

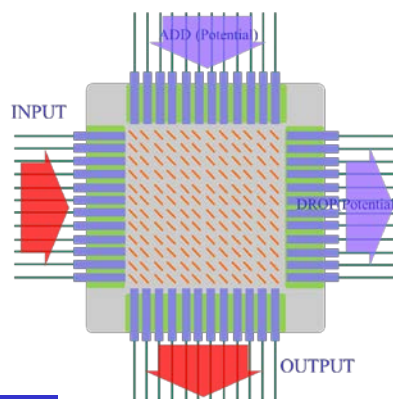
MEMS 12 x 12 Fiber Optical Switch (Non-Blocking, Bidirectional)

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

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	1.7	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 ^[4]			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 for SM only
2. Within 50nm bandwidth
3. -25 °C-75°C version is also available.
4. High power version available
5. For non-latching version

Features

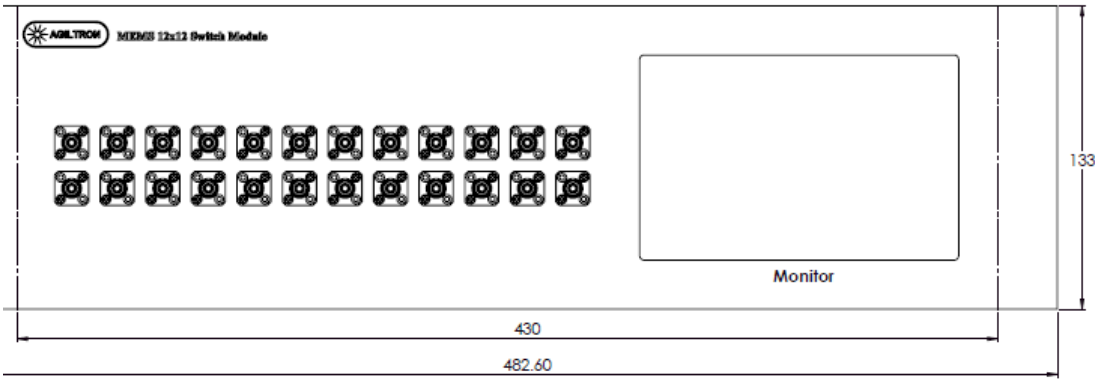
- Low Cost
- High Reliability
- Low Insertion Loss
- Broad Band
- Compact Design
- Low Voltage

Applications

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

MEMS 12 x 12 Fiber Optical Switch

3RU Module With Touch Screen Dimensions



*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
	12x12=012 Dual 12x12 =212 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

[1]. For PM fiber version, please call us to get more information.

MEMS 1x1, 1x2, ..., Dual 2x2 Fiber Optical Switch

(*SM & MM: 1x1, 1x2, 2x2, Dual 1x1, Dual 1x2, Dual 2x2, Quad 1x1. *PM: 1x1, 1x2)

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.

