ORX 5800

SDTV / HDTV

fiber 3G **SERIES** 5000

CardModules

3Gbit Quad SDI Fiber Optic Receiver

Description

The ORX 5800 is a flexible four channel SDI optical to electrical converter for SDI/ASI-DVB video signals up to 3Gbit/s. Each channel has automatic input clock rate and signal presence detection with selectable signal reclocking. This module is ideally suited for demanding digital multi-format broadcast and professional applications.
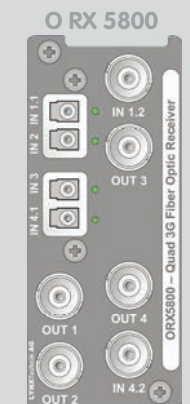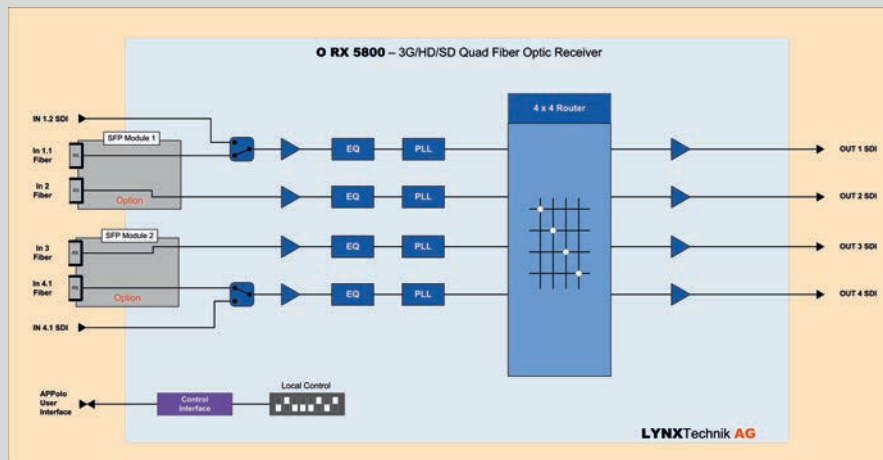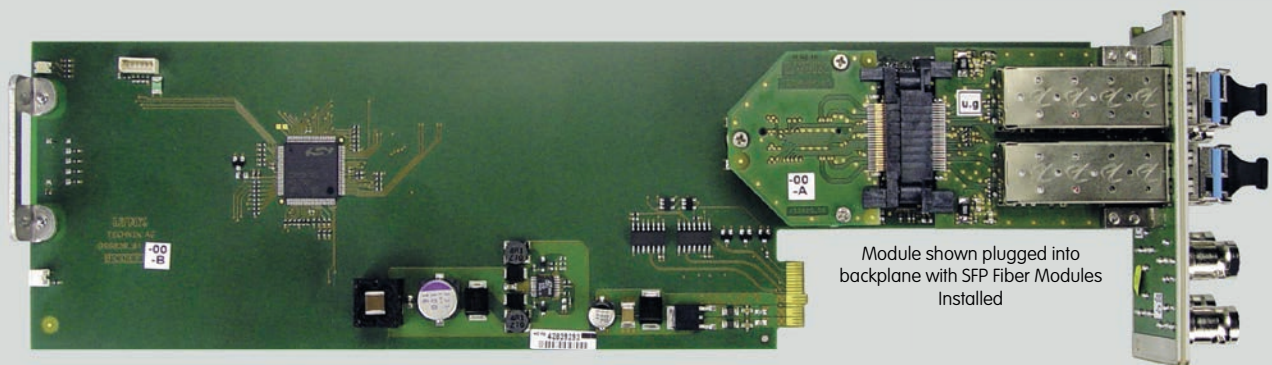
Two of the input channels can be switched between standard electrical SDI inputs or optical inputs. In non-reclocked mode the module will transparently pass any data between 15Mbit/s and 3Gbit/s. Support for ASI/DVB and SMPTE 310 signals is also provided.

The standard mode of operation will directly map each input to its corresponding output. An integral 4x4 signal router can be utilized to change I/O channel mapping when using the LYNX control system.

Up to 10 modules or 40 fiber RX channels can be supported in a standard LYNX 2RU rack frame. The Fiber SFP sub-modules are secured on the backplane allowing for module removal and hot swapping without removing any modules rear I/O fiber connections. Full remote control, status monitoring and error reporting is possible when using the LYNX control system.

Features

- 4 independent Fiber RX channels and 4 x SDI outputs
- Supports SDI/ASI/DVB and SMPTE 310 up to 3Gbit/s
- 1260nm to 1620nm wavelength operational range
- Selectable electrical / optical inputs for 2 channels
- Reclocking or non-reclocking mode for each channel
- Auto-detects input clock rate
- Transparently pass data between 15Mbit/s and 3Gbit/s in non-reclocked mode.
- Input presence detection with LED indication for each channel
- Internal 4x4 signal router for flexible I/O mapping (remote only)

- LC fiber optic connections, single mode or multimode fiber
- Fiber SFP modules secured in backplane. Module can be freely removed or replaced without disconnection of fiber cables
- Remote control, status monitoring and error reporting when used with LYNX control system
- SNMP error reporting when used with master controller option
- Hot Swappable

Module shown plugged into backplane with SFP Fiber Modules Installed

O RX 5800 – 3G/HD/SD Quad Fiber Optic Receiver

Backplane

3Gbit Quad SDI Fiber Optic Receiver

Specifications

SDI Optical Inputs

Signal type	SMPTE 297M - 2006
Connector	LC / PC Single Mode or Multimode*
No. Of inputs	4 (on 2 dual channel SFP fiber sub modules)
Receiver Sensitivity	-3 dBm to -16 dBm
Wavelength Range	1260nm - 1620nm

SDI Electrical Inputs

Signal type	Serial Digital Video SMPTE 259M, 292M, 424M DVB-ASI and SMPTE 310
Input level	0.8 v peak to peak
No. of Inputs	2 - (channels 3 and 4 switchable with fiber inputs)
Input Impedance	75 Ohms
Connector	BNC
Return Loss	> 15dB (1.485Gbit) > 10dB (2.97Gbit)

SDI Video Outputs

Signal Type	Serial Digital Video SMPTE 259M, 292M, 424M DVB-ASI and SMPTE 310
Video standard	Follows input
Output level	0.8 v peak to peak
Output impedance	75 Ohm
No. Of Outputs	4 (1 for each channel)
Connector	BNC
Return loss	> 15dB (1.485Gbit) > 10dB (2.97Gbit)
Jitter	< 0.20 UI (270 MHz) < 1.0 UI - Timing Jitter - (1.485Gbit - 2.97Gbit) < 0.20 UI - Alignment Jitter - (1.485Gbit - 2.97Gbit)

Performance

Cable equalization	Up to 250M using Belden 8281 (270Mbit) Up to 140m using Belden 1694A (1.485Gbit) Up to 80m using Belden 1694A (2.97Gbit)
Control	Remote control possible when used with LYNX controller
Status monitoring (LED)	Signal presence (each input channel) plus general alarm

Operation modes

4 channel receiver	in basic mode with no remote control inputs are mapped to outputs 1 to 1
Input / output mapping	A 4x4 Internal router can be used to freely assign I/O mapping when using the LYNX control system.
Re-clocking	Clocked or non-reclocked operation (selectable for each channel)
Input Selection	Input 3 and 4 switchable between fiber or copper SDI inputs

Electrical Specifications

Operating Voltage	12 VDC
Power Consumption	< 7W
Safety	IEC 60950/ EN 60950/ VDE 0805

Mechanical

Size	283mm x 78mm
Weight	CardModule 120g, connector plate 120g

Ambient

Temperature	5 C to 40 C Maintaining specifications
Humidity	90% Max non condensing

Specifications subject to change

Settings and Control

Local Settings

Re-clocking	clocked / non re-clocked for each input channel
Input Select	Select electrical / optical inputs for channel 3 and 4

Settings Available from Control System

4 x 4 Router Control

On Board Indicators / LEDs

Input 1 Present / No Input
Input 2 Present / No Input
Input 3 Present / No Input
Input 4 Present / No Input
General Alarm Indicator – 3 Color
RX fiber activity (on rear connection panel)

*Note
We recommend the use of Single Mode fiber cable with these modules. Multimode operation is possible for non CWDM applications, but performance (distance) is heavily influenced by the type of Multimode cable.

Ordering Information

Model #	Description	Includes
O RX 5800	3Gbit Quad SDI Fiber Optic Receiver	CardModule, Rear termination Panel with SFPs, + Mounting Screws, and Reference Manual (on CD)