polatis

VOA & Power Meter Switch Tray VST

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The Polatis VST family of products offers an ideal integration of optical switching, attenuation and power monitoring in a single, compact package. This class of switch is unique to Polatis and delivers significant cost savings for a highly versatile tool with a single, easy-to-use interface.

Ideal for test environments, the VST provides physical-layer connectivity for sharing of high value equipment and for automation of test sequences in design verification and manufacturing systems. Its instrument-grade performance ensures the maximum signal fidelity, with ultra-high stability and repeatability. VST integrated power meters permit rapid trouble-shooting across the entire test set without patching in separate meters. The unique VOA function permits easy control of attenuation for trimming power, or of preset maximum power levels to protect sensitive downstream equipment.

Users may fully configure all ports for power meter and VOA functionality, or choose from sub-populated options. Power meter options include Input and/or Output detectors, while

optical attenuation options include both Relative attenuation (power drop across switch) or Absolute attenuation (fixed output power).

The VST is available in both symmetric (NxN) and asymmetric (MxN) port configurations, provided in a standard 19” rack mount enclosure.

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 Reconfigurable port and Multimode optical switch systems, as well as a range of optical switch modules and standard backplane optical cards.

KEY FEATURES

- Integrated Variable Attenuation (VOA) option
- Integrated Power Meter (OPM) option
- Instrumentation grade performance
- Ultra-low insertion loss
- High repeatability
- Low polarization dependent loss
- High power handling
- Dark fiber switching
- Bi-directional operation
- Protocol and bit rate independent
- Ethernet, RS232 and GPIB options
- Standard protocols: SCPI, TL1, SNMP

APPLICATIONS

- Automated component test
- Automated manufacturing test
- Network span emulation
- Systems verification testing
- Centralized optical equipment sharing
- Secure communication networks
- Centralized PON/FTTH test capability
- ROADM

High performance optical switch solutions

PERFORMANCE SPECIFICATIONS

Fiber Count Designator	I		K	
	-100, -300, -400 Output Monitor or Absolute VOA	-200, -500 Input & Output Monitor or Relative VOA	-100, -300, -400 Output Monitor or Absolute VOA	-200, -500 Input & Output Monitor or Relative VOA
Insertion Loss @ 1550nm [1]	<1.2dB	<1.3dB	<1.6dB	<1.7dB
Polarization Dependent Loss @ 0 dB attenuation	<0.1dB	<0.1dB	<0.15dB	<0.15dB
Crosstalk	<-70dB		<-60dB	
Operating Wavelength Range [5]	1260-1625nm			
Wavelength Dependent Loss	<0.3dB (C+L Band)			
Repeatability [6]	<±0.05dB			
Return Loss [2]	>55dB			
Switching Time	<17ms			
Maximum Optical Power [3]	+24dBm			
Switch Lifetime	10^8 cycles			
Operating Temp (Normal)	+10° to +40°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 GR63 EN60950			
VOA Performance				
Optical Attenuation Range [7]	>40dB			
VOA Resolution	< 0.25dB			
Output Stability @ 0dB [8]	< ± 0.05dB			
OPM Performance				
Operating Wavelength Range [5]	1290-1330nm + 1450-1625nm			
OPM Dynamic Range [4]	-30 to +24dBm			
OPM Accuracy	< ± 0.5dBm			

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.
4. Dynamic range for extended temperature is –20 to +24dBm.
5. Calibrated range for optical power monitors; switch operable over 1260-1625nm.
6. At zero attenuation.
7. When output power is within OPM dynamic range.
8. For stability at various levels of attenuation please contact Polatis for further details.
Partially populated VOA & OPM options also available. Call for details.

The performance characteristics of the switch trays vary according to the fiber count and the selected VOA and OPM options.

Fiber Count	04	08	12	16	20	24	28	32	CC
04	I	I	I	I	K	K	K	K	-
08	I	I	I	I	K	K	K	K	K
12	I	I	I	I	K	K	K	K	K
16	I	I	I	I	K	K	K	K	K
20	K	K	K	K	K	K	K	K	K
24	K	K	K	K	K	K	K	K	K
28	K	K	K	K	K	K	K	K	K
32	K	K	K	K	K	K	K	K	K

Packaging Information

Fiber Count	Connector	Tray Dimensions	Power Dissipation
8-32	LC or MU	19" rack mount 1 rack unit high	25W
8-16	FC, SC or ST		
17-32	FC, SC or ST	19" rack mount 2 rack units high	
33-64	All	19" rack mount 3 rack units high	45W

Ordering Information

The part numbering scheme for Polatis products is as follows:

VST - ___x___ - __ __ 1 - __ __ __ __ __ - __ __ __

Fibers
- 4-32 Input
- 8-32 Reconfigurable

Fibers
- 4-32 Output
- CC = Reconfigurable

Connector
- L = LC
- F = FC
- C = SC
- T = ST
- U = MU

Polish
- U = UPC
- A = APC

Fiber
- 1 = Single mode 9/125µm

Interface
- E = Ethernet & RS232
- M = Ethernet (Multisession) & RS232
- G = GPIB, Ethernet & RS232

Protocol
- S = SCPI
- T = TL1
- N = SNMP

Power
- B = Battery (48V)
- Mains connector type
- A = North America/Japan
- E = Continental Europe
- U = UK
- C = China/Australia

Environmental
- N = Normal
- E = Extended

Customization
- S = Standard
- R = Rear panel connectors
- V = Non-standard variant

Switch Configuration*
- -100 = Output power monitors with absolute VOA
- -200 = Input & output power monitors with relative VOA
- -300 = Output power monitors
- -400 = Input power monitors
- -500 = Input & output power monitors

** Reconfigurable only have options 100, 300 & 400.*

FOR MORE INFORMATION

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