yellobrik®

CHD 1412

LYNX | Centraal™ ✓ yelloGUI ✓

4K HDMI® to 12G-SDI Converter + Frame Synchronizer

- Supports 12G / 6G / 3G / 1.5G / SD-SDI Signals
- 3G-SDI Level A And Level B Support
- Integrated Frame Synchronizer
- Multi-Format Sync Reference Input - Cross Lock Compatible
- 2 x SDI Outputs With Optional SDI Fiber Output
- HDMI Embedded Audio Passes Transparently
- Balanced Analog Audio, Unbalanced Line Level Audio, Or AES Input
- Selectable AES Channel For Embedding External Audio
- HDMI, Reference And Audio Present LED Indication
- LynxCentraal & yelloGUI Compatible For Additional Internal Settings

Shown with Fiber SFP Option Installed

The CHD 1412 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 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. It can also lock to the HDMI input. 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 LynxCentraal and yelloGUI software packages, which provide 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.

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.)

Fiber I/O Options:

SDI Fiber Transmitter Options

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

* **Distance is an approximation.** Actual distances achieved can be longer or shorter depending on the type of fiber cable and accumulated optical losses in the fiber link. Determine link losses and perform optical budget calculations to ensure correct operation.
More SFP options are available.

Technical Specifications

HDMI Input	Type A 2.0b connector for up to 2160p60
	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, 3G, 12G: All tri-level sync standards (exceptions 1080p 50/59.94/60Hz) Cross lock compatible
	SMPTE 274M, SMPTE 296M - 75 Ohm BNC connector
Frame Synchronizer	Functional if valid reference is detected, otherwise operates in free run (async) 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 LynxCentraal or yelloGUI
SDI Outputs	2 x SDI video, 75 Ohm BNC (both have the same signal - NOT dual link)
	SMPTE 259M, SMPTE 292M, SMPTE 424M, SMPTE 2081-1, SMPTE 2082-1
	Electrical Return Loss: to 1.5GHz >15dB; to 3GHz >10dB; to 6GHz >7dB; to 12GHz >4dB
Fiber Output	Optional plug in SFP for optical SDI output (see fiber options table) SMPTE 297 - 2006
Audio Inputs	Left and right analog audio using 3.5mm jack plugs
	10k Ohm differential balanced input mode with 24,22,20,18,15,12 dBu and User defineable full scale level (selectable)
	Unbalanced mode with (line level) at -10 dBV (3.5mm 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: <+/- 0.1dB 20Hz to 20KHz
	48kHz A/D sample rate (frequency locked to SDI output)
Power	+12V DC @ 10.0W (excl. SFP) nominal - (supports 10 - 14V DC input range)
Physical	Size (incl. connectors): 140mm x 90mm x 22mm (5.51" x 3.54" x 0.86") Weight (excl. SFP): 207g (7.3oz)
Ambient	5 - 40ºC (41 - 104ºF) 90% Humidity (non condensing)
Model #	CHD 1412 - (EAN# 4250479328112)
Includes	Module, AC power supply, RCA adapters, HDMI + USB cable