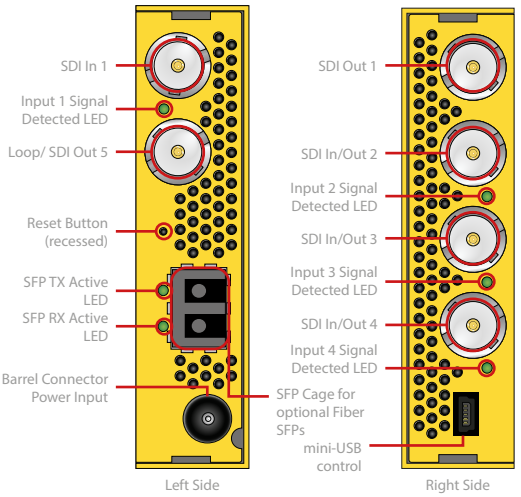
yellobrik®

CQS 1462

LYNX | Centraal™ ✓ yelloGUI ✓

12G-SDI / 3G-SDI Bi-Directional Converter

Shown with optional fiber SFP installed



Features

- Support for 12G/6G/3G/1.5G-SDI Video Formats
- Quad Link 2SI/SQD conversion to/from 12G-SDI
- 1x5 Distribution Mode (+Fiber output)
- Automatic Link Loss Reply Options for 2SI/SQD
- 4x 12G-SDI Mux/Demux to Fiber Transceiver
- 4x 12G-SDI inputs on BNC connectors
- 5x 12G-SDI outputs on BNC connectors
- 1x optional 12G-SDI Fiber Transceiver (In/Out)
- LynxCentraal & yelloGUI compatible for additional internal settings

Description

The CQS 1462 is a compact solution designed to bridge Quad Link 3G-SDI to Single Link 12G-SDI devices with support for 2SI and SQD.
Conversion modes:

- 12G-SDI to 4x 3G-SDI (Quad Link 2SI and SQD)
- 6G-SDI to 4x 1.5G-SDI (Quad Link 2SI and SQD)
- 4x 3G-SDI (Quad Link 2SI and SQD) to 12G-SDI
- 4x 1.5G-SDI (Quad Link 2SI and SQD) to 6G-SDI
- Auto Quad Link to Single Link
- Distribution Amplifier 1×5 (+ optional Fiber output)

Operational mode can be selected from the local rotary switch or via the LynxCentraal and yelloGUI control software. The CQS 1462 can be used as a distribution amplifier. Link identification is possible through on-screen overlays.

The module is suitable for all SMPTE standard signals from 1.5G-SDI to 12G-SDI (SMPTE 292M, 424M, 2081 and 2082). For optical inputs and outputs, we offer optional SFPs, in both CWDM and non-CWDM variants.

Technical Specifications

Supported Formats	4K	4096x2160p	23.98, 24, 25, 29.97, 30, 50, 59.94, 60			
	UHD	3840x2160p	23.98, 24, 25, 29.97, 30, 50, 59.94, 60			2SI+SQD
	2K	1920x1080p	23.98, 24, 25, 29.97, 30, 50, 59.94, 60			
	HD	1920x1080p	23.98, 24, 25, 29.97, 30, 50, 59.94, 60			
	HD	1920x1080i	50, 59.94, 60			
Supported Standards	SMPTE 292M, SMPTE 424M, SMPTE 2081-1, SMPTE 2082-1					
Color Precision	YCbCr	4:2:2	10-bit			
	YCbCr/RGB	4:4:4	10, 12-bit			
SDI I/O	1x 12G-SDI video input on BNC connector					
	4x 12G-SDI video outputs on BNC connector (1 x Loop/Processed output)					
	3x switchable SDI video in-/outputs on BNC connector					
	Electrical Return Loss		to 1.5GHz >15dB	to 3GHz >10dB	to 6GHz >7dB	to 12GHz >4dB
	Automatic Cable EQ*		1.5Gbit/s	3Gbit/s	6Gbit/s	12Gbit/s
			200m	150m	90m	85m
			Belden 1694A		Belden 4794R	
Fiber I/O	1 x fiber optic input and output (optional, see table)					
	SMPTE 297M - 2006					
Power	+12V DC @ 13.24W nominal (incl. SFP) - (7-24V DC input range)					
Physical	Size (incl. connectors): 140mm x 90mm x 22mm (4.96" x 3.54" x 0.86") Weight (excl. SFP): 200g (7.05oz)					
Ambient	5 - 40°C (41 - 104°F) 90% Humidity (non condensing)					
Model #	CQS 1462 - (EAN# 4250479327832)					
Includes	Module, AC power supply					

** Only supported in **Distribution Mode**

CAUTION: This is a high power module. If mounting the module in the RFR 1200 rack frame please leave an empty slot each side of the module to allow for adequate airflow to prevent the risk of overheating.

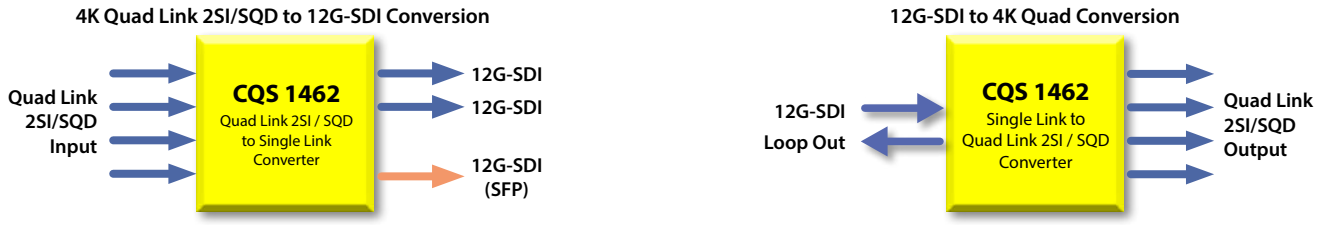
*Distance is an approximation. Actual distances achieved can be longer or shorter depending on the type of cable. Determine link losses and perform optical budget calculations to ensure correct operation.

CQS 1462 Applications

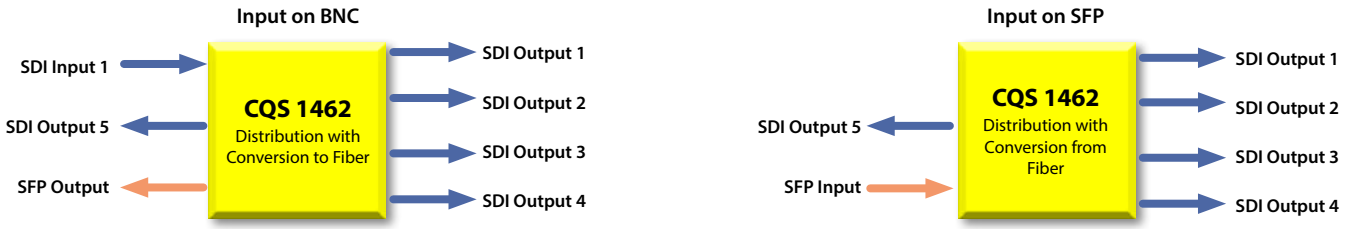
There are multiple applications for the CQS 1462. Aside from the conversions to and from Quad Link / Single Link, the optional fiber port opens up a host of additional possibilities.

Basic Applications

You may have a 4K camera (or another source device) which has a Quad Link 2SI/SQD 4K UHD output which you would like to convert to a standard Single Link 12G-SDI signal. Likewise, you may have a disk recorder or other device which requires a Quad Link 2SI/SQD input, and you only have a 12G source. These basic "bridge" modes are the most simple and most common applications of the module.



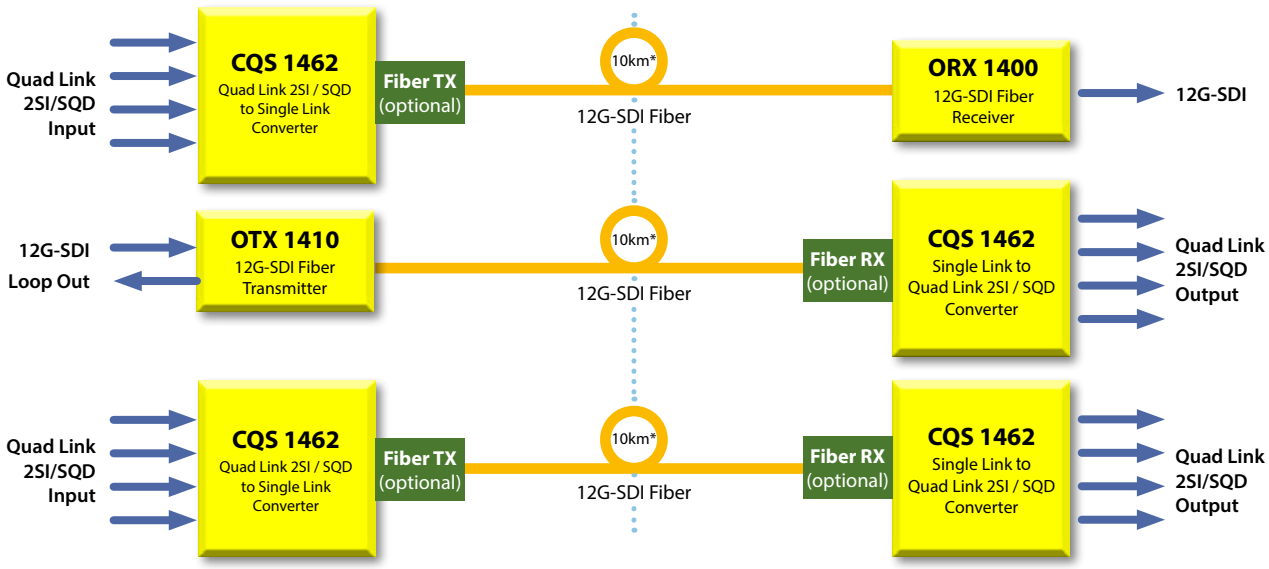
You can also use CQS 1462 for distributing one SDI signal from Input 1 [BNC/SFP] and distribute it to output 1-5 and SFP.



Basic Fiber Applications

The CQS 1462 is equipped with an integrated SFP port that can accept several fiber options to expand the distance of the 12G-SDI signal. Likewise, you can also extend the distance of a native Quad Link 2SI/SQD signal using fiber if needed.

Note: Additional LYNX Technik Fiber conversion modules are shown in some applications

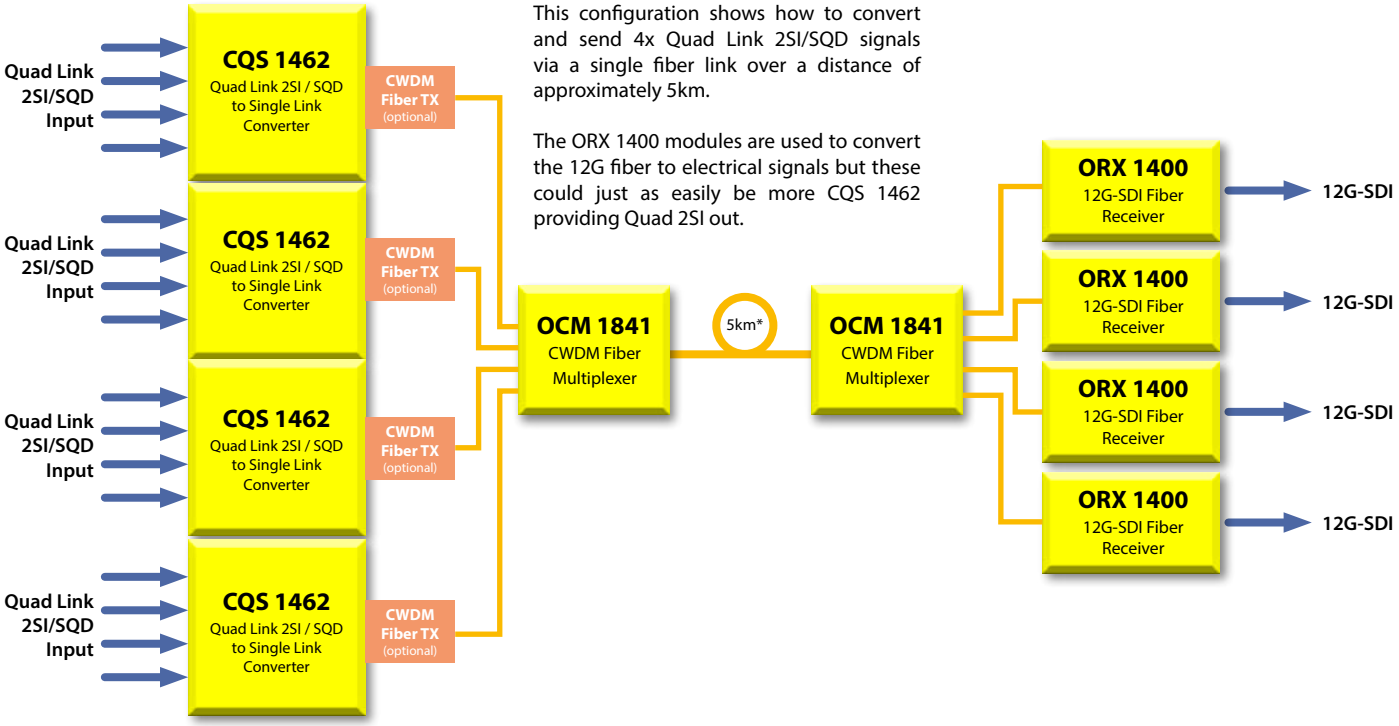


Fiber transceiver options are also available. These include both a transmitter and receiver in a single SFP package. Depending on the application, both SFP ports can be used at the same time. This option is also useful, if the CQS 1462 configuration is frequently changed and fiber transmission is sometimes needed and on other occasions fiber reception.

***Note:** Max distances quoted are only approximations based on nominal fiber links. Actual distances achieved can be shorter or longer than that stated. Many things can impact distance such as splices, connections, patches, splitters and the quality of the fiber. For longer distances you should always calculate the total fiber losses in the fiber link and ensure adequate optical budget.

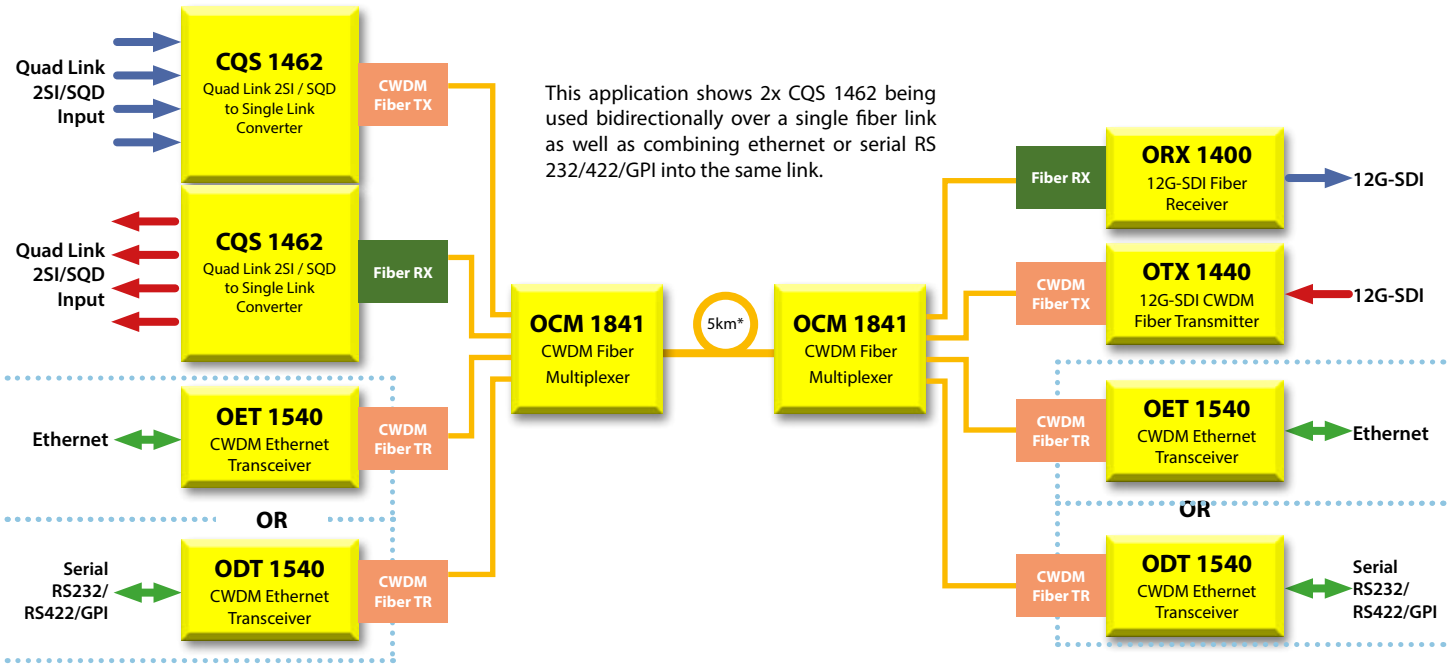
CWDM Fiber Applications

12G-SDI CWDM fiber options with the CQS 1462 open up a whole host of additional possibilities for remote, complex system designs: Combining multiple signals into a single fiber link, unidirectional and even bi-directional transmission over a Single Link. Quad Link 2SI/SQD and 12G can be combined with ethernet, serial data and even additional SDI signals if needed. Here are a few examples illustrating the versatility of CWDM fiber when used with the CQS 1462.



This configuration shows how to convert and send 4x Quad Link 2SI/SQD signals via a single fiber link over a distance of approximately 5km.

The ORX 1400 modules are used to convert the 12G fiber to electrical signals but these could just as easily be more CQS 1462 providing Quad 2SI out.



This application shows 2x CQS 1462 being used bidirectionally over a single fiber link as well as combining ethernet or serial RS 232/422/GPI into the same link.

***Note:** Max distances quoted are only approximations based on nominal fiber links. Actual distances achieved can be shorter or longer than that stated. Many things can impact distance such as splices, connections, patches, splitters and the quality of the fiber. For longer distances you should always calculate the total fiber losses in the fiber link and ensure adequate optical budget.

Optional Accessories

Rack Frames

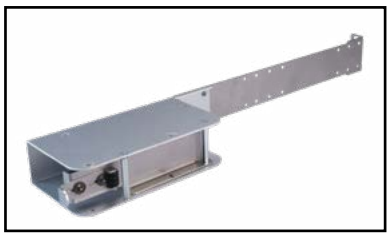
This yellobrik can be placed in a rack frame along others to build increasingly complex systems, all monitored and controlled with a rack controller (RCT 1012) and server module (SRV 1000) via a PC or MAC using LynxCentraal.

The RFR 1200 offers additional power redundancy with GPI alert. It automatically closes a connection between the A and B terminals on power failure.

The RPS A100 is a 100W power supply, which can be mounted at the rear end of the RFR 1200 with an RXT 1001 power supply holder for rack frames.

RFR 1200: yellobrik Rack Frame

RPS A100: 100W Power supply



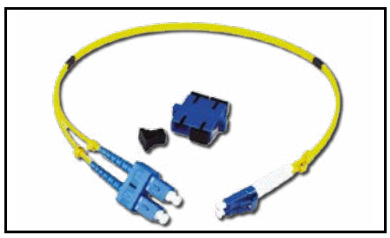
RXT 1001: Power Supply Holder

Fiber Adapter Cables

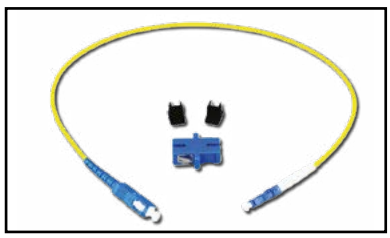
While some of our products offer LC, ST and SC fiber connectors, most SFPs in our product range offer LC fiber connectors.

To still allow the necessary flexibility in a professional setting we offer patch cables to convert LC to ST or SC fiber connections. These patch cables' insertion less and return loss are manually checked for each individual cable to allow for maximum precision when calculating the optical budget

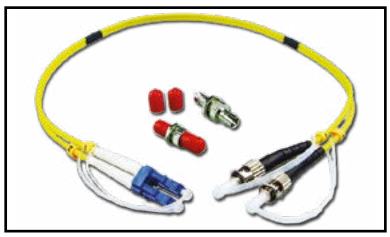
Besides the selection here we offer LC/FC and LC/LC patch cables.



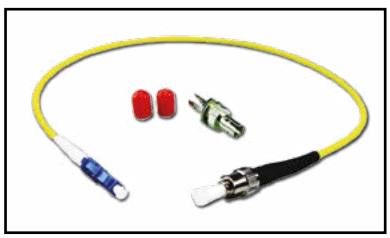
LC/SC Dup: LC/SC Duplex adapter cable



LC/SC Sim: LC/SC Simplex adapter cable



LC/ST Dup: LC/ST Duplex adapter cable



LC/ST Sim: LC/ST Simplex adapter cable

Fiber I/O Options:

A wide range of SFP modules are available for this yellobrik. The selection listed here shows the most likely SFP modules for most typical setups.

More SFP modules are available. To find the perfect solution for your setup visit lynx-technik.com for more information or contact us.

Model	Description		
SDI Fiber Transceiver Options		Power	Sense
OH-TR-12G-LC	SFP Fiber RX/TX - Singlemode, LC Connector, 10km	-5 ... 0.5 dBm	-14 ... -10 dBm
SDI CWDM Fiber Transceiver Options		Power	Sense
OH-TR-12G-XXXX-LC	12G CWDM Fiber RX/TX - Singlemode LC Conn., 40km XXXX=Wavelength. 18 according to ITU T G692.2 (1270 - 1610nm)	-2 ... +3 dBm	-14 ... -10 dBm
OH-TR-8-XXXX-LC	3G CWDM Fiber RX/TX - Singlemode LC Conn., 80km XXXX=Wavelength. 18 according to ITU T G692.2 (1270 - 1610nm)	+1 ... +5 dBm	-26 ... -28 dBm
SDI Fiber Transmitter Options		Power	
OH-TX-12G-LC	12G SFP Fiber TX- Singlemode, LC Connector, 10km	-5 ... 0.5 dBm	
SDI Fiber Receiver Options		Sense	
OH-RX-12G-LC	12G SFP Fiber RX- Singlemode, LC Connector, 10km	-16 ... -10 dBm	