yellobrik®

CHD 1802
yelloGUI compatible

3Gbit HDMI® to SDI Converter

Shown with Fiber SFP Option Installed

- 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.

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.)

Technical Specifications

HDMI Input	3D compatible input using type A connector
	Up to 8 channels embedded audio in HDMI is passed transparently
SDI Outputs	2 x SDI video, 75 Ohm BNC. (both have the same signal - NOT dual link) SMPTE 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)
Fiber Output	Optional plug in SFP for optical SDI output (see fiber options table)
Power	+12VDC @ 4W nominal - (supports 10 - 14VDC input range)
Physical	Size: 123mm x 90mm x 22mm (4.84" x 3.54" x 0.86") - including connectors Weight: 175g (6.17oz)
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)
Model #	CHD 1802 - (EAN# 4250479318328)
Includes	Module, AC power supply, HDMI + USB cable, transport case

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)
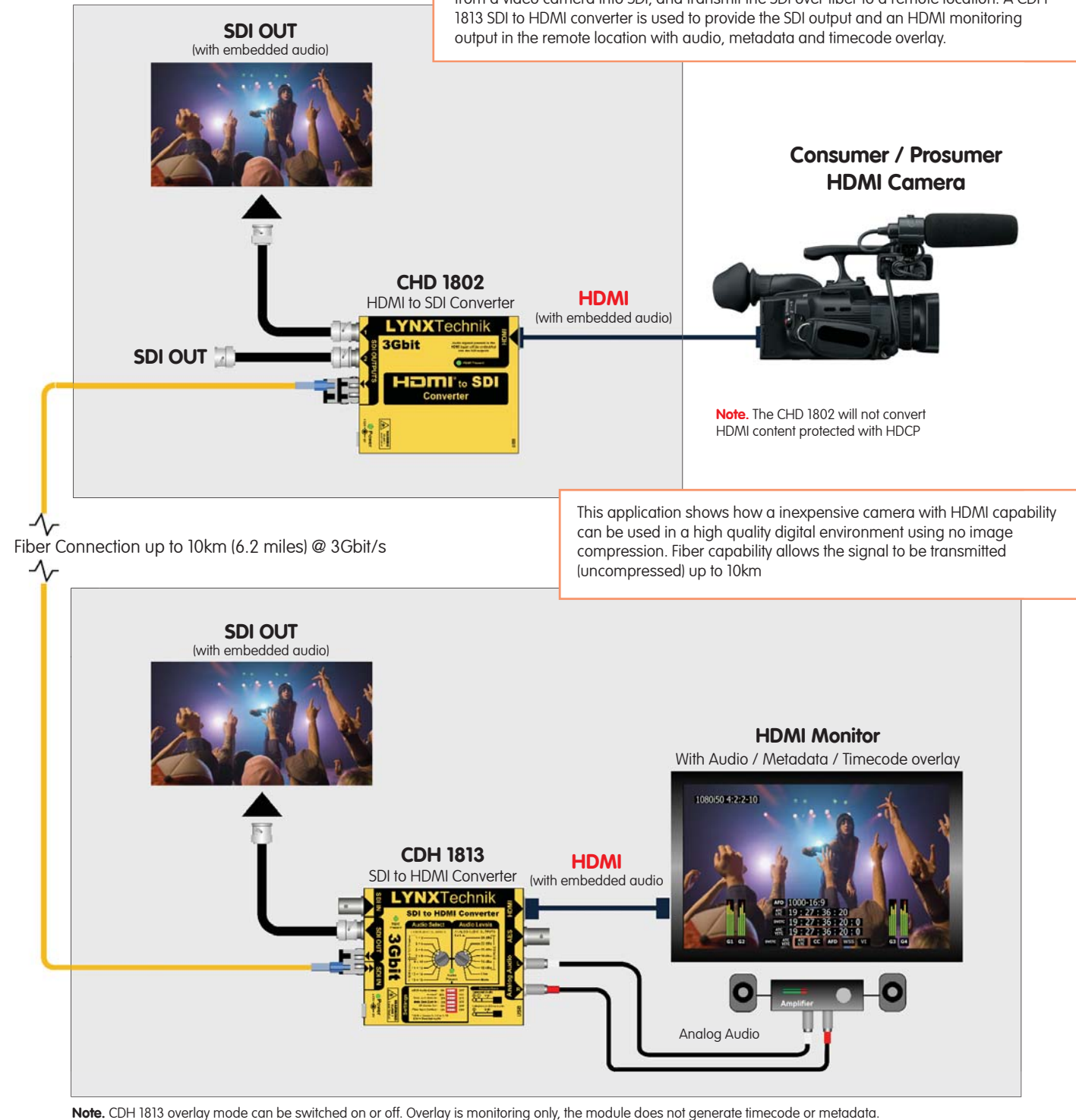
The table below shows the input to output resolution settings that are applied is AUTOMATIC mode. The yelloGUI interface provides the ability to manually set the output resolution interdependently of the input resolution. For these cases the table below also lists the conversion mode applied to optimally 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

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.

SDI OUT (with embedded audio)

Consumer / Prosumer HDMI Camera

CHD 1802 HDMI to SDI Converter

SDI OUT

HDMI (with embedded audio)

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

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

This application shows how a 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

SDI OUT (with embedded audio)

HDMI Monitor With Audio / Metadata / Timecode overlay

CDH 1813 SDI to HDMI Converter

HDMI (with embedded audio)

Analog Audio

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