

IQOTR40

3G/HD/SD-SDI Multichannel Fiber Transceiver

Bidirectional conversion of four 3G/HD/SD-SDI signals to/from single-mode fiber optic signals.

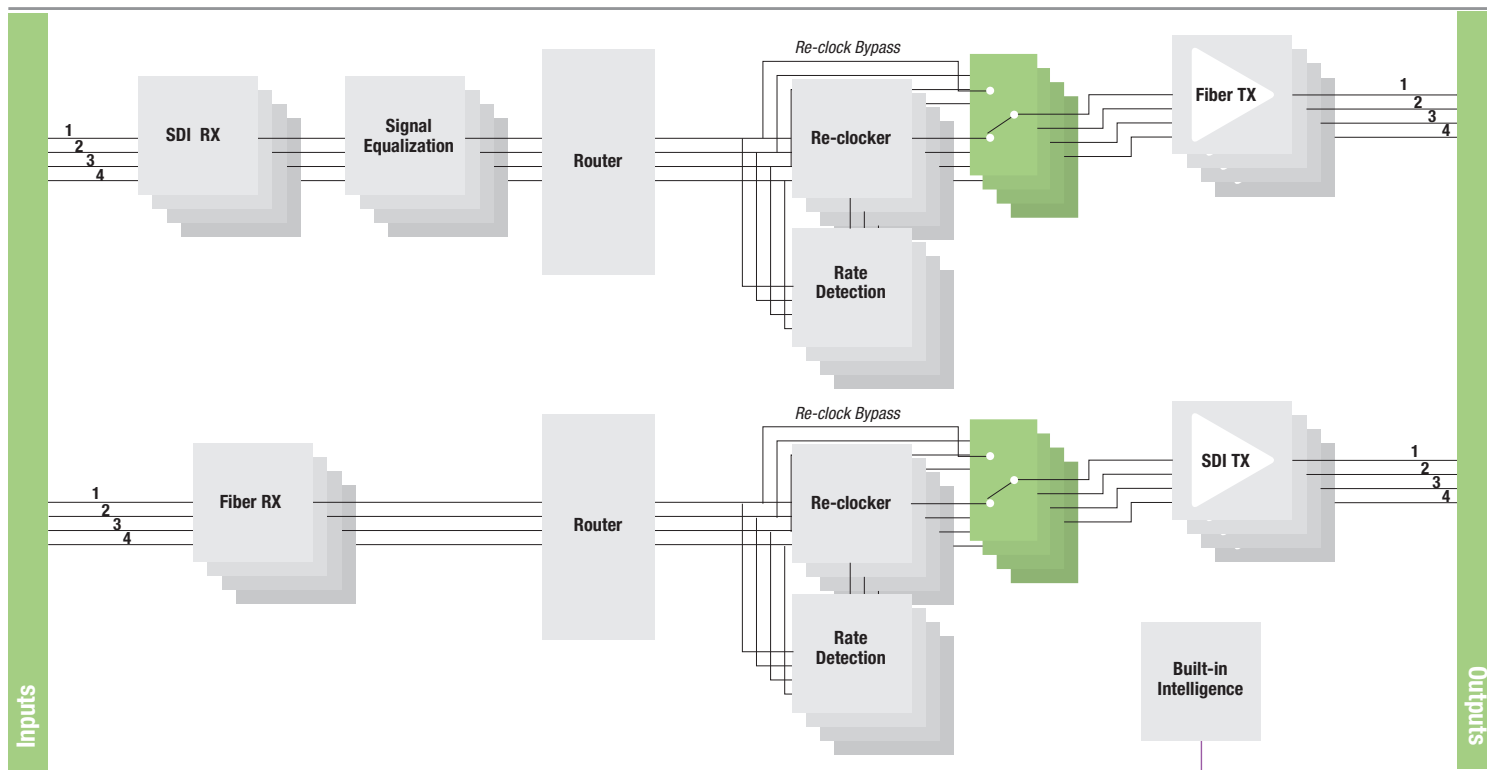
The IQOTR40 range from Grass Valley provides bidirectional conversion of four 3G/HD/SD-SDI signals to/from single-mode fiber optic signals. The unit is available in single- or dual-width versions with either HD-BNC or BNC connectors.

Why should you choose this module?

- Suitable for transporting 3G/HD-SDI signals over long distances either within the facility or between sites
- Lower weight and higher density compared with copper cables
- Full GV Orbit compatibility provides an all-inclusive remote configuration, control and monitoring solution
- Comprehensive SNMP support allows easy integration with third-party Network Management Systems

KEY FEATURES

- Multichannel single-mode fiber optic receiver for 3G/HD/SD-SDI signals
- 1310 nm input wavelengths support
- Multichannel single-mode fiber optic transmitter for 3G/HD/SD-SDI signals
- Reclocking for 3 Gb/s, 1.5 Gb/s HD-SDI and 270 Mb/s SDI signals, or asynchronous operation for other frequencies (input range 50 Mb/s to 3 Gb/s)



Block Diagram for IQOTR4080-2B3

Network Intelligence, Control & Monitoring

SPECIFICATIONS

Inputs and Outputs

Signal Inputs

SDI inputs: 4x
 Input cable length:
 Up to 80m Belden 1694A @ 3 Gb/s
 Up to 140m Belden 1694A @ 1.5 Gb/s
 Inputs 1-3, up to 350m Belden 1694A @ 270 Mb/s
 Inputs 4-8, up to 160m Belden 1694A @ 270 Mb/s

Signal Outputs

SDI outputs: 4x

Fiber Signal Input

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

Fiber Signal Output

Outputs: 4x
 Optical: 3 Gb/s HD-SDI, 1.485 Gb/s HD-SDI or 270 Mb/s SD-SDI
 Connector/format: LC singlemode
 Conforms to:
 SMPTE ST 297-2006
 SMPTE ST 424 (HD level A/B)
 SMPTE ST 292 (HD)
 SMPTE ST 259-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, Data Rate

Logging:

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

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

SPECIFICATIONS

Other Controls

User memories: Name, save and recall 16 user memories

General Specifications

Electrical:

- 3 Gb/s SDI, SMPTE ST 424
- 1.5 Gb/s HD-SDI, SMPTE ST 292
- 270 Mb/s SDI, SMPTE ST 259-C / DVB-ASI

Connector/format: BNC/75Ω panel jack on standard Grass Valley connector panel

Return loss:

- > -15 dB (270 Mb/s, 1.5 Gb/s)
- > -10 dB (3 Gb/s)

Output jitter:

- SD-SDI 0.2 UI (10 Hz) / 0.2 UI (1 kHz)
- 3G/HD-SDI 1.0 UI (10 Hz) / 0.2 UI (100 kHz)

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 @ 270 Mb/s
 - Up to 21 km @ 1.5 Gb/s
 - Up to 10 km @ 3 Gb/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 @ 3 Gb/s
 - 270 ps @ 1.5 Gb/s
 - 1.5 ns @ 270 Mb/s
- Extinction ratio: >7.5:1 (typ)
- Link distance:
 - Up to 30 km @ 270 Mb/s
 - Up to 21 km @ 1.5 Gb/s
 - Up to 10 km @ 3 Gb/s

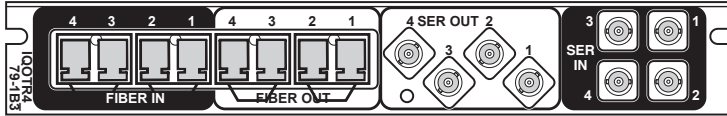
Power Consumption

Module power consumption: 8 PR (B Frames)

ORDERING

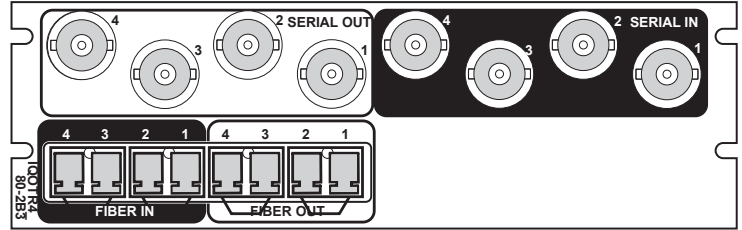
IQOTR4079-1B3

3G/HD/SD-SDI multichannel fiber transceiver. 4x HD-BNC 3G/HD/SD-SDI inputs to 4x 1310 nm optical outputs and 4x optical inputs to 4x HD-BNC 3G/HD/SD-SDI outputs.



IQOTR4080-2B3

3G/HD/SD-SDI multichannel fiber transceiver. 4x BNC 3G/HD/SD-SDI inputs to 4x 1310 nm optical outputs and 4x optical inputs to 4x BNC 3G/HD/SD-SDI outputs.



For more details on enclosure types please refer to the IQ Modular Enclosures datasheet.



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