

AO GbE 1+1

Description

Optical adapter **AO GbE** card is a 1+1 multiple optical transponder with 3R recovery to add redundancy in the network routing to GigabitEthernet elements that do not have. Switching between optical Interfaces is performed in less than 50ms, depending on the policies defined by management console: reversible, non reversible, forced switching, thresholds and switching power. The card auto-detect inserted optical modules, allowing to work on 1+0 configurations (two optical modules) and 1+1 redundancy.

Interfaces

AO GbE 1+1 has three optical interfaces: the first two relate to the network link. The second is correspond to the local link with the user element. The card acts as a boundary between the network user and network operator. From the SNMP management system it is possible to monitor 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 establishing loops in the three optical interfaces allow the detection of flaws and faults delimiting responsibilities.

Traffic generation

GbE 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 options generation and analysis for the three interfaces of the equipment.

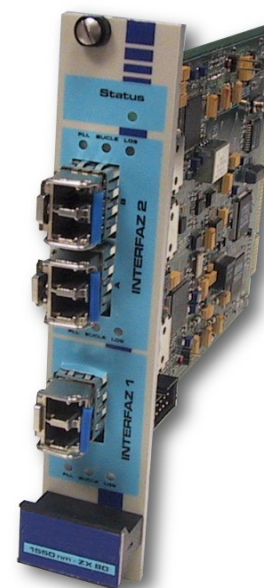
WDM in band management

AO GbE 1+1 adapter, in combination with the AO-100 module and a WDM multiplexer, provide an in band solution on the same optical fiber that provides the Gigabit Ethernet service.

Thanks to this innovative TELNET solution, operators can access the remote computer without having to carry the traffic management along with customer data, or having a parallel network for the management.

Supported Chassis

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



Features

1+1 Network Interface Protection

Card designed for use in Gigabit Ethernet circuits. Provides redundancy in the optical transport link.

Fast convergence

In case of failure in main route, re-routing of the service without penalty. Convergence time less than 50ms.

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. Is it possible to prolong a Gigabit Ethernet signal chaining in cascade several optical adapters.

Modular SFP optics

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

Low latency and compatibility

AO GbE introduces minimal latencies in the Gigabit channel. This module is compatible with the IEEE specification and interoperable with major providers of LAN equipment.

Technical Specifications

General features

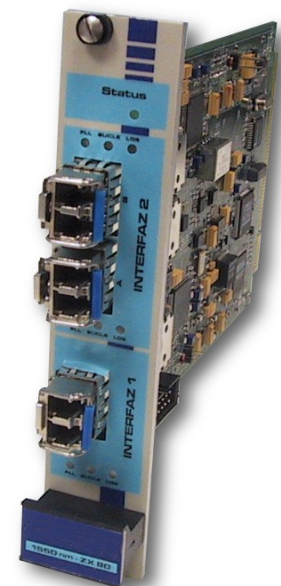
- 1+1 Network Interface Protection
- Convergence time less than 50ms.
- Allows the realization of loops in the user interface and network interfaces.
- Includes 3R clock recovery in the three optical interfaces
- 3 optical interfaces. 2 for oprator and 1 for client.
- Modular SFP modules.
- Monitoring 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) solution.
- Supports hot insertion and extraction.
- Supported chassis: MicroSAE, TriSAE, MiniSAE y MetroSAE.

Applications

- Gigabit Ethernet service protection in applications that require convergence times lower than those offered by Spanning Tree, RSTP.
- 1+1 Protection for MediaMux.
- Demarcation point between MPLS/IP Services Networks of operator and customer.
- Low-latency Gigabit Ethernet channels regenerator
- Gigabit services integration in CWDM and DWDM networks.

Optical SFP modules options

| | 1000 BaseSX 550m | 1000 BaseLX 10Km | 1000 BaseLX+ 30Km | 1000 BaseZX 80Km | 1000 BaseEZX 110Km | xWDM and Singlefi- ber |
|----------------------|------------------------|------------------------|-------------------------|------------------------|--------------------------|--|
| Emitted power (Pout) | -9.5dBm | -9.8dBm | -9 dBm | -0 dBm | -0 dBm | Consult available lambdas and dynamic ranges |
| Sensibility (S) | -18dBm | -20dBm | -21 dBm | -23 dbm | -30 dbm | |
| Wavelength | 850nm | 1310nm | 1550 nm | 1550 nm | 1550 nm | |



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