

# Optical Switch Blade/Card OSB

## Optical Switch Blade

The Polatis OSB family provides a standard backplane interface and simple plug & play operation for chassis-based switching solutions. The OSB is an ideal element for OEM use where small size and superior optical performance are required.

Conforming to PXI, VXI, and cPCI standards, the OSB series is ideal for network communications, test and defense applications. With extremely high signal stability, excellent crosstalk immunity, and low insertion loss, the OSB is the preferred solution for optical RF transmission systems. These card-based solutions can be integrated into existing WDM and TDM transport systems for flexibility at the optical layer.

The OSB switch blades are available in both symmetric (NxN) and asymmetric (MxN) port configurations. The Reconfigurable option provides user-definable input and output ports, enabling complete port connection flexibility. For 16 total fibers, users can create any matrix from 1x15 to 8x8.



## DirectLight® Technology

All Polatis products are based on the patented DirectLight beam-steering technology, setting the benchmark for reliable, high performance switching.

Polatis also offers a full range of rack-mount optical switch systems and optical switch modules.

## KEY FEATURES

- cPCI, VXI, PXI backplane formats
- Plug & Play operation
- Dual Ethernet option
- High speed parallel and RS232
- Ultra-low insertion loss
- High repeatability
- Low polarization dependent loss
- Fast switching speed
- High power handling
- Dark fiber switching
- Bi-directional operation
- Compact size, easy to integrate

## APPLICATIONS

- Hybrid OEO/OOO network switches
- Remote network monitoring & test access
- Centralized PON/FTTH test capability
- Network protection & restoration
- ROADM
- Automated component test
- Secure communication networks
- RF over fiber
- Shipboard communications
- Optical sensor arrays
- Automated manufacturing test

# High performance optical switch solutions

## PERFORMANCE SPECIFICATIONS

Insertion Loss <sup>1</sup>	<1.1dB
Polarization Dependent Loss	<0.1dB
Crosstalk	<-70dB
Operating Wavelength Range	1260-1625nm
Wavelength Dependent Loss	<0.3dB (C+L Band)
Repeatability	<±0.05dB
Return Loss <sup>2</sup>	>55dB
Switching Time	<17ms
Maximum Optical Power <sup>3</sup>	+27dBm
Switch Lifetime	10 <sup>8</sup> cycles
Operating Temp (Normal)	+ 5° to +45°C, <85% RH non-condensing
Operating Temp (Extended)	- 5° to +55°C, <90% RH non-condensing
Storage Temp (Normal)	-40° to +70°C, <40% RH non-condensing
Storage Temp (Extended)	-40° to +70°C, <95% RH non-condensing
Qualification (Normal)	Designed to meet EN60950
Qualification (Extended)	Designed to meet Telcordia GR1073 EN60950

All parameters are measured excluding connectors at 1550nm and 20°C with an unpolarized source after thermal equalization unless stated.

- 1 Measured using a 3 patch-cord method as defined in TIA/EIA-526-14A
2. With APC connectors return loss >70dB without connectors
3. Switch will operate on dark fiber

## Packaging Information

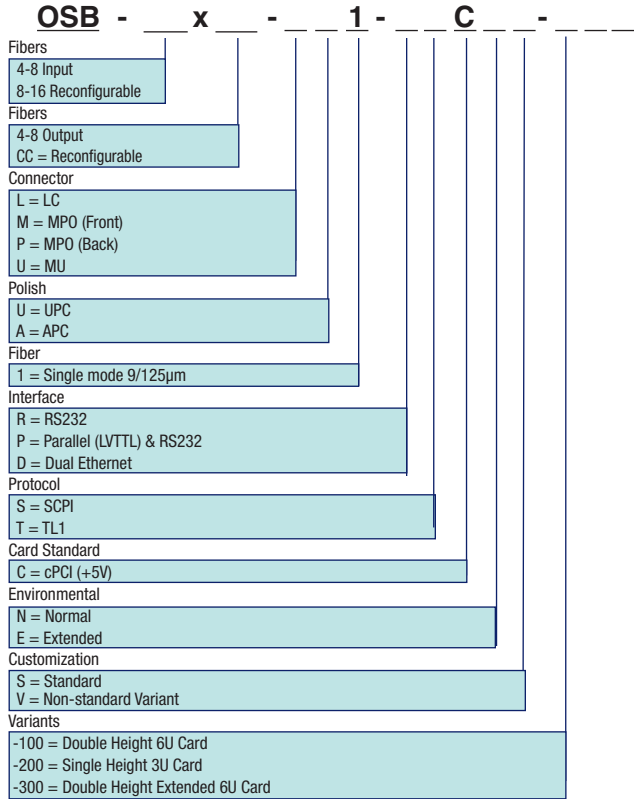
The Blade dimensions are designed for use within industry standard chassis including cPCI, PXI and VXI.

Configuration	Fiber Count	Height	Depth	Width	Variants*	Power Dissipation
04 x 04	8	6U	160mm	4HP	100	8W
08 x CC		3U	160mm	12HP	200	
04 x 08	12	6U	160mm	8HP	100	12W
12 x CC		3U	160mm	20HP	200	
		6U	280mm	4HP	300	
08 x 08	16	6U	160mm	8HP	100	15W
16 x CC		3U	160mm	20HP	200	
		6U	280mm	4HP	300	

\*Variants: See below

## Ordering Information

The part numbering scheme for Polatis products is as follows:



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