

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



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 SD black burst 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 stereo pair of analog inputs can be embedded into any AES channel. Inputs can be either professional balanced audio with selectable full scale level, or unbalanced consumer line level audio.

Any audio present in the HDMI stream will be embedded into the SDI outputs, or can be replaced with the external audio input.

An optional SDI fiber output is also provided (Single Mode Fiber)

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 Output Options

Fiber SFP Transmitter Stick (LC)

Inserts into the Fiber SFP cage on the side of the module. Can be added at any time. Please select from below:



Wavelength	TX Power	Max Distance	Option #
1310nm	-5dBm	10km (6.2 miles)	OH-TX-1
1550nm	-1dBm	40km (24.8 miles)	OH-TX-3-1550

NOTE: 18 x CWDM wavelength versions are also available. Please contact LYNX for details.

Technical Specifications

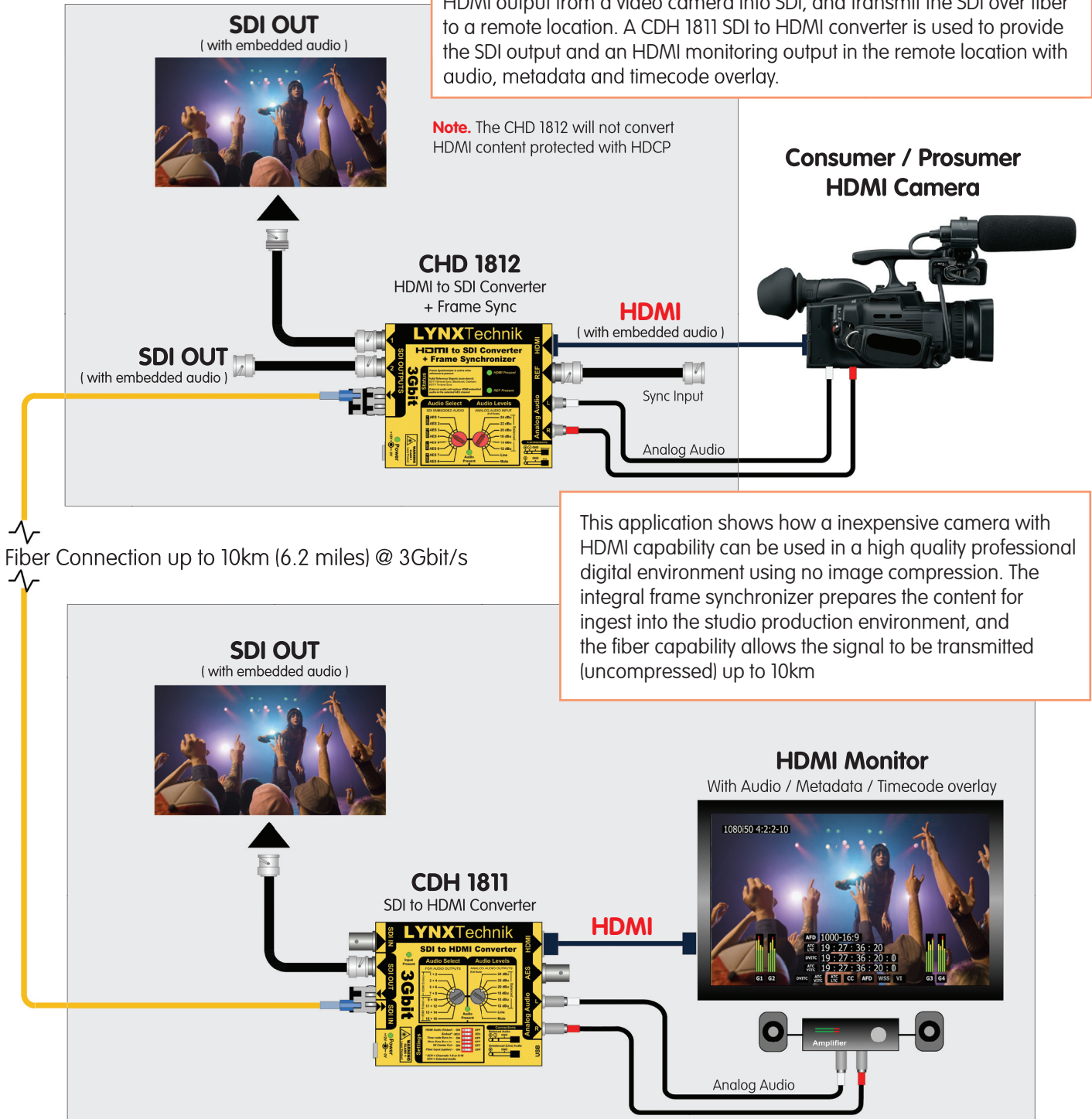
HDMI Input	3D compatible input using type A connector Up to 8 channels embedded audio in HDMI is passed transparently or replaced with external analog audio input
Reference Input	SDTV: Analog 525 or 625 bi-level sync, black burst or colorbars HDTV: All tri-level sync standards (exceptions 1080p 50/59.94/60Hz) Cross lock compatible 75 Ohm BNC connector SMPTTE 274M, SMPTTE 296M
Frame Synchronizer	Functional if valid reference is detected, otherwise operates in free run (asynchronous) mode. External audio and HDMI input are frequency locked to external reference, fully cross lock compatible across standards
SDI Outputs	2 x SDI video on 75 Ohm BNC connector SMPTTE 424M, SMPTTE 292M, SMPTTE 259M Multi-standard output from 270Mbit/s to 3Gbit/s (follows HDMI input) SDTV (525/625) 720p and 1080p (23.98/24/25/29.97/30/50/59.94/60 Hz) 1080i (50/59.94/60 Hz)
Audio Inputs	Left and right analog audio using 1/4 inch jack plugs 10k Ohm differential balanced input mode with 24,22,20,18,15,12 dBu full scale (selectable) Unbalanced mode with (line level) at -10 dBV (1/4 inch Jack Plug to RCA connection adapters supplied) Selectable AES channel for audio embedding (1 through 8) (Overwrites any HDMI embedded audio present in selected channel) Frequency response: $\pm 0.2\text{dB}$ 20Hz to 20KHz 48KHz A/D sample rate (free run or frequency locked to ref input)
Power	+12VDC power supply (included)
Size	105mm x 95mm x 22mm (4.13" x 3.74" x 0.86")
Model #	CHD 1812
Includes	Module, AC power supply, RCA adapters, HDMI cable and mounting brackets

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.)

Specifications subject to change

CHD 1812 Application

An example application is shown below, using the CHD 1812 to convert the HDMI output from a video camera into SDI, and transmit the SDI over fiber to a remote location. A CDH 1811 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.



Note. The CHD 1812 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 professional digital environment using no image compression. The integral frame synchronizer prepares the content for ingest into the studio production environment, and the fiber capability allows the signal to be transmitted (uncompressed) up to 10km

Note. Overlay mode can be switched on or off. Overlay is monitoring only, does not generate timecode or metadata