

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 has **no internal scaler**, but it is possible to use force the desired video format with LynxCentraal or yelloGUI. This is done by forcing the formats reported over EDID. As a result the recognized HDMI resolution is changed and the **output is either cropped or boxed**. For examples where HDMI formats result in either cropping, boxing, or any combination of both, 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?

Any HDMI input can have a wide range of formats. These vary not only in resolution, but also aspect ratio. We compiled a list of expected, compatible formats. It can be found on the product page.



lynx-technik.com/p/chd_1402

Note: We continuously work on improving our products, this list might expand in the future.



CHD1402_R01

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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 transparently
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 to 3GHz to 6GHz to 12GHz
	>15dB >10dB >7dB >4dB
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)

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

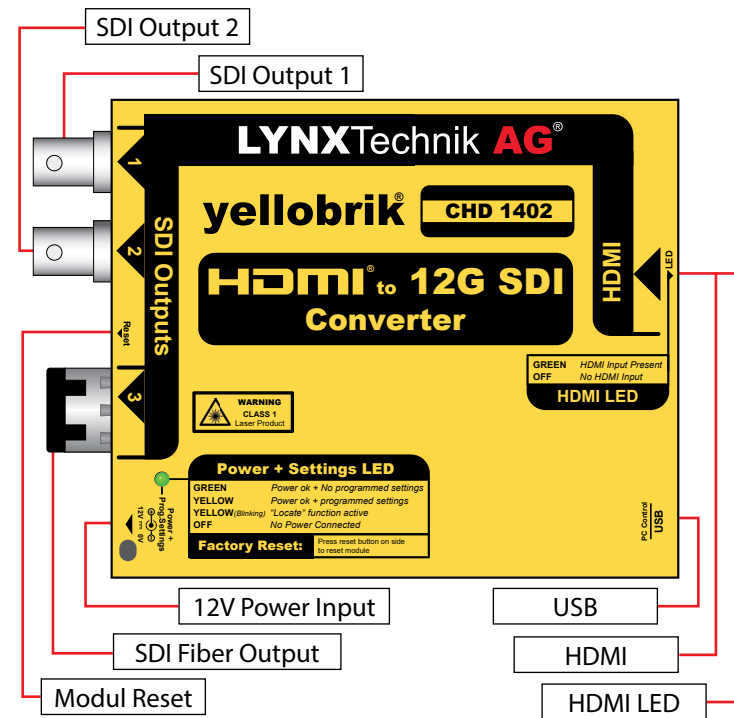


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Quick Reference

CHD 1402 4K HDMI to 12G SDI Converter



LYNXTechnik AG | www.lynx-technik.com

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. If encoded audio is present such as Dolby Digital then this encoded stream will be embedded (transparently) into the SDI output.

Note: One AES channel = two channels of audio.



Fiber Output (optional)

An SDI fiber output is provided via a removable SFP fiber stick. This can be a standard SDI Transmitter (1310nm) or if needed CWDM versions are also available (18 wavelength choices). Please contact LYNX Technik for more details on the fiber options compatible with this module.




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 USB interface on the module is used for firmware updates and for control of the module using the yelloGUI or LynxCentraal software applications.

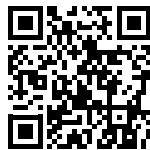
To update a yellobrik, power it and connect it to the PC or Mac running the yelloGUI software with the provided USB cable. The yelloGUI software will indicate if a new firmware is available for the connected module and will guide you through the update process.

For updates through LynxCentraal, just click the "Update" button on the left side. From there you can pick and choose which device to update.

Firmware updates are always free of charge.



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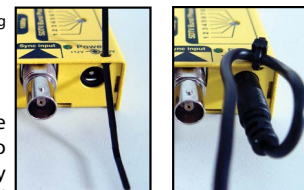
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Fiber I/O Options

The module can accommodate several fiber options, which are detailed below. These are SFP sub modules and plug into the side of the module. We can also supply CWDM versions in 18 different wavelengths if required (contact LYNXTechnik for more details).

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

* Distances are an approximation 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 optional RFR 1000-1 rack mount can be used to permanently mount up



to 14 yellobrik modules. In addition, the RFR 1000-1 can provide full power redundancy for all mounted yellobriks.