

Light**LEADER**TM 4000 PLATFORM

A Modular, Carrier-Class Optical Protection Platform

Functions:

- ✓ Dedicated protection applications:
Fiber Link, equipment and optical channel (OCh)
- ✓ Shared protection applications:
1:n, mxm

Features:

- ✓ 1U configuration supports up to four protection modules
- ✓ 2U configuration supports up to 10 protection modules
- ✓ Hot swappable plug-in modules
- ✓ Power supply redundancy
- ✓ Control module redundancy
- ✓ Management & Control:
 - CLI protocol: local over RS232 or remote over Telnet over Ethernet
 - SNMPv1 protocol over Ethernet
 - Front panel control:
 - LCD
 - Push buttons
 - LED indications
 - Audible alarm (buzzer) with ACO (Alarm Cut Off) push button
 - Dry contacts alarm relay

PRODUCT OVERVIEW

Lynx's LightLEADERTM 4000 is a carrier class platform supporting a family of modular optical protection systems offering high versatility, extensibility, availability and port density. The result is cost-effective protection architecture, to meet the needs of carriers, IXC, private network operators and enterprises.

A 1U or 2U rack-mountable chassis containing 6 or 12-slots can hosts a variety of hot-swappable optical protection modules, one or two redundant power supplies and control modules. For some applications, a 3U chassis configuration is also offered. Chassis are compliant with 300mm ETSI and NEBS.

Versatility

The chassis accommodates and uniformly controls any combination of protection modules, allowing users the freedom to choose any functionality mix, based on their deployment needs. The system can be used for fiber-equipment- and optical channel protection.

Cost-Effectiveness

Optical protection is the most cost-effective high availability solution for high-speed networks. The modular architecture of the LightLEADER 4000 offers low up-front cost and allows user to expand the system as their needs increase.

High Port Density

The 1U chassis can protect up to 4 bi-directional channels and a 2U configuration can protect up to 10 bi-directional channels.

Benefits

- ✓ Pay as you grow
- ✓ Highest APS & port density in a 1U or 2U configuration
- ✓ Supports various protection schemes and applications within the same platform

Options

- ✓ User-selected power supply:
 - 110/220 V AC
 - -48/-60 V DC

Redundant Power Supply

Two types of hot-swappable power supplies are available: -48/-60 dual-feed VDC or 110/220 VAC. Redundancy is supported when an optional second power supply is used.

Redundant Control Module

Controller redundancy is supported when an optional second control module is used,

Easy control

The control module is responsible for controlling all modules and management communication. The system can be managed from the front panel using an LCD and control buttons, through a CLI or via SNMP. LynxVision, an SNMP-based EMS, offers easy configuration, monitoring and management through a graphical user interface (GUI).

LightLEADER™ 4000
PLATFORM

SPECIFICATIONS

PHYSICAL

19/21/23" Rack mountable
1U or 2U height, ETSI 300 NEBS 12" depth
Includes 6 or 12 slots

ELECTRICAL

Control Interface: RS-232, Ethernet, LCD, LEDs Push buttons, Dry Contact
Input Voltage: 110/220 V AC or Dual feed ¹ -48/-60 V DC
Power consumption: From <7.5W to <25 W (depending on protection modules installed)

ENVIRONMENTAL

Operating temperature range (° C)	0 to 55
Storage temperature range (° C)	-40 to 85

¹ For Front entry power

MANAGEMENT AND CONTROL

Remote (over Ethernet): SNMPv1, CLI over Telnet, LynxVision EMS/SMS (SNMP managed- ordered separately)
Local: CLI over RS-232, LCD with push buttons
Additional alarms: dry contacts alarm relay, Internal buzzer, ACO (Alarm Cut Off) push button, front panel LEDs

APPLICABLE STANDARDS

UL, CE, FCC
NEBS
ETSI

ENVIRONMENTAL COMPLIANCE

Fully Compliant with RoHS/WEEE

ORDERING INFORMATION

LightLEADER 4000 Platform minimal configuration includes: 1 chassis, 1 power supply module, 1 controller module and 1 optical Automatic Protection Switch (APS) module. Each of the modules can be purchased separately to customize the customer configurations and sparing requirements.

TYPE	ITEM ID	SHORT DESCRIPTION
CHASSIS¹	CHS4901-D	6-slot, 1U chassis for front-loaded DC power supplies
	CHS4902-D	12-slot, 2U chassis for front-loaded DC power supplies
	CHS4903-D	18-slot, 3U chassis for front-loaded DC power supplies
	CHS4901-A	6-slot, 1U chassis for front-loaded AC power supplies
	CHS4902-A	12-slot, 2U chassis for front-loaded AC power supplies
	CHS4903-A	18-slot, 3U chassis for front-loaded AC power supplies
APOWER SUPPLY MODULES	DCM4172	Front-loaded -48/-60 V DC Dual feed power supply module
	ACM4260	Front-loaded 110/220 V AC power supply module
CONTROL MODULE	LL4001	Front-loaded control module
COMM MODULE	LL4001E	Front-loaded Ethernet-switch module
MOUNTING BRACKETS	BKT19/21/23	1U chassis mounting brackets for 19 or 21 or 23 inch racks
	BKT19s/21s/23s	2U chassis mounting brackets for : 19 or 21 or 23 inch racks

SUPPORTED MODULES LIST

TYPE	ITEM ID	SHORT DESCRIPTION	APPLICATIONS EXAMPLES
APS MODULES	APS4300	1 + 1 unidirectional protection module	Fiber link protection
	APS4301	1:1 bidirectional fiber protection module	Fiber link protection, GDPS
	APS4302	Remote-link monitoring & signaling module	Dual homing protection
	APS4304	Dual-ended bi-directional protection module enabling Working and Protection links remote monitoring	Dual-homing protection.
	APS4305	1 + 1 bi-directional (fiber-pair) protection	Fiber link protection
	APS4305-OT	1 + 1 single ended, bi-directional wavelength protection module with OTU-2 overhead monitoring	2.5Gbs-10Gbs wavelength protection in transponder-less DWDM systems
	APS4310	Single-ended, bi-directional (fiber-pair) link protection module	Distributed dual-homing protection, Optical protection aggregation.
	APS4401	1:n cascadable bi-directional shared protection module	Shared fiber/wavelength/ interfaces protection. 40G Muxponders protection
	APS4403	1 + 1 bi-directional protection module with SM64/OC192 overhead monitoring	10Gbs Wavelength Service/OCh/ path protection
	APS4404	1 + 1 bi-directional protection module with STM16/OC48 overhead monitoring	2.5Gbs Wavelength Service/OCh Protection
	APS4410	Inline optical equipment bypass module	Inline equipment bypass

¹ CHASSIS INCLUDES ONE SET OF 19" OR 21" OR 23" MOUNTING BRACKETS OF THE CUSTOMER'S CHOICE.

LightLEADER™ 4000 PLATFORM



FOR ORDERING INFORMATION, PLEASE CONTACT:

Americas

LYNX PHOTONIC NETWORKS, INC.

6303 Owensmouth Avenue
Woodland Hills, CA 91367
Tel: 1-818-936-3557
(1-866-GO-LYNXP)
Fax: +1-818-936-3022
E-mail: AmericasSales@lynxpn.com



Visit www.LynxPN.com for more information
about Lynx and our innovative
optical product lines.

Headquarters

LYNX PHOTONIC NETWORKS, LTD.

13 Hamelaha St., Afek Ind. Park
Rosh Ha'ayin 48091, Israel
Tel: +972-3-915-5000
Fax: +972-3-903-3129
E-mail: Headquarters@lynxpn.com

Copyright © 2005-2009 Lynx Photonic Networks, Inc. All Rights Reserved. All information in this document is provided for informational purposes only and is subject to change without notice. Lynx Photonic Networks assumes no liability for actions taken based on information contained herein.