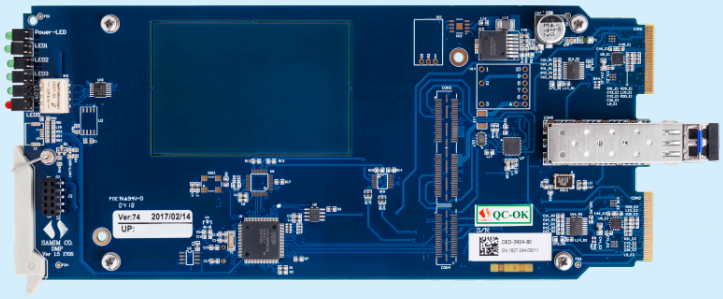
SAMIM
Media & Communication Technologies

SRM Module | 3G-SDI | DVB-ASI | Optical Fiber

OED-3904

Dual Channel 3G/HD/SD-SDI Optical to Electrical Converter

2024 Datasheet

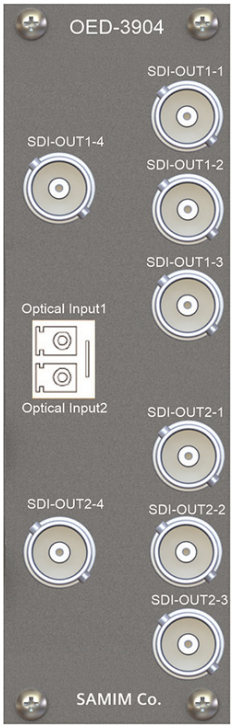


The OED-3904 is a converter of optical digital video signals to 3G/HD/SD-SDI or DVB-ASI electrical signals. The module can receive two video signals over fiber optic links via an SFP and provide four electrical outputs per channel.
The OED-3904 performs automatic input signal detection, and two conversions on a single board. Users can use different SFPs with various sensitivity and wavelengths related to the link length and transmitter power.
This module offers two distinct routing modes: manual and auto change-over. In manual mode, users can manually select from four different modes for built-in 2x2 crosspoint. In auto change-over mode, two sub-modes are available: single 1-to-8 and dual 1-to-4.
In the single 1-to-8 mode, users designate their preferred optical input, and the module automatically executes change-over function based on the carrier lock status of the input signals. In the dual 1-to-4 mode, each output group receives signals from corresponding optical inputs unless an input becomes unlocked. Following a change trigger, the module can revert to the preferred input manually.
All adjustments and controls can be applied directly by onboard DIP switches and the web-based user interface. LED indicators on the front edge of the module, inform the user about operational status of the module.

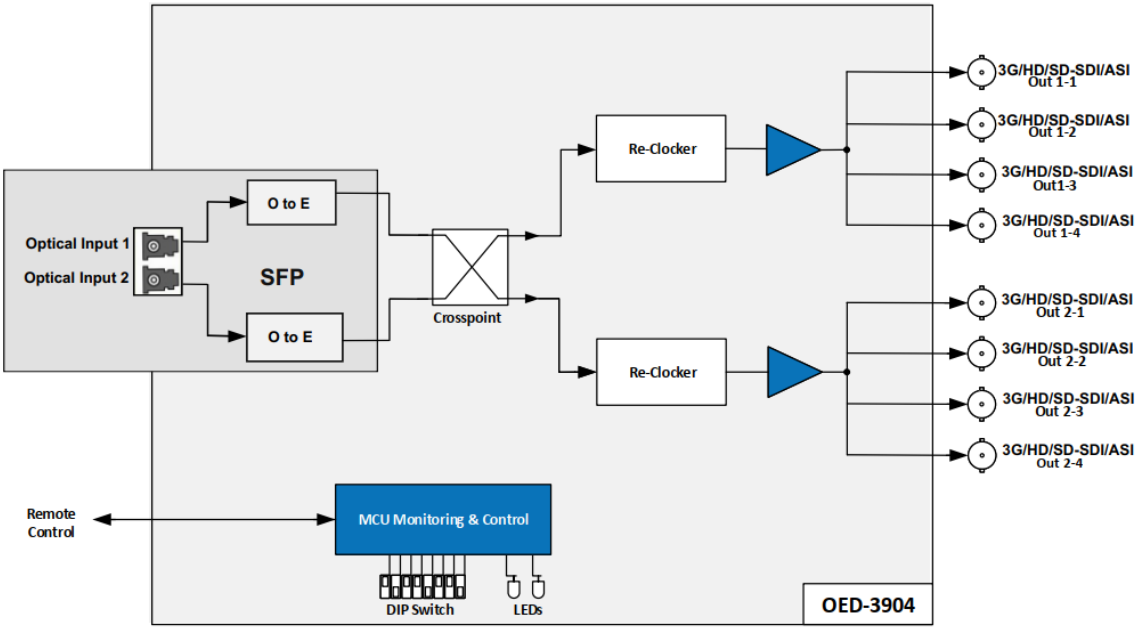
Key Features

- Supports SMPTE 259M, SMPTE 292M, SMPTE 424M, and DVB-ASI standards
- Optical connection via various range of SFPs
- SFP parameters monitoring: wavelength, power, and temperature
- Automatic input change-over in the event of input loss
- Eight 3G/HD/SD-SDI/DVB-ASI electrical outputs in two groups
- LED status indicators
- Web-based user interface
- Remote firmware upgrade

Back Panel



Block Diagram



Specifications

Optical Inputs	
Signal type	Optical SDI/ASI
Standard	SMPTE ST 297M
Number of Inputs	2
SFP related parameters	Connector Type Wavelength Fiber Type Output Power

Digital Video Outputs	
Signal type	3G/HD/SD-SDI / DVB-ASI
Standards	SMPTE 259M, SMPTE 292M, SMPTE 424M
Number of outputs	2x4
Connector	BNC
Impedance	75Ω
Voltage level	800 mv ± 10%
Jitter	<0.2 UI (SD, HD) <0.3 UI (3G)
Return loss	>15 dB to 270 Mb/s >12 dB to 1.5 Gb/s >10 dB to 3 Gb/s
Rise and fall time	0.4 to 1.5 ns (SD) <270 ps (HD) <135 ps (3G)
Overshoot	<10% Amplitude
DC offset	0 V ± 0.5 V

Electrical	
Voltage	+12VDC (from frame)
Power	<5W (excluding SFP usage)

Mechanical	
Dimensions	220 mm × 100 mm (for 19”, 3RU Samim frame)

Environmental	
Temperature	5 °C to 50 °C
Humidity	0% to 90%

System Requirements

Type	Product	Description
Frame	SRM-0645	1RU Frame with Controller
	SRM-0655	3RU Frame with Controller

Ordering Information

Order Code	Description	Type
OED-3904	Dual Channel 3G/HD/SD-SDI Optical to Electrical Converter	Main Board
OED-3904-3DRP	Back-panel for OED-3904 (compatible with SRM-655)	Back Panel
OED-3904-1DRP	Back-panel for OED-3904 (compatible with SRM-645)	Back Panel
OED-3904-3SRP	Single slot back-panel for OED-3904 (compatible with SRM-655) Only x2 outputs per path	Back Panel
FBR-0004	Video SFP, Dual Receiver, -3 to -20dbm, 10km, 0.27~3Gbps, 1200 1600nm	Accessory
Contact Samim	An SFP with other sensitivity and wavelength specification	Accessory

With over two decades of extensive experience in the broadcast and media industry, Samim Group has emerged as a rapidly growing manufacturer and developer of professional-grade hardware and software solutions that cater to Broadcast Production Infrastructure, Intercom Systems, and Media Business Automation. We remain attuned to the latest technological advancements, ensuring we deliver high-standard solutions and products that can be marketed globally.

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sales@samimgroup.com
www.samimgroup.com