

AO STM-16 Multirate 1+1

Description

The **STM-16 1+1 optical adapter** card is a multiple optical transponder with 3R recovery to add redundancy on the route of SDH network elements which do not have it. Switching between optical interfaces is performed in less than 50ms, depending on the policies defined by management console: reversible, non reversible and forced switching. The card auto-detect inserted optical modules, allowing to work on 1+0 configurations (two optical modules) and 1+1 redundancy.

Interfaces

AO STM16 has three 1+1 optical interfaces: two of them for the network link. The other is the local link with the user element. From the SNMP management system can be monitored physical parameters of the interfaces as transmitted and received optical power, intensity of polarization of each laser (detection of premature aging) and the internal temperature of the modules.

Moreover, the facilities for establishing loops in the three optical interfaces allow the detection of flaws and faults delimiting responsibilities.

Traffic generation

STM-16 adapter includes a block of generation and analysis of pseudorandom sequence (PRBS). This feature allows testing of fiber link without the need for external equipment involving disconnection of the fiber path. The network operator, from the remote console can enable SNMP the options of generation and analysis for the three interfaces of the equipment.

Speed limitation

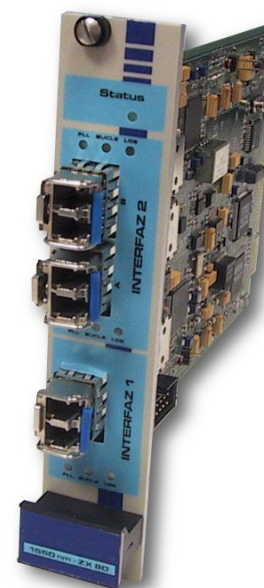
Multirate version lets you configure the adapter (through internal Microswitches) so that the circuit can not be used with transmission rates greater than 622 or 155Mbps.
WDM in band management

AO STM-16 1+1 adapter, in combination with the AO-100 module and a WDM multiplexer, providing a solution enabling in band management over the own optical fiber which serves STM-16.

Thanks to this TELNET solution, operators can access the remote equipment without a parallel network for SNMP management of the solution.

Chassis Supported

This module is compatible with the entire family of SAE chassis: MicroSAE, TriSAE, MiniSAE and MetroSAE, supporting the insertion and extraction in hot.



Features

1+1 Protection Network Interface

Card designed for use in STM-16 circuits. Provides redundancy in the optical path of transport.

Multirate STM-16/4/1

The multirate option allows limiting the speed of the circuit to STM-4 or STM-1 hierarchies only.

Loops support

Allows the realization of loops in the user interface and network interfaces.

3R regeneration

Includes 3R clock recovery in the three optical interfaces, allowing its use as a signal regenerator. It is possible to extend an STM-16 signal an indefinite length chaining in cascade several optical adapters.

SFP modular optics

Optical modules based on removable SFP optical interfaces (Small Form-factor Plug-in). The equipment can monitor via SNMP parameters as the optical power emitted, received, temperature and current polarization of lasers.

Low latency and compatibility

AO STM-16 1+1 introduces minimal latencies in the SDH channel. This module is compatible with the ITU-T specification and interoperate with the leading suppliers of SDH equipment.

General features

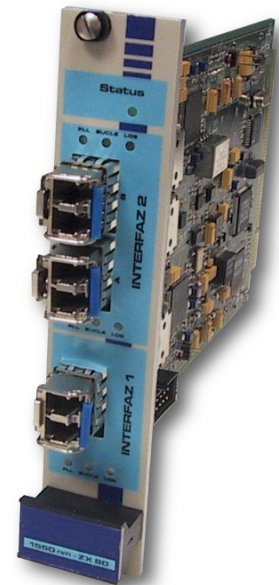
- 1+1 Network Interface Protection
- Allow limitations of speed on circuit to STM-4 or STM-1 hierarchies exclusively.
- Allows the realization of loops in the user interface and network interfaces.
- Includes 3R clock recovery in the three optical interfaces
- 3 optical interfaces. 2 for oprator and 1 for client.
- Modular SFP modules.
- Monitoring via SNMP parameters of optical power emitted, received, temperature and current polarization of the lasers.
- Low latency and compatibility with the IEEE specification and interoperable with major providers of LAN equipment.
- In band management with WDM (AO100 1+0/ MUX-DEMUX WDM).
- Supports hot insertion and extraction.
- Supported chassis: MicroSAE, TriSAE, MiniSAE y MetroSAE.

Applications

- Economic protection for STM-16 services through two different fibers or lambdas.
- Limitation of dark fiber at STM-4 or STM-1 transmission rates.
- Demarcation point between SDH service network of operator and customer.
- Low-latency regenerator for SDH STM-16/4/1 channels.
- STM-16 services integration in CWDM and DWDM networks.

Optical SFP modules options

	I.16 2Km	S.16.1 15Km	S.16.2 15Km	L.16.1 40Km	L.16.2 80Km	xWDM L.16.2 ext Singlefiber
Emitted power (Pout)	-10 dBm	-5 dBm	-5 dBm	-2 dbm	-2 dbm	Consult available lambdas and dynamic ranges
Sensibility (S)	-18 dBm	-18 dBm	-18 dBm	-27dBm	-28dBm	
Wavelength	1310nm	1310 nm	1550 nm	1310 nm	1550 nm	



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