Alphion®

Product Brief

AOLT-4000

GPON Optical Line Terminal

Feature Summary

- 9 RU, ETSI 515 mm hole to hole rack mount, and 500 mm aperture
- 537 mm W x 300 mm D x 400 mm H
- Operating temperature range -5 to +50ºC, 5% to 90% non- condensing relative humidly
- Requires front access only
- Redundant controllers and aggregation switches
- Supports card hot swap
- Redundant 1+1 controller and aggregation switches option
- 1+1 (from different cards) uplink protection option
- 1:1 (same card) uplink protection option
- Dual shelf power inputs
- Dual BITS/SSU clock inputs
- Central office dry alarms contacts via the control card
- Integrated Fiber management
- Forced air cooling with field replaceable air filter

Applications

The AOLT-4000 is designed for Carrier Central Office or MSO Hub environments for enabling cost-effective FTTx services.

Flexible Configuration

Two control card slots for 1+1 Control cards. Two switch slots for 1+1 Aggregation switch cards with redundant 10-GbE and 1-GbE Service Node Interfaces (SNI) uplinks. Ten line card slots.

Data Plane Connectivity

The AOLT-4000's data plane consists of redundant 10-GbE connections to each card slot from the two dedicated double-width AOLT-4000-SWT slots in the shelf.

Control Plane Connectivity

The AOLT-4000's control plane consists of redundant 1-GbE connections to each card slot from the two dedicated AOLT-4000-CTL slots.

Synchronization Connections

Inputs for redundant BITS/SSU timing for GPON and TDM synchronization and outputs for sourcing clocks for external synchronization use.

Switch Capacity

Dual star redundant architecture with
20 Gb/s bandwidth to each card slot and 400 Gb/s bandwidth total capacity.

High Availability

High Availability architecture where removal or insertion of any single card does not affect existing connections on other cards. Even in a system with a single AOLT-4000-CTL card, a failure of the control card does not affect the working traffic. To increase control plane availability, a second mate AOLT-4000-CTL card can be inserted in the AOLT-4000 chassis, providing 1+1 redundancy for the control plane. Likewise to increase data plane availability, a second mate AOLT-4000-SWT card can be inserted in the AOLT-4000 chassis, providing 1+1 redundancy for the data and signaling plane.

AEMS or SNMP Managed

With the AOLT-4000-CTL card installed the AOLT-4000 is either remotely or locally managed from either Alphion's Element Management System (AEMS) or with a 3rd party EMS using SNMP or a legacy NMS.

SPECIFICATIONS

Capacity

2 slots	Redundant control cards (AOLT-4000-CTL)
2 slots (double-width)	Redundant switch and timing cards (AOLT-4000-SWT)
10 slots	GPON Line Cards (AOLT-4000-GLCP)

Management interface

Protocol	SNMPv2c
Interface	10/100Base-T
Ports	2

Craft interface

USB 2.0 (type B connectors)

BITS/SSU clock

Two inputs	75 ohms BNC and DB9
Two outputs	75 ohms BNC and DB9

Alarm

Five outputs	DB15

Power supply

Dual input	Individually controlled by circuit breaker -40.0 to +56.7 VDC

Cooling

Forced air cooling with fans

Dimensions

W x D x H	537 mm x 300 mm x 400 mm
Frame mounting	ETSI 515 mm hole to hole, and 500 mm aperture

Operating environment

Temperature	-5 to +50ºC
Relative humidity	5% to 90% (non-condensing)

Compliance

EMC	EN55022, CISPR-22 Class A
Safety	EN60950, UL60950, CE, Optical IEC-60825-1 Class B Laser safety per G.664
Environmental	EN300 019-1-3, QM-333 'B2" Category
Chassis	EN300 119-4
Transient	EN/IEC61000-4-4 (2001) Level 2
Radiant RF Immunity	EN/IEC61000-4-3 (2002) level 2
Conducted Immunity	EN/IEC61000-4-6 (2001) level 2
Surge	EN/IEC61000-4-5 (2001) 0.5 KV (line) and 1.5 KV (earth)
ESD	EN/IEC61000-4-2 (2001) Contact level 2 & air discharge level 3

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