

### 3Gbit HDMI® to SDI Converter

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

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

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

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

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

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

### Video Output Resolution

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

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

SDI Output	HDMI Input Resolution								
	SDTV 720x [525]625	720p 1280x720	1080i 1920x1080	1080p 1920x1080	VGA 640x480	SVGA 800x600	XGA 1024x768	WXGA 1280x768	WUXGA 1920x1200
<auto>	SDTV	720p	1080i	1080p	720p	720p	1080p	1080p	1080p
SDTV	N	C	C	C	V=C / H=B	V=C / H=B	C	C	C
720p	N	N	N	C	B	V=C / H=B	V=C / H=B	V=C	C
1080i	B	B & I	N	I	B	B	B	B	V=C
1080p	N	B	N	N	B	B	B	B	V=C



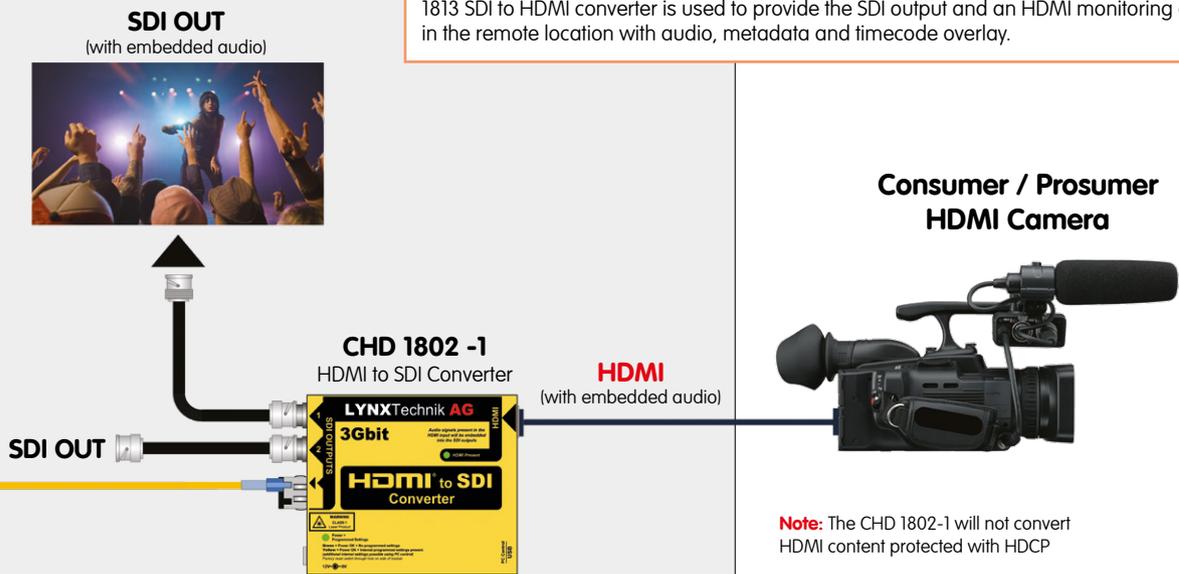
### Technical Specifications

<b>HDMI Input</b>	3D compatible input using type A connector For a detailed list of supported formats please refer to the article in our knowledge base ( <a href="http://www.lynx-technik.com &gt; support &gt; tech.support">www.lynx-technik.com &gt; support &gt; tech.support</a> )
	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 424M, SMPTE 292M, SMPTE 259M 3G Level A & B-DL & B-DS according to SMPTE ST 425-1 and ST 425-2 (3D) with image formats 1280 x 720 and 1920 x 1080 For a detailed list of supported formats please refer to the article in our knowledge base ( <a href="http://www.lynx-technik.com &gt; support &gt; tech.support">www.lynx-technik.com &gt; support &gt; tech.support</a> )
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
<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 1802-1 - ( EAN# 4250479318328 )
<b>Includes</b>	Module, AC power supply, HDMI + USB cable

CHD1802-1-rev08 Specifications subject to change

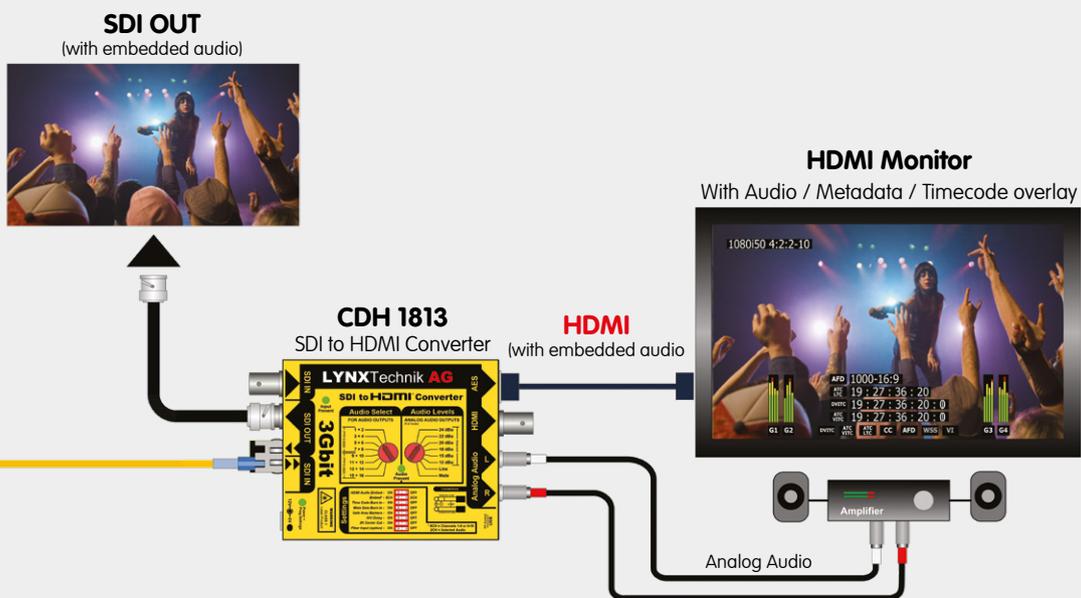
### CHD 1802-1 Application

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



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

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



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

CHD1802-1-rev08 Specifications subject to change