Optical Bypass Protection Switch
(OBP) (10ms, 100 μs, 100 ns)

Features

- Reduce interrupt time
- Increase network reliability
- Improve service quality
- Real-time power monitoring
- Automatic switching

Product Description

Optical Bypass Protection Switching System (OBP) is deployed in each note to protect a cascaded or layered fiber optical network in which one equipment failure will disrupt the network integrity. In cases of power loss, software crash, or hardware failure, OBP automatically reroutes the transmission bypassing the malfunctioned equipment. This is achieved by inserting optical switches between the transmission fibers and real-time monitoring the signal strength through the equipment, it automatically switches to the bypass connections when the signal power value is lower than a user-defined threshold. When the equipment is recovered, the transmission will be automatically restored. Our net-ready OBPs offer various reliable protection schemes against network failures. We uniquely provide fast optical switching to reduce data loss with three choices of optical switching speed:100ns, 100 ms, 10 ms. Management of the OBP is performed using a Web GUI, reachable through the local Ethernet ports on the OBP system control card.

Performance Specifications

Optical Line Protection Switch	Min	Typical	Max	Unit
Operating Wavelength		1310/1550 ± 50		nm
Insertion Loss [1], [2]		1.2	1.5	dB
Monitoring Power Range		-50	23	dBm
Optical Power Resolution		+- 0.01		dB
Return Loss		45		dB
Cross Talk		55		dB
PDL			0.05	dB
Optical Switching Time [4]	100 ns	10 ms		
Repeatability			±0.05	dB
Noise Figure			30	dB
Durability[5]	10^7			Cycle
Power Consumption			3	W
Operating Temperature	0		70	°C
Storage Temperature	-40		85	°C
Monitor Port		RJ45, Console, SFP		
Working Power	DC: 12~48V; AC: 100~240V (50/60 Hz), 50W			
Fiber Type	SMF-28 or equivalent			
Chassis Type	19" Standard Rack, 1 U Dimension (HxWxD)		44.5x482.6x300nm	
Relative Humidity	5-95%			

[1]. Excluding connectors.
[2]. Multimode IL measure @ Light Source CPR<14 dB.
[4]. Optical switch speed, there are electrical signal delay in the system
[5]. Higher reliability switches are available

Applications

- Fiber Optical Line Protection
- FTTx Networks

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15 Presidential Way, Woburn, MA 01801 Tel: (781) 935-1200 Fax: (781) 935-2040
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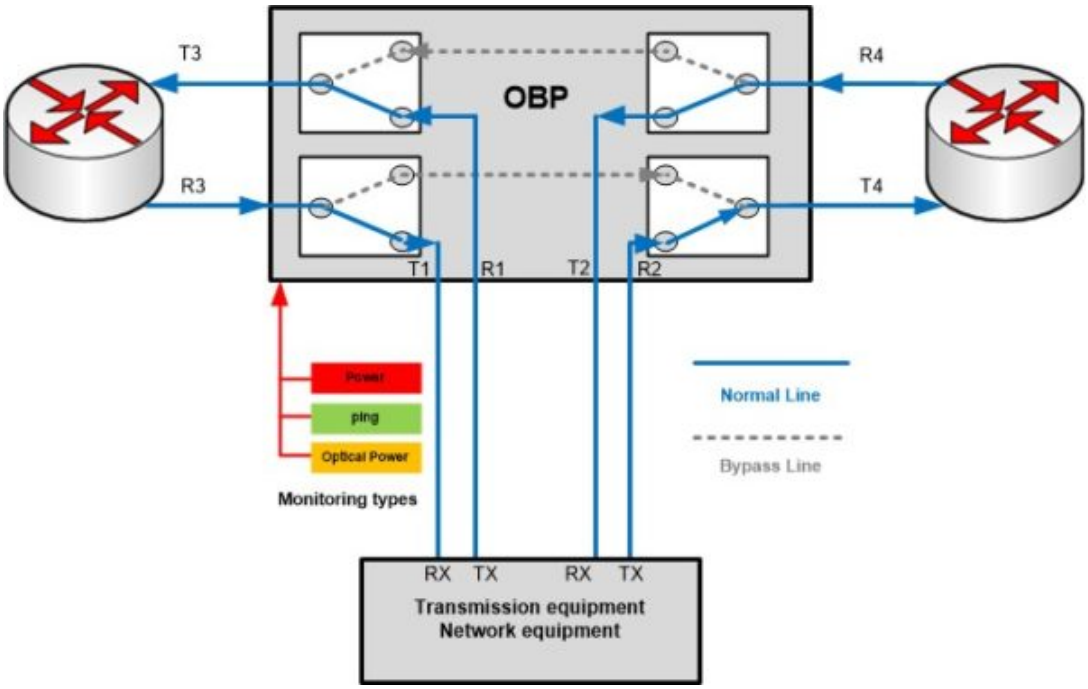
Mechanical Dimensions (Unit: mm)

1RU 19" mount rack typically. The input and output connectors and the control interface are on the front panel, while and power inputs are on the rear panel.

*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Optical Diagram



Electrical Power Requirements

The protection switch comes with dual power supply. The requirement for each power supply is 100~240V / 1.8A. The whole power consumption is less than 100W.

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Ordering Information

OBSP -	☐	☐	☐	☐	☐	☐	☐	☐
	Type	**Channel**	**Wavelength**	**Package**	**Fiber Type**	**Switch Speed**	**Power Supply**	**Connector**
	With control =1 Card only =2 Special =0	1 2 3 4	1310=3 1550=5 1310/1550=9 Special=0	Pluggable Module =9 Standard 1RU=1 2U =2 Special=0	SMF-28=1 Special=0	10ms=1 100 μs =2 100 ns =3	12V DC=1 48V DC =2 100~240VAC =3 Special=0	None=1 FC/PC=2 FC/APC=3 SC/PC=4 SC/APC=5 ST/PC=6 LC=7 Duplex LC=8 Special=0

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