

Fiber-Fiber™ Series of 1xN Fiber Optic Switch Module

(bidirectional)

(Protected by U.S. patents 7224860, 6757101, 6577430 and pending patents)



DATASHEET

BUY NOW



Applications

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

Features

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

The Fiber-Fiber™ Series 1xN Series optical fiber switch is based on patent pending self-groove alignment mechanism without the need for AR coating and lenses. It offers unparalleled advantages of very low loss and cost, amicable to any fiber core size, and broad wavelength operation from 300nm-2300nm. The 1xN series optical fiber switch is compliant with the Telcordia 1209 and 1221 reliability standards. The driving circuit is embedded in the package and is connected to computer through RS232, USB or RJ45 interface.

The Fiber-Fiber™ 1xN optical fiber switch is suitable for multiple channel signal monitoring and signal management. The switch is bidirectional. It is not designed to maintain optical connections after electrical power is removed.

Specifications

Parameter	Min	Typica	Max	Unit
Operation Wavelength	400		1800	nm
Insertion Loss ^[1]		0.6	1.5	dB
Cross Talk	50			dB
Switch Speed (Rise, Fall) ^[2]		100		ms
Durability	10 ⁷			cycle
Polarization Dependent Loss		0.02	0.1	dB
Wavelength Dependence Loss		0.1	0.2	dB
Return Loss ^[5]	45			dB
Repeatability			0.3	dB
Power Consumption ^[3]	0.7	3.6	5	W
Operating Temperature ^[4]	-5		65	°C
Optical Power Handling ^[6]		300	500 ^[6]	mW
Storage Temperature	-40		85	°C
Power supply		110 ~ 220		VAC
Fiber Type	SMF-28 or 50/125um or 62.5/125um			
Package Dimension	2RU 19" Mount rack or similar			

Notes:

- [1]. Measured without connectors
- [2]. Switching between adjacent channels
- [3]. Consume minimum power during sleep time
- [4]. -25°C~75°C version is also available.
- [5]. For SM. Larger core will reduce the value, index matching-fluid version increases the return loss
- [6]. High power version available

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Module Mechanical Dimensions

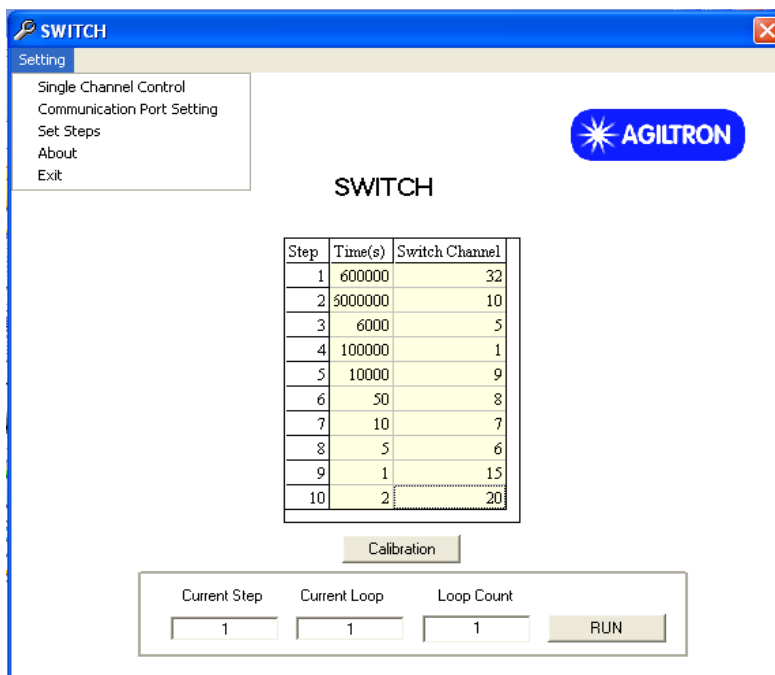
2RU 19" mount rack typically. The input and output connectors are on the front panel, while the control interface and power supplier are on the rear panel.

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

Control Interface and Power Supply

- RS 232
- Ethernet 10/100 with definable IP address
- USB
- GUI
- 110-220V (0.6 A) Power Input

Typical Graphic User Interface



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Ordering Information (Part Number)

Prefix	Type	Wavelength	Switch Type	Package	Fiber Type	Fiber Cover	Connector ^[1]
LBSC-	1x8 = 008 1x16 = 016 1x32 = 032 1x64 = 064 1x128 = 128 1x256 = 256 Special = 000	1240-1640nm = A 1060nm = 1 1310nm = 3 1410nm = 4 1550nm = 5 1310/1550nm = 2 650nm = 6 780nm = 7 850nm = 8 Special = 0	X	Standard 2RU = 1 Special = 0	62.5/NA.22 = 6 105/NA.15 = E 200/NA.22 = F 300/NA.22 = G 400/NA.22 = H 600/NA.22 = J 800/NA.22 = K Special = 0	Bare fiber = 1 loose tube = 2 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 Duplex LC/PC = 8 Quad LC = 9 Special = 0

RED is Special Order

[1]. The connector cannot be installed directly onto bare fiber, as it is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer can remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SM28 fiber and decreases further with smaller core fibers.

Questions and Answers

Q: If the device were to fail, would the switch continue to pass the fiber light through the switch as configured before failure? When power is restored, does the IN/OUT configuration before failure remain in place?

A: This depends, if one mirror fails, it only affects the light go through that mirror. Yes, when power back up it will go to the previous points

Q: When power is restored, does the IN/OUT configuration before failure remain in place?

A: Yes, when power back up it will go to the previous flightpath

Q: If power to the device were shutoff, would the device continue to pass the fiber light as configured before failure?

A: This function is call latching. We uniquely offer MEMS latching switch but cost more.

Q: With the Ethernet Control Option, does the switch support SNMPv3

A: Yes. This internet standard protocol allows user to write their own control code

Q: With the Ethernet Control Option, what type of encryption does the SNMPv3 use?

A: MD5/DES

Q: With the Ethernet Control Option, could this device be controlled by multiple users at different locations and all users will also see the configuration updates?

A: Yes

Q: With the Ethernet Control Option, could this switch be controlled by multiple users at different locations and all users will also see the configuration updates?

A: Yes

Q: With the Ethernet Control Option, does the user need to install any software on their computer other than a web browser?

A: No