FAQ

HDMI connected, but no SDI output?

When two HDMI devices are connected, the EDID (Extended Display Identification Data) protocol automatically negotiates the highest video resolution supported by both devices and configures the HDMI connection accordingly. The CHD 1402 supports video formats up to 2160p60. By default, an HDMI input signal of 2160p60 results in a 12G-SDI output.

If a 3G-SDI, 1.5G-SDI or 270M-SDI output is required, the HDMI source device must be manually configured to output the desired video format.

The CHD 1402 does not feature an internal video scaler. However, a specific output format can be selected via LynxCentraal or yelloGUI by overriding the video formats advertised through EDID. Depending on the selected format, the resulting SDI output may be cropped or displayed with black borders (letterboxing or pillarboxing). For detailed format mapping information, please refer to the datasheet.

HDMI LED off despite an active connection?

The HDMI source may be transmitting HDCP-protected content. In this case, the HDMI Present LED remains OFF, and the module blocks the conversion, resulting in a black SDI output.

Note: Consumer HDMI devices typically implement HDCP copy protection, even when the source media itself is not copy-protected. Before contacting technical support, verify the module's operation using an HDMI source known not to support HDCP, such as most HDMI cameras.

Which video formats are compatible?

HDMI supports a wide range of video formats, differing in both resolution and aspect ratio. A list of tested and compatible formats is available on the product page and datasheet.

yellobrik® CHD 1402

Technical Specifications

HDMI Input	Type A 2.0b connector for up to 4K DCI, 4:4:4, 12-bit at 60 fps				
	Supports transparent pass-through of up to 8 embedded HDMI audio channels. Pass-through supports PCM, Dolby Digital, Dolby Digital Plus and Dolby Atmos.				
SDI Outputs	2x SDI video, 75 Ohm BNC (identical signals; non-dual-link)				
	SMPTE 259M, SMPTE 292M, SMPTE 424M, SMPTE 2081-1 and SMPTE 2082-1				
	Electrical Return Loss:	to 1.5GHz >15dB	to 3GHz >10dB	to 6GHz >7dB	to 12GHz >4dB
Fiber Output	Optional Simplex SFP Transmitter: SMPTE 297 - 2006				
Power	+12V DC @ 9.3W nominal - (supports 10 - 24V DC input range)				

Description

The CHD 1402 is a compact HDMI to 12G-SDI converter. It is an ideal solution for any application which requires a broadcast quality 12G-SDI signal derived from an external HDMI source. The PCM audio present in the HDMI stream will be embedded into the corresponding channels on the SDI output.
It can handle video formats up to UHD and 4K DCI with 4:2:2 and 4:4:4 chroma sub-sampling at 8-bit, 10-bit or 12-bit depth.
A 12G-SDI fiber output is provided with a selection of optional SFPs.
The module is fully compatible with yelloGUI and LynxCentraal. It can be configured, controlled and updated using Windows or MacOS. Like all yellobrik modules, it is compatible with the RFR 1200 rack frame, which provides centralized power and power redundancy.



WARNING
CLASS 1M LASER PRODUCT
LASER RADIATION

Do not view directly with optical instruments

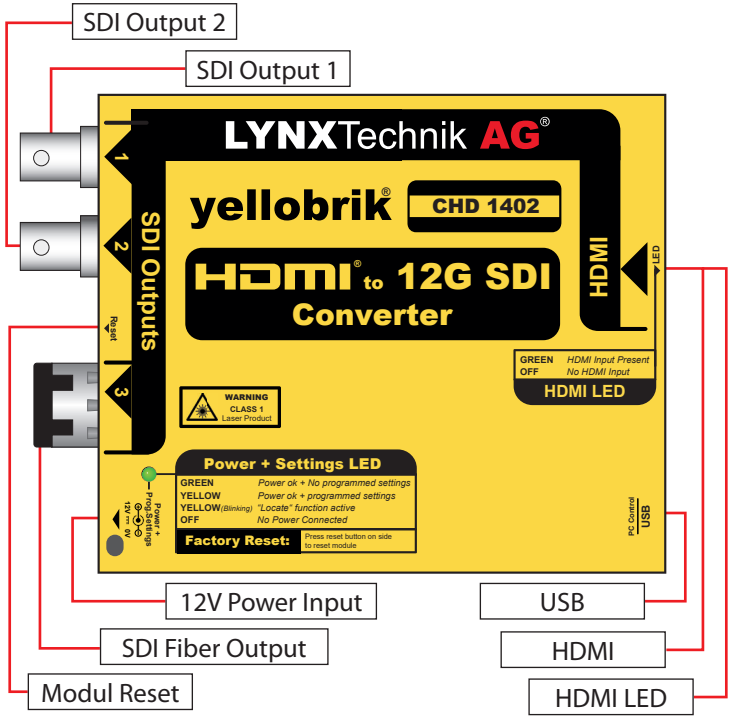
Visit our website for the latest product updates: **www.lynx-technik.com**

LYNXTechnik | Broadcast Television Equipment

yellobrik® Quick Reference

CHD 1402

4K HDMI to 12G-SDI Converter



Connections
All connections are clearly indicated on the module. The optional simplex fiber SDI transmitter is hot pluggable and can be added at any time.

Operation
The CHD 1402 automatically detects the incoming HDMI format and converts valid signals to SDI. Video is converted at its native resolution without scaling.

HDCP Copy Protection
The CHD 1402 **does not** support the conversion of HDCP-protected content. If an HDMI source is connected but the HDMI Present LED remains off, the incoming signal is most likely HDCP-protected.

Audio
The CHD 1402 yellobrik automatically detects up to 8 embedded HDMI audio channels and embeds them into the SDI outputs (AES channels 1–4). HDMI audio is passed through without modification or decoding. PCM, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3) and Dolby Atmos (JOC) audio formats are passed through to the SDI output.

Note: Each AES channel carries two audio channels (stereo).

Fiber Transmitter (optional)
This yellobrik module is compatible with Tx fiber SFPs as outlined below. CWDM SFPs are available in 18 wavelengths as per ITU-T G.694.2 recommendations.

12G-SDI Simplex Fiber Transmitter SFPs			
Model	Type	Wavelengths	Power
OH-TX-12G-LC	Standard	1310nm	-2dBm
OH-TX-4-12G-LC	Standard	1310nm	+1.25dBm
OH-TX-12G-XXXX-LC	CWDM	1270 -1610nm	+0.5dBm
OH-TX-4-12G-XXXX-LC	CWDM	1270 -1610nm	+2.5dBm

Module LEDs
The module has several LEDs included to indicate status:

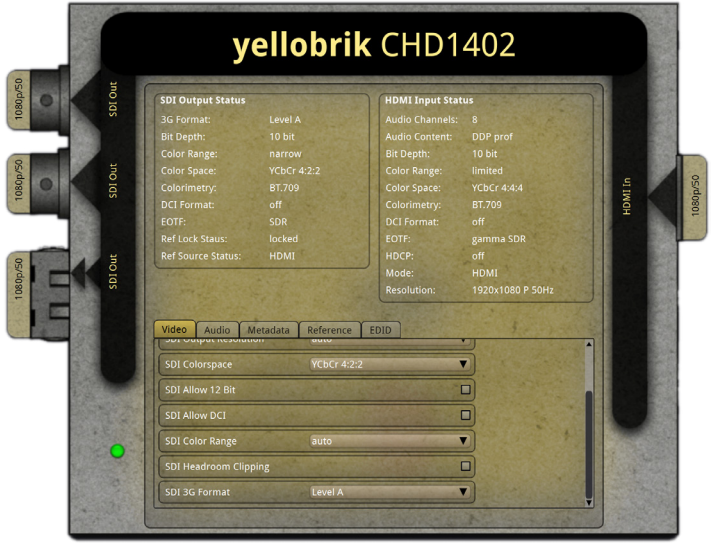
HDMI Present LED

Green	Valid HDMI signal connected
Off	Non valid HDMI signal or signal missing

Power / Prog Setting LED

Green	Power OK and no internal programmed settings are present
Yellow	Power OK and some programmed settings are active*
Off	Power not present

* Some additional internal settings have been made using control software.
The module can be reset to factory defaults by using the GUI or reset switch (recessed under a hole on the side of the module). When reset the LED will change back to green.

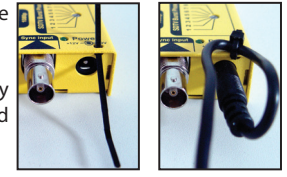


Firmware Updates / Control Software
To update a yellobrik, power it and connect it to a PC or Mac via USB. Ensure that yelloGUI or LynxCentraal are installed and running on the computer. The control applications can be downloaded from:
https://lynx-technik.com/software-applications/
Lynx Centraal indicates when a new firmware is available. To apply the update, navigate to the "Update" tab, select the devices to be updated, and click "Start Update" in the bottom-right corner.

Lynx Technik firmware updates are free of charge.

Power Lead Strain Relief
The module has a small hole in the case located above the power connection.

To prevent the power lead being accidentally pulled out, use the supplied tie-wrap and secure the lead as shown.



Optional Mounting Solutions
The optional RFR 1001 mounting bracket allows yellobriks to be installed on any surface or on 19" rack rails.



The RFR 1200 rack mount can mount up to 14 yellobrik modules and provide full power redundancy for all installed yellobriks.

