

AceCom Networks

STM-1 Optical to STM-1 Electrical Converter

Product Brochure & Data Sheet

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Product Overview

AceComm STM-1 Optical to STM-1 Electrical converter provides a simple and cost-effective conversion between STM-1 optical interface to STM-1 electrical interface. STM-1 Optical to STM-1 Electrical converter is an interface conversion equipment supplied with one STM-1 electrical interface and one STM-1 optical interface. 1+1 option is also offered and available.



STM-1 Optical to STM-1 Electrical converter is a compact solution housed in a 19" rack 1U high, which can be placed on the desktop or installed in a standard 19 inch rack.

Complete loop-back facility is supported for system diagnostic and commissioning.

Compact casing and simple operation achieve cost saving and investment protection.

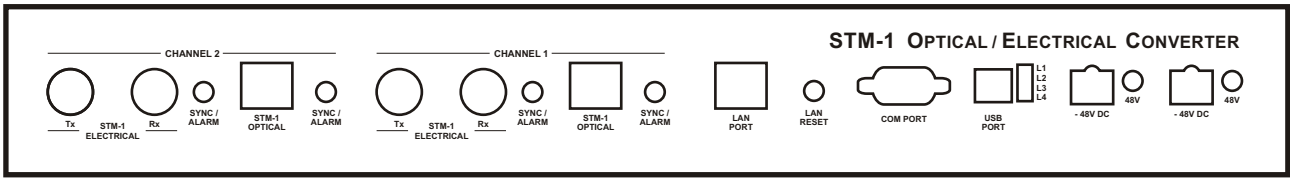
This unit offers two power supply options. Options for the power supply to the equipment include:

1. Dual feed (1+1 Redundant) -48V DC Inputs (range -18V DC to -72V DC)
2. Dual feed (1+1 Redundant) AC 110V AC to 240V AC, 50 / 60 Hz Inputs

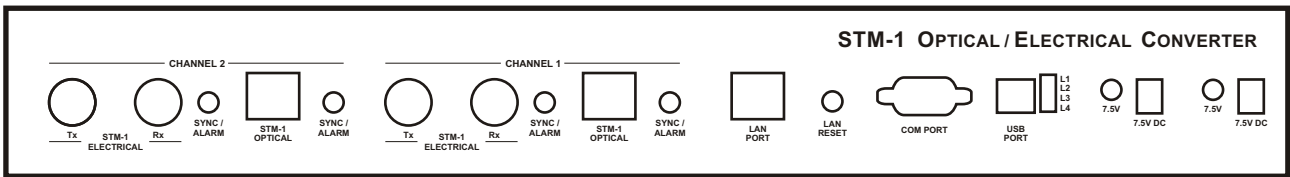
Features:

- 1+0 STM-1 Optical to STM-1 Electrical
- 1+1 STM-1 Optical to STM-1 Electrical options available
- SFP based design. Provides field removable / upgradable optical SFPs
- Short haul (1310nm), long haul (1550nm) and multi mode (850nm) optical SFP modules offered
- Provides low cost STM-1 Optical to STM-1 Electrical conversion
- Management options:
 - ▶ Serial RS232 Port (COM Port)
 - ▶ 10/100 BaseT Remote Management over LAN Telnet
 - ▶ 10/100 BaseT Telnet over TCP-IP Network
 - ▶ SNMP V2
 - ▶ USB interface
 - ▶ Network Management System (NMS)
- High reliability, complies to ITU-T G.703 and G.957
- State-of-the-art design, ensure normal working under difficult environments
- Supports local and remote loop-back on electrical or optical interface for system diagnostics
- Simple operation and maintenance
- Compact design and low power consumption
- 75 Ohms compliant with ITU-T G.703 and Telcordia GR-253 155Mbps electrical interfaces (BNC connector)
- ITU-T G.783 compatible loss of signal detect
- Handles over 12.7dB of cable loss
- Duplex LC optical interface
- Hot-pluggable
- Supports DDM function for read back of transmit and received optical power
- Class 1 laser safety
- Compliant with ITU-T G.957 STM-1

Front View - DC Version



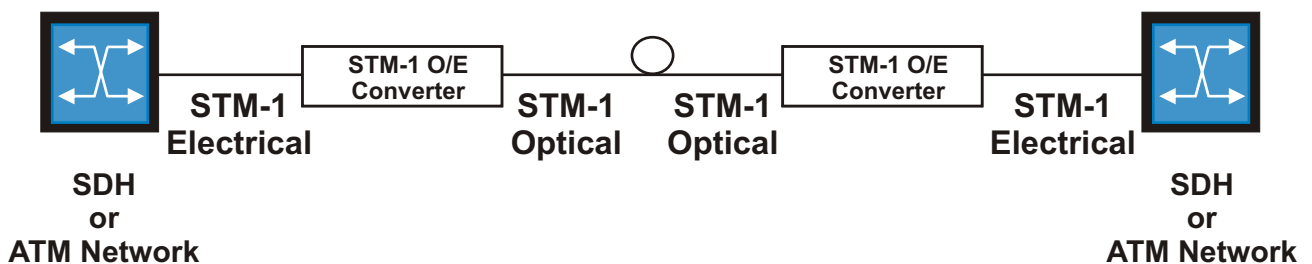
Front View - AC Version



Compliance:

G.703	Provides one standard STM-1 electrical interface complying with G.703
G.707	Network node interface for the synchronous digital hierarchy (SDH)
G.781	Structure of Recommendations on equipment for the Synchronous Digital Hierarchy (SDH)
G.782	Types and characteristics of Synchronous Digital Hierarchy (SDH) equipment
G.783	Characteristics of Synchronous Digital Hierarchy (SDH) equipment functional blocks
G.813	Timing characteristics of SDH equipment slave clocks (SEC)
G.825	Control of Jitter and Wander within Digital Networks Which are Based on the Synchronous Digital Hierarchy (SDH)
G.957	Provides one standard STM-1 optical interface complying with G.957
G.958	Digital line systems based on the Synchronous digital hierarchy for use on optical fiber cables

Application Diagram



Specifications:

STM-1 electrical interface

Data Rate	155.52 Mbps
Standard	ITU-T G.703 Compliant
Impedence	75 Ohms resistive
Peak to peak voltage (signal)	1 ± 0.1 V
Rise time between 10 % and 90 % amplitudes of the measured steady state amplitude	≤ 2 ns
Maximum Attenuation	12.7 dB at 78 MHz
Jitter	As per ITU-T G.825
Line Code	CMI
Physical Connector	BNC (Female)

STM-1 optical interface

Data Rate	155.52 Mbps
Standard	ITU-T G.957 STM-1
Coding	NRZ
Connector	LC
Light source	Class 1 Laser
Wave length options	1310nm 1550nm
Transmission Type	Dual Fiber (standard) Single Fiber Bi-directional (optional)
Transmit power options - S 1.1	-11.5dBm (1310nm)
Transmit power options - L 1.1 / L 1.2	-2.5dBm (1310nm / 1550nm)
Receive sensitivity options - S 1.1	-31 dBm (1310nm)
Receive sensitivity options - L 1.1 / L 1.2	-34 dBm (1310nm) / -38 dBm (1550nm)
Receiver overload - S 1.1	- 8 dBm (1310nm)
Receiver overload - L 1.1 / L 1.2	- 10 dBm (1310nm / 1550nm)
Section loss - S 1.1	0 - 12 dB
Section loss - L 1.1 / L 1.2	10 - 28 dB
Automatic Laser Shut Down Option	Provided - User selectable option

Management options:

Serial RS232 Port (COM Port)
10/100BaseT Remote Management over LAN Telnet
10/100BaseT Telnet over TCP-IP Network
SNMP V2
USB interface
Network Management System (NMS)

Mechanical Specifications

Rack Mounting	Standard 19 Inch. DIN Rack
Height	42 mm.
Depth	125 mm.
Width	205 mm.
Weight	1.5 kg

Power Supply

Input voltage	DC - 48V Inputs (range - 18 V DC ~ - 72 V DC) AC 110 VAC to 240 VAC, 50 / 60 Hz Inputs
Power consumption	≤ 6 W (1+0 version) ≤ 8 W (1+1 version)

Environmental

Working temperature	- 0°C ~ 50°C for operation
Relative humidity	< 90% (Non condensing)

Technical specifications are subject to changes without notice.

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