

BUY NOW 

MEMS 18 x 18 Fiber Optical Switch

(Non-Blocking, Bidirectional)

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

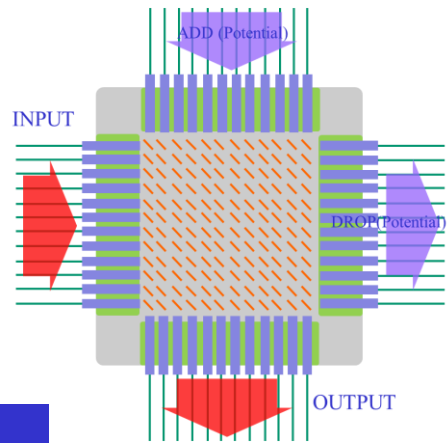
Features

- Low Cost
- High Reliability
- Low Loss
- Broad Band
- Compact Design
- Low Voltage

Product Description

The Agiltron MEMS N x M optical fiber switch uses an advanced 2D configuration in which each mirror only moves within two positions: in or out of the light path, as shown in the enclosed Figure. Our unique digital mirror technology advantageously eliminates the need for software position calibrations associated with conventional analog MEMS, that have long term drift issues.

Our switches feature very low latency, intrinsic temperature insensitivity, latching to the positions against vibrations, direct driving, and low cost. The passive switches establish optical signal paths in milliseconds supporting all data rates, ideally suited to manage and monitor large optical networks intelligently and remotely,



Performance Specifications

MEMS 12 x 12 Switch	Min	Typical	Max	Unit
Operation Wavelength		1260-1650		nm
Insertion Loss ^[1]		1.2	2	dB
Dynamic Cross Talk	50			dB
Static Cross Talk	60			dB
Switch Speed (Rise, Fall)		5	10	ms
Durability	10 ⁹			cycle
Polarization Dependent Loss		0.04	0.2	dB
Wavelength Dependence Loss ^[2]		0.1	0.3	dB
Return Loss	50			dB
Repeatability		0.3	0.5	dB
Operating Temperature ^[3]	-5		65	°C
Transit Time Delay			0.2	ms
Port to Port Time Delay Difference			0.5	ns
Optical Power Handling (CW) ^[4]		300	500	mW
Storage Temperature	-40		85	°C
Electrical Power Consumption			50 ^[5]	W
Switch type	Non-Latching/Latching			
Package Dimension	1RU/2RU/4RU			

1. Measured without connectors
2. Within 50nm bandwidth
3. -25 °C-75°C version is also available.
4. High power version available
5. For non-latching version

Applications

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

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2RU Module



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

Control & Electric Interface

The USB and/or RS232 and RJ-45 is the default interface with GUI. Other control interface as listed can be implemented per request.

- Physical Layer: 10/100Base-T
- Data Link Layer: Ethernet Protocol per IEEE 802.3
- Network Layer: IPv4
- Transport Layer: UDP
- Application Protocol: SNMP
- Connector Type: RJ-45
- Dual 48V/120-220V Power Input

Ordering Information

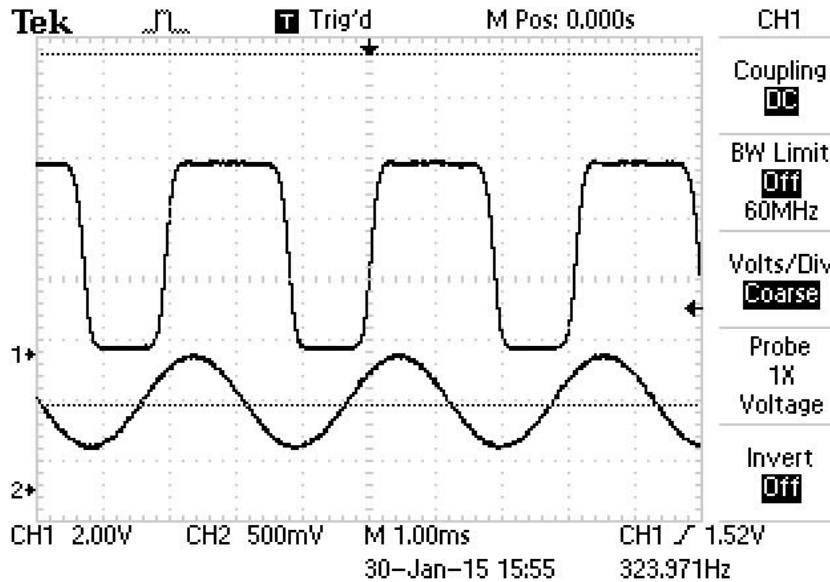
MEMS-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Type	Wavelength	Control Interface	Package	Fiber Type	Power Monitor	Connector
	18x18=018 6x18=618 8x18=818 9x18=918 Special=000	1060=1 1310=3 1410=4 1550=5 1310/1550=2 780=7 850=8 Special=0	USB/RS232 = 1 Ethernet 10/100 = 2 Special=0	2RU=2 4RU=4 Special=0	SMF-28 =1 MM 50/125=2 Panda=5 ^[1] Special=0	Input=1 Output=2 Input/output=3 None =0 Power Supply 110-240=4 48V=5	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]. For PM fiber version, please call us to get more information.

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10⁹ Switching Cycle Test

We have tested MEMS 1x2 switch at the resonant frequency ~300Hz for more than 40 days, as shown in the attachment, which corresponding over 10⁹ switching cycles. The measurements show little changes in Insertion loss, Cross Talk, Return loss ect, all parameters are within our specs.



MEMS-	Type	Wavelength	Control Interface	Package	Fiber Type	Power Monitor	Connector
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	18x18=018 6x18 =618 8x18 =818 9x18 =918 Special =000	1060=1 1310=3 1410=4 1550=5 1310/1550=2 780=7 850=8 Special=0	USB/RS232 = 1 Ethernet 10/100 = 2 Special=0	2RU=2 4RU=4 Special=0	SMF-28 =1 MM 50/125=2 Panda=5 ^[1] Special=0	Input=1 Output=2 Input/output=3 None =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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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 shutdown, 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