PL-1000RO

Next Generation WSS ROADM

Advanced Integrated ROADM platform providing flexible Wavelength Add Drop, Automatic Power Balancing and Amplification for next generation DWDM Network Infrastructure

FEATURE OVERVIEW

Flexible wavelengths Add/Drop

Automatic Optical Power Equalization

Directionless, Colorless architecture

Supports up to 88 C-Band channels

Up to 4 degrees ROADM

Supporting Mesh, Ring and Linear add/drop topologies

Flexible channel spacing 50GHz/100GHz

Optical Power Level Monitoring for all channels

Supports 8 channel internal DWDM Mux/Demux

Supports optional embedded EDFA Booster/Preamp

Ready for 40Gbps and 100Gbps transmission format

Embedded Optical Supervisory Channel for remote management

Dual AC or DC pluggable Power Supply and pluggable FAN Unit

A-Z provisioning and service management using PacketLight's LightWatch (TM) NMS

PL-1000RO Reconfigurable Optical Add-Drop Multiplexer (ROADM)

ROADM based network architecture simplifies configuration and management of complex DWDM network infrastructure. It offers highly flexible wavelength routing capabilities suitable for mesh, ring, linear add/drop, core and edge DWDM network topologies.
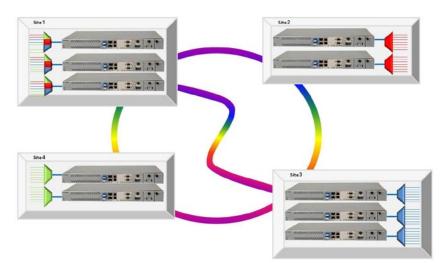
PacketLight's PL-1000RO offers the ROADM functionality based on the most advance next generation WSS (wavelength selective switch) technology.

The user configures the PL-1000RO dynamically to add/drop selected wavelengths at any node in the network and seamlessly change the network node capacity as needed. In addition, it automatically maintains the equalization and power balance of the added and bypass wavelengths. The PL-1000RO also integrates optional EDFA for amplifying the wavelengths thus delivering effective long distance DWDM solutions.

PacketLight colorless, directionless ROADM provide high flexibility for mesh and ring networks.

PL-1000RO simplifies network management and reduces operation costs (OPEX) by allowing deployment of new wavelengths remotely. PL-1000RO fully integrates with PacketLight's WDM product line.

The PL-1000RO can be managed by any third party NMS system or with PacketLight's EMS.

![PacketLight Networks logo]

TECHNICAL SPECIFICATIONS

ROADM Parameter	Min	Max	Units	Notes
Insertion Loss		6.5	dB	All Ports
Loss Uniformity		1.5	dB	All Ports
WDL		1.2	dB	All Ports
PDL	0.5	1.0	dB	All Ports
Channel Range	191.3	196.0	THz	Full C-band, 1529.55 to 1567.13 nm
Channel Count		48/88	Channels	50/100 GHz spacing ITU Grid (Ch13-CH60)
-0.5 dB Passband	±20		GHz	Centered on ITU grid
-3.0 dB Passband	±25		GHz	Centered on ITU grid
-30 dB Stopband	±15		GHz	Centered on ITU grid
Chromatic Dispersion	-10	10	ps/nm	In passband, both express and drop
PMD	-0.2	0.2	ps/nm	In passband
Switch Speed	0.001	100	ms	
VOA Range	0	15	dB	
VOA Error	0.5	1	dB	
Optical Power Limit - 1ch		20	dB	In passband
Optical Power Limit - All		27	dB	Entire input spectrum

Full C-Band Amplifier

Output Power	14dBm, 17dBm, 20dBm, 23dBm
Input Power	-5dBm up to 16dBm
Gain	10dB to 20dB
Operating Modes	AGC (Automatic Gain Control), APC (Automatic Power Control
Eye Safety	Automatic laser power reduction upon fiber cut or disconnection

General

Gain Flatness	+/- 1 dB
Noise Figure	4-6 dB
PMD	0.3 ps
PDL	0.3 dB

Physical Dimensions

Size	1.77" (1 RU) (H) x 17.32"(W) x 9.05"(D) 45 mm (H) x 440mm (W) x 230 mm (D)
Weight	8Kg (Max)
Mounting	19", ETSI and 23"

Environmental

Operating Temperature	-5° C to 50° C (+23° F to +122° F) Operational
Humidity	5% to 85% RHI

Network Management

Management Ports	10/100MBase-T, RJ-45, RS-232, DB9
Protocols	SNMP, HTTP, HTTPS, Telnet, SSH, Syslog, RADIUS
Management	Web server application, IBM Tivoli, HP Openview, LightWatch NMS
OAM	Event Logger Alarms OCM
Management Ch.	Optical Supervisory Channel (OSC)
Visual Indicators	LED status indicators for client ports, line interfaces, power and system

Power Supply

AC/DC	90 to 246VAC, -36 to -72VDC, 60W max
PSU Redundancy	Single/Dual feeding, Hot Swappable
Cooling Unit	Hot Swappable Fan Unit

Approvals & Standards

CE, FCC, RoHS 5/6
NEBS Compliant