W nominal - ( supports 10 - 24V DC input range )	
<b>Physical</b>	Size (incl. connectors): 123mm x 90mm x 22mm (4.84" x 3.54" x 0.86") Weight: 186g (6.56oz)	
<b>Ambient</b>	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)	
<b>Model #</b>	CHD 1402 - ( EAN# 4250479328129)	
<b>Includes</b>	Module, AC power supply, HDMI + USB cable	



**CAUTION:** This is a high power module. If mounting the module in the RFR 1200 rack frame please leave an empty slot each side of the module to allow for adequate airflow to prevent the risk of overheating.

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

\* Distance is an approximation

### Video Output Resolution

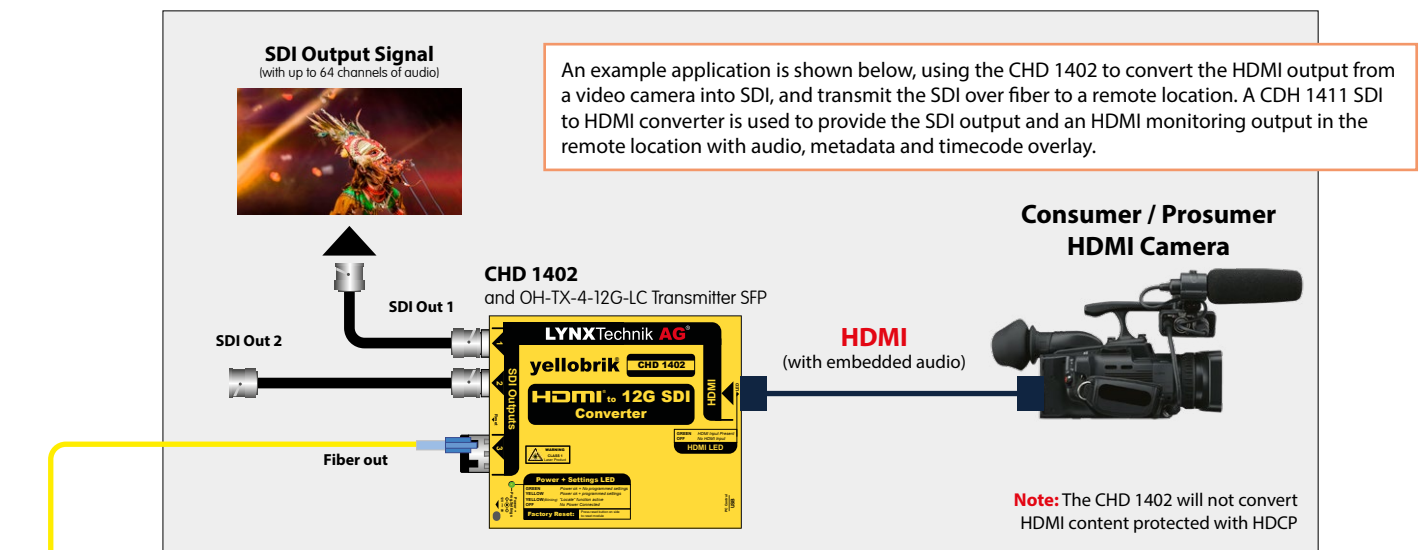
The module does not have an internal scaler and no de-interlacer. If the input resolution does not match any of the supported SDI formats, the module will select an appropriate SDI standard with a similar number of line pixels and map the signal into the SDI output. This may result in some image cropping (cut) or boxing (blanking) of the overshoot area. To change the output format, please connect the module to a PC or Mac via either yelloGUI or LynxCentraal.

HDMI Input	SDI Output				
	SDTV	720p	1080i	1080p	2160p
SDTV [720x 525/625]	N	B	B	B	B
720p [1280x720]	C	N	B	B	B
1080i [1920x1080]	C	C	N	N	B
1080p [1920x1080]	C	C	N	N	B
2160p [3840x2160]	C	C	C	C	N

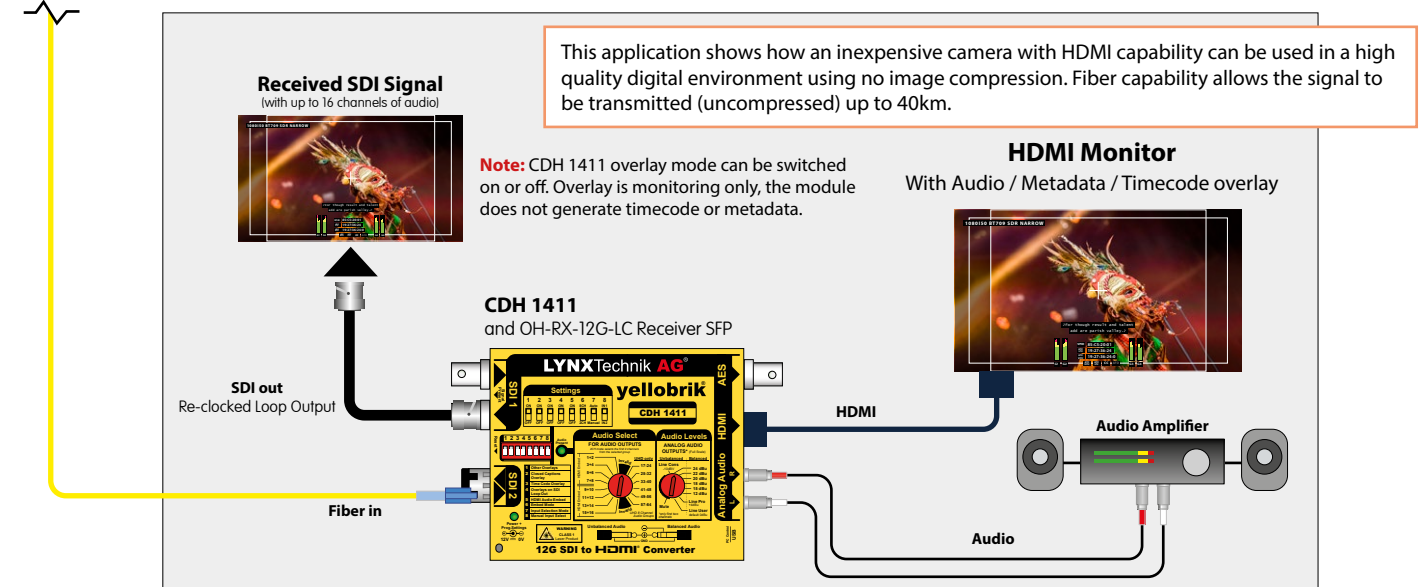
Legend		CV/BH	Crop: Vertical / Boxing: Horizontal
C	Cropping (Horizontal and Vertical)	CV	Crop: Vertical
B	Boxing (Horizontal and Vertical)	N	Output = Input

HDMI Input	SDI Output				
	SDTV	720p	1080i	1080p	2160p
VGA [640x480]	B	B	B	B	B
SVGA [800x600]	C	B	B	B	B
XGA [1024x768]	C	CV/BH	B	B	B
WXGA [1280x768]	C	CV	B	B	B
WUXGA [1920x1200]	C	C	CV	CV	B
WQXGA [2560x1600]	C	C	C	C	B
WQUXGA [3840x2400]	C	C	C	C	CV

### Application Example



Fiber Connection up to 40km (24.9 miles) @ 12Gbit/s with select SFP modules



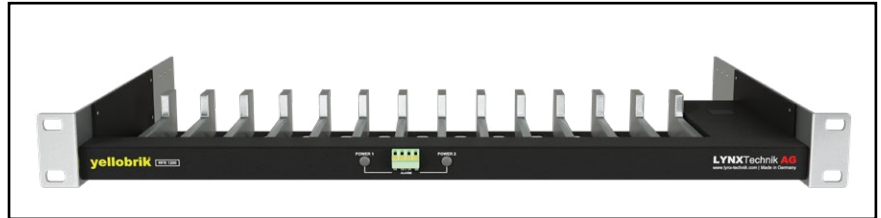
### Optional Accessories

#### Rack Frames

This yellobrik can be placed in a rack frame along others to build increasingly complex systems, all monitored and controlled with a rack controller (RCT 1012) and server module (SRV 1000) via a PC or MAC using LynxCentral.

The RFR 1200 offers additional power redundancy with GPI alert. It automatically closes a connection between the A and B terminals on power failure.

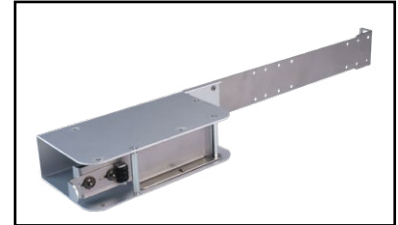
The RPS A100 is a 100W power supply, which can be mounted at the rear end of the RFR 1200 with an RXT 1001 power supply holder for rack frames.



**RFR 1200:** yellobrik Rack Frame



**RPS A100:** 100W Power supply



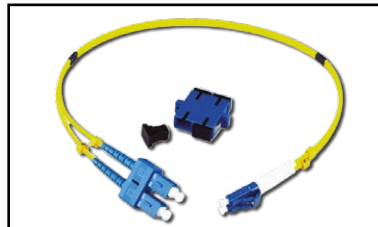
**RXT 1001:** Power Supply Holder

#### Fiber Adapter Cables

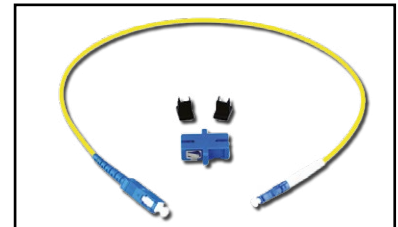
While some of our products offer LC, ST and SC fiber connectors, most SFPs in our product range offer LC fiber connectors.

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

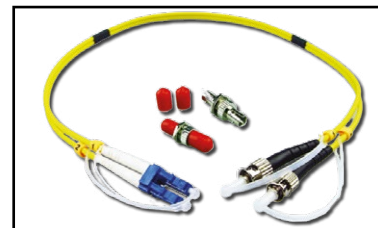
Besides the selection here we offer LC/FC and LC/LC patch cables.



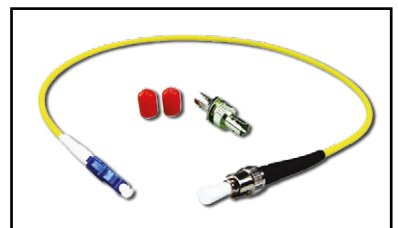
**LC/SC Dup:** LC/SC Duplex adapter cable



**LC/SC Sim:** LC/SC Simplex adapter cable



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



**LC/ST Sim:** LC/ST Simplex adapter cable

#### Fiber I/O Options:

A wide range of SFP modules are available for this yellobrik. The selection listed here shows the most likely SFP modules for most typical setups.

More SFP modules are available. To find the perfect solution for your setup visit [lynx-technik.com](http://lynx-technik.com) for more information or contact us.

#### SDI Fiber Transmitter Options

Model	Description	Power
<b>OH-TX-12G-LC</b>	SFP Fiber TX - Singlemode - LC connector - 10km*	-5 ... +0.5dBm
<b>OH-TX-4-12G-LC</b>	SFP Fiber TX - Singlemode - LC, ST or SC conn. - 40km*	-0.5 ... +3dBm
<b>OH-TX-12G-XXXX-LC</b>	CWDM SFP Fiber TX - Singlemode LC Conn. - 10km* XXXX=Wavelength. 18 according to ITU T G692.2 1270 - 1610nm	-2 ... +3dBm
<b>OH-TX-1 LC/ST/SC</b>	3G SFP Fiber TX - Singlemode - LC/ST/SC connector - 10km*	-8 ... -3dBm
<b>OH-TX-4-XXXX-LC</b>	3G CWDM SFP Fiber TX - Singlemode - LC connector - 40km*	-4 ... +2dBm
<b>OH-TX-8-XXXX-LC</b>	3G CWDM SFP Fiber TX - Singlemode - LC connector - 80km*	+1 ... +5dBm