

IQOTR40-45

3G/HDTV/SD-SDI Multi-Channel Fiber Transceiver

The IQOTR40-45 range provides bi-directional conversion of four 3G/HDTV/SD-SDI signals to/from single mode fiber optic signals. The unit is available in single or dual width versions with either HDBNC or BNC connectors with a range of fiber wavelength transmitters suitable for CWDM applications.

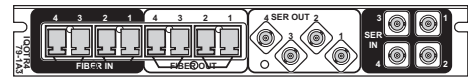
Features

- Multi-channel Single mode fiber optic receiver for 3G/HDTV/SD-SDI signals
- Input wavelengths from 1260nm to 1620nm suitable for CWDM applications
- Multi-channel Single mode fiber optic Transmitter for 3G/HDTV/SD-SDI signals
- Output wavelengths from 1270nm to 1610nm suitable for CWDM applications
- Reclocking for 3 Gbit/s, 1.5 Gbit/s HD-SDI and 270 Mbit/s SDI signals, or asynchronous operation for other frequencies (input range 50 Mbit/s to 3 Gbit/s)

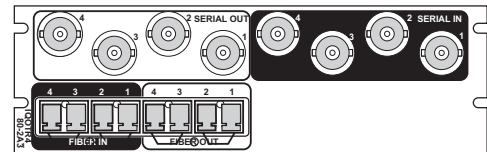
Why should you choose this module?

- Suitable for transporting 3G/HDTV-SDI signals over long distances either within the facility or between sites
- Lower weight and higher density compared with copper cables
- Full RollCall and SNMP compatibility allows easy integration with SAM Centra, or third party, network management systems providing an all-inclusive monitoring and control solution

Order codes



IQOTR4079-1A3 - HD-BNC & LC/PC Connectors



IQOTR4080-2A3 BNC & LC/PC Connectors

IQOTR4079-1A3, IQOTR4080-2A3, IQOTR4079-1B3, IQOTR4080-2B3 3G/HDTV/SD-SDI multi-channel fiber transceiver. 4 x 3G/HDTV/SD-SDI inputs, 4 x 1310nm optical outputs.

IQOTR4179-1A3, IQOTR4180-2A3, IQOTR4179-1B3, IQOTR4180-2B3 As IQOTR40 but fitted with 1550nm optical transmitters.

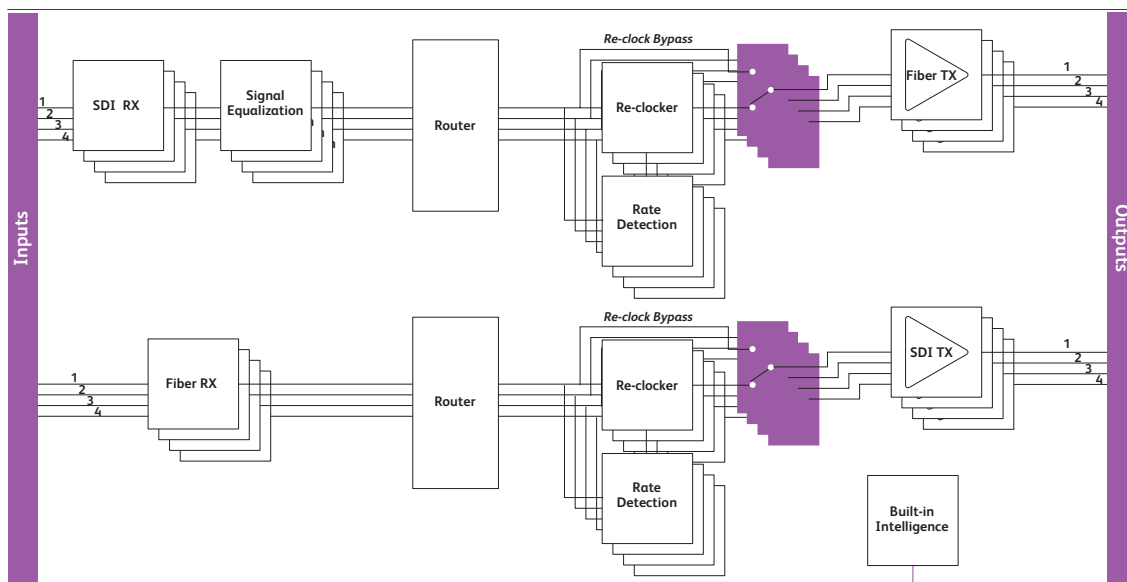
IQOTR4279-1A3, IQOTR4280-2A3, IQOTR4279-1B3, IQOTR4280-2B3 As IQOTR40 but fitted with 1270-1330nm CWDM optical transmitters.

IQOTR4379-1A3, IQOTR4380-2A3, IQOTR4379-1B3, IQOTR4380-2B3 As IQOTR40 but fitted with 1350-1410nm CWDM optical transmitters.

IQOTR4479-1A3, IQOTR4480-2A3, IQOTR4479-1B3, IQOTR4480-2B3 As IQOTR40 but fitted with 1470-1530nm CWDM optical transmitters.

IQOTR4579-1A3, IQOTR4580-2A3, IQOTR4579-1B3, IQOTR4580-2B3 As IQOTR40 but fitted with 1550-1610nm CWDM optical transmitters.

For more details on enclosure types please refer to Frames and Hardware section.



Block Diagram for IQOTR4080-2A3

Technical Specification

Inputs and Outputs

Signal Inputs

SDI Inputs	4 x
Input Cable Length	Up to 80m Belden 1694A @ 3 Gbit/s Up to 140m Belden 1694A @ 1.5 Gbit/s Inputs 1-3, up to 350m Belden 1694A @ 270 Mbit/s Inputs 4-8, up to 160m Belden 1694A @ 270 Mbit/s

Signal Outputs

SDI Outputs	x 4
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Fiber Signal Input

Inputs	Up to 4
Optical	3 GBit/s HD-SDI, 1.485 GBit/s HD-SDI or 270 Mbit/s SD-SDI
Connector / Format	LC singlemode
Conforms to:	SMPTE 297-2006 SMPTE 424M (HD level A/B) SMPTE 292M (HD) SMPTE 259M-C (SD)

Fiber Signal Output

Outputs	x 4
Optical	3 GBit/s HD-SDI, 1.485 Gbit/s HD-SDI or 270 Mbit/s SD-SDI
Connector / Format	LC singlemode
Conforms to	SMPTE 297-2006 SMPTE 424M (HD level A/B) SMPTE 292M (HD) SMPTE 259M-C (SD)

Controls

Indicators

Power	OK (Green)
CPU	OK (Green flashing)
Input 1-8	3G-OK (Blue), HD-OK (Green), SD-OK (Yellow), Bypass (Rate color flashing), Loss (Red)

Video Controls

Input 1 - 8 rate select	3G, HD, SD, other
Reclock bypass	On/Off
Output 1-4 select	Input 1 - 4
Output 5-8 select	Input 5 - 8
Laser Disable (Tx)	On/Off/Input Error
Output Mute (Rx)	On/Off
Output Mute on I/P Error (Rx)	On/Off
Input 1 - 4 Configuration	1, 2
Input 5 - 8 Configuration	1, 2
Configuration Rules	Primary Input OK Primary Input Error Secondary Input Error
Mode	Use Config 1 Use Config 2 Use Rules
Delay for Rules Actions	OK Timer 0 - 5s Error Timer 0 - 5s

Input status Present, Loss, Unknown,

Logging	Data Rate Input 1 - 8 Identifier Input 1 - 8 Name Input 1 - 8 Type Input 1 - 8 Data Rate Input 1 - 8 Present Input 1 - 8 Error Input 1 - 8 Loss
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Optical Logging

Output 1 - 8 Tx Laser Bias High Warning	
Output 1 - 8 Tx Laser Bias Current	
Output 1 - 8 Tx Power Low Warning	
Output 1 - 8 Tx Power High Warning	
Output 1 - 8 Tx Power	
Output 1 - 8 Tx Wavelength	
Input 1 - 8 Rx Power High Warning	
Input 1 - 8 Rx Power Low Warning	
Input 1 - 8 Rx Power Measurement	
Input/Output 1 - 8 SFP State	
RollTrack controls	On/Off, Index, Source, Address, Command, Status, Sending
RollTrack Sources	Unused Input 1 - 8 Present Input 1 - 8 Rate Unknown Input 1 - 8 Error Input 1 - 8 Loss Input 1 - 8 3G Input 1 - 8 HD Input 1 - 8 SD Output 1 - 8 Tx Laser Bias High/Low Warning Input 1 - 8 Rx Power High Warning Input 1 - 8 Rx Power Low Warning

Other Controls

User memories	Name, save and recall 16 user memories
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Specifications

Electrical	3Gbit/s SDI, SMPTE 424M 1.5Gbit/s HD-SDI, SMPTE 292M 270 Mbit/s SDI, SMPTE 259M-C / DVB-ASI
Connector / format	BNC/ 75ohm panel jack on standard SAM connector panel
Return loss	>-15dB (270Mbit/s, 1.5Gbit/s) >-10dB (3Gbit/s)
Output jitter	SD-SDI 0.2 UI (10Hz) / 0.2 UI (1KHz) 3G/HD-SDI 1.0 UI (10Hz) / 0.2 UI (100KHz)

Optical Rx

Input wavelength range	Min. 1260 nm, Max. 1620 nm
Input Sensitivity	-21 dBm
Optical power input range	> -0 dBm, < -20 dBm
Optical return loss	-27 dB
Link distance	Up to 30 Km @ 270Mbit/s Up to 21 Km @ 1.5Gbit/s Up to 10 Km @ 3Gbit/s

Optical Tx

Wavelength	1310 nm
Spectral width (FWHM)	>1.5 nm (typ)
Output power	0 to -5 dBm typical (-2 dBm typical)
Rise and Fall Time	135 ps @ 3Gbit/s 270 ps @ 1.5Gbit/s 1.5 ns @ 270Mbit/s

Extinction ratio	>7.5:1 (typ)
Link distance	Up to 30 Km @ 270Mbit/s Up to 21 Km @ 1.5Gbit/s Up to 10 Km @ 3Gbit/s

Wavelength	1550 nm
Spectral width (FWHM)	1 nm
Output power	4 to 0 dBm
Rise and Fall Time	135 ps @ 3Gbit/s 270 ps @ 1.5Gbit/s 1.5 ns @ 270Mbit/s

Extinction ratio	>7.5:1 (typ)
Link distance	Up to 50 Km @ 270Mbit/s, 1.5Gbit/s or 3Gbit/s

Technical Specification cont...

CWDM

Wavelength	1270 - 1610 nm
Spectral width (FWHM)	1 nm
Output power	5 to 0 dBm (2.5 dBm Typ)
Rise and Fall Time	130 ps @ 3Gbit/s 175 ps @ 1.5Gbit/s 300 ps @ 270Mbit/s
Extinction ratio	>9 dB
Link distance	Up to 30 Km @ 270Mbit/s Up to 21 Km @ 1.5Gbit/s Up to 10 Km @ 3Gbit/s

Power Consumption

Module Power Consumption	9.5W Max (A Frames) 8 PR (B Frames)
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