FAQ

HDMI connected, but no SDI output?

When two HDMI devices are connected together, the EDID communication protocol automatically determines the highest resolution both devices support and configures the HDMI link to that resolution. CHD 1402 supports video formats up to 2160p60. If the HDMI Input is 2160p60, the SDI Output per default will be 12G-SDI.

If 3G, 1.5G or 270M SDI output is needed, the HDMI source device should be manually set to output the desired video resolution.

The CHD 1402 **does not include an internal scaler**, but it is possible to force a specific output video format via LynxCentraal or yelloGUI. This is achieved by overriding the formats advertised through EDID. As a result, the output may appear either cropped or boxed. For details on format mappings, please refer to the datasheet.

HDMI LED off, but connected?

The HDMI content may have HDCP copy protection, in which case the HDMI present LED will be OFF and the module will block the conversion and provide a black SDI output.

Note: Consumer devices usually include HDCP copy protection even if the source media is not copy protected. Please verify the operation of the yellobrik module on a HDMI source which is known not to have HDCP copy protection (e.g. most HDMI cameras) before contacting technical support.

Compatible Formats?

An HDMI input can present a wide range of formats that vary not only in resolution but also in aspect ratio. A list of expected, compatible formats has been compiled and is available on the product page.

lynx-technik.com/p/chd_1402

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yellobrik®

CHD1402_R03

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Technical Specifications

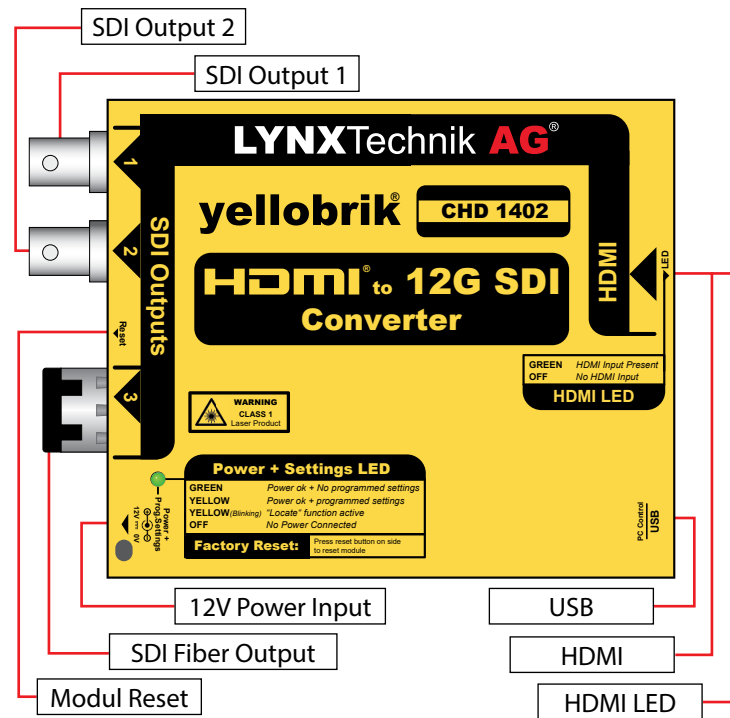|	
HDMI Input	Type A 2.0b connector for up to 2160p60
	Up to 8 channels embedded audio in HDMI is passed through transparently. Audio pass through support for PCM, Dolby Digital, Dolby Digital Plus and Dolby Atmos
SDI Outputs	2 x SDI video, 75 Ohm BNC (both have the same signal - NOT dual link)
	SMPTE 259M, SMPTE 292M, SMPTE 424M, SMPTE 2081-1, SMPTE 2082-1
Fiber Output	Optional plug in SFP for optical SDI output (see fiber options table)
Power	+12V DC @ 9.3W nominal - (supports 10 - 24V DC input range)

Electrical Return Loss:

to 1.5GHz	to 3GHz	to 6GHz	to 12GHz
>15dB	>10dB	>7dB	>4dB

We are constantly adding more yellobrik modules.
Visit our website for the latest product updates.

lynx-technik.com/yellobrik/

LYNXTechnik | Broadcast Television Equipment

CHD 1402
4K HDMI to 12G-SDI Converter

SDI Output 2

SDI Output 1

LYNXTechnik AG®

yellobrik® CHD 1402

HDMI to 12G SDI Converter

SDI Outputs

1
2
3

Reset

GREEN HDMI Input Present
OFF No HDMI Input
HDMI LED

HDMI

LED

⚠ WARNING
CLASS 1
Laser Product

Power + Settings LED

GREEN	Power ok + No programmed settings
YELLOW	Power ok + programmed settings
YELLOW (Blinking)	"Locate" function active
OFF	No Power Connected

Power +
Prog Settings
12V 0V

Factory Reset: Press reset button on side to reset module

PC Control USB

12V Power Input

USB

SDI Fiber Output

HDMI

Modul Reset

HDMI LED

WARNING
CLASS 1M LASER PRODUCT

Laser Radiation
Do not look directly into emitter with optical instruments

Connections

All connections are clearly indicated on the module. The fiber SDI output is optional and can be added at any time if needed using the socket provided (plug in SFP module).

Operation

The CHD 1402 module is a powerful HDMI to SDI conversion device. It auto-detects the connected HDMI standard and, if valid, converts it to SDI. The HDMI is converted to an SDI signal in its native SDI resolution (no scaling). Any audio present on the HDMI signal will be automatically embedded into the SDI outputs.

HDCP Copy Protection

The CHD 1402 **WILL NOT** convert any HDCP encrypted content. If a HDMI source is connected and the "HDMI present" is off then the HDMI content is most likely protected with HDCP.

Audio

Up to 8 channels of audio present on the HDMI input are automatically embedded into the SDI outputs (AES channels 1, 2, 3, 4).
The HDMI audio is not modified or decoded. PCM, Dolby Digital (AC3), Dolby Digital Plus (E-AC-3) and Dolby Atmos (JOC) audio formats present in the HDMI stream are passed through to the SDI output.
Note: One AES channel = two mono audio channels or one Stereo pair.

Fiber Output (optional)

The fiber output is provided via an optional SFP module. Several SFP options are available, including a standard single-mode transmitter (1310 nm) and high powered CWDM for up to 40km. For more information on compatible Tx SFPs options please check the Lynx Technik website.

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 and the LED indicates this by turning yellow. 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.

USB Port / Firmware Updates / Control Software

The module's USB interface is used for firmware updates and for controlling the device via software applications.
To update a yellobrik using yelloGUI, power the module, connect it to your PC or Mac, and launch the software. If a new firmware version is available, yelloGUI will notify you and guide you through the update process.
To update via LynxCentraal, simply click the Update button on the left side of the user interface, then select the devices you wish to update.

Firmware updates are always free of charge.

lynx-technik.com/software-applications/

Fiber I/O Options

This module is compatible with multiple fiber SFPs, as outlined below. CWDM variants are available in up to 18 wavelengths upon request; contact LYNX Technik for further details.

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 1270 -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

* Distances are an aproximation and can vary depending on individual setups.

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
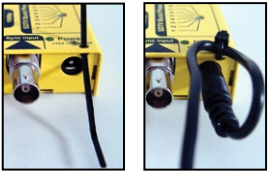
Mounting Solutions

The optional RFR 1001 mounting bracket can be used to permanently mount the module on any surface or on 19" rack rails.
The RFR 1200 rack frame can accommodate up to 14 yellobrik modules and allows full power redundancy for all mounted yellobriks.