

SelfAlign™ Dual 1xN Fiber Optical Switch

(all fiber type, all wavelength, bidirectional)

(Protected by U.S. patents 6823102 pending patents)

Product Description

The SelfAlign series Dual 1xN Broadband Fiber Optical Switch connects optical channels by redirecting an incoming optical signal into a selected output fiber. This is achieved by using a patent pending opto-mechanical configuration activated via an electrical control signal. Latching operation preserves the selected optical path after the drive signal has been removed. Agiltron unique design offers low insertion loss covering a very broad spectral band from 200 to 2000 nm with various single mode and multimode fibers. Multimode fiber core size is from 50 to 1000 μm. MWIR and LWIR version are also available. The switch is bidirectional and can accommodate up to 300 fiber ports.

The switch is ideal for sensor and spectroscopy applications. The switch is controlled by RS232 or USB computer interface with a graphic Software. Labview version is also available. A fully packaged box module is available.



Features

- Low Cost
- High Reliability
- Low Insertion Loss
- Broad Band
- Compact Design
- Low Power Switching

Performance Specifications

SelfAlign dual 1xN Switch		Min	Typical	Max	Unit
Operation Wavelength	UV-VIS	200		2000	nm
	MWIR	1000		5000	
	LWIR	7000		12000	
Insertion Loss ^[1]			0.3	1	dB
Port Uniformity			0.3	0.6	dB
Wavelength Dependence Loss			0.15	0.2	dB
Polarization Dependent Loss			0.05	0.1	dB
Cross Talk		50	60		dB
Return Loss	APC	50			dB
	UPC	40			
Switch Time				200	ms
Switch type			Latching		
Durability		10 ⁷			cycle
Optical Power Handling			0.3	5 ^[2]	W
Operating Temperature		-5		65	°C
Storage Temperature		-40		85	°C
Fiber Type	Single Mode	Corning SMF-28 or equivalent			
	Multimode	50		1000	μm
Package Dimension		192L x 102W x 60H			mm

[1]. Measured without connectors.

[2]. High power version is available.

Applications

- Optical Signal Routing
- Network Protection
- Wavelength Management
- Signal Monitoring
- Instrumentation

SelfAlign™ Dual 1xN Fiber Optic Switch

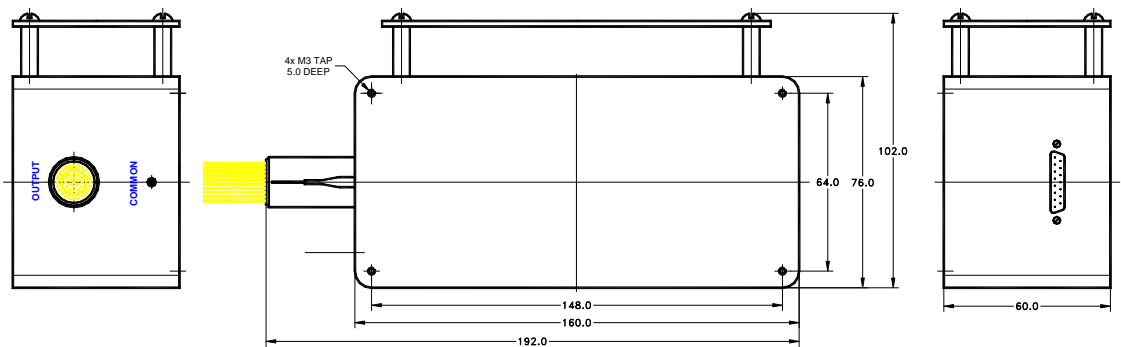
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Electronic Control Requirements

The sub-module comes with a computer control kit with a USB interface and Windows™ GUI. It has a wall plug-in power supplier

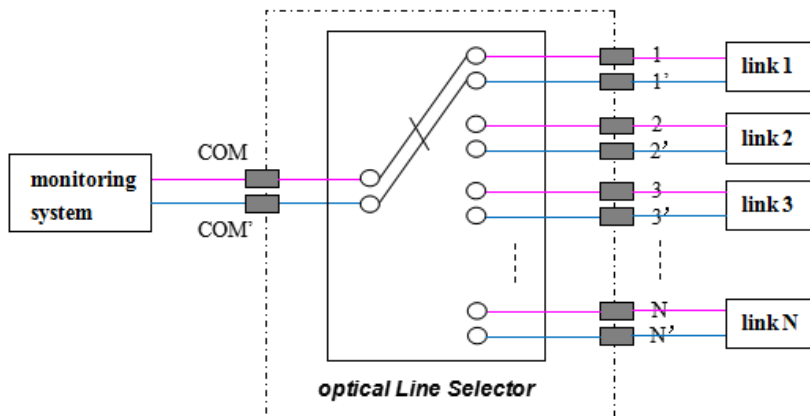
Parameters	Min	Typical	Max	Unit
Operating Voltage		12	13	VDC
Operating Current	100		200	mA
Power Consumption		3.6	5	W

Mechanical Dimensions (Unit: mm)



Dual Channel Optical Configuration

Two fiber channels are grouped to switch simultaneously. This is a cost effective configuration than using two 1xN switches.



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Ordering Information

LBSAD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Type	Wavelength	Switch Type	Package	Fiber Type	Fiber Length	Connector				
XXX ^[1]	1060=1 1310=3 1550=5 650=6 780=7 850=8 1310/1550=9 Special=0	Latching=1	Standard=1 Special=0	SMF-28 =1 MM 50/125=5 MM 62.5/125=6 Special=0	Bare fiber=1 900µm loose tube=3 Special=0	0.25m=1 0.5m=2 1.0m=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			

[1]. **XXX**: dual 1x8 Switch, XXX=008; dual1x9 Switch, XXX=009, dual 1x10 Switch, XXX=010, ..., dual 1x128 Switch, XXX=128