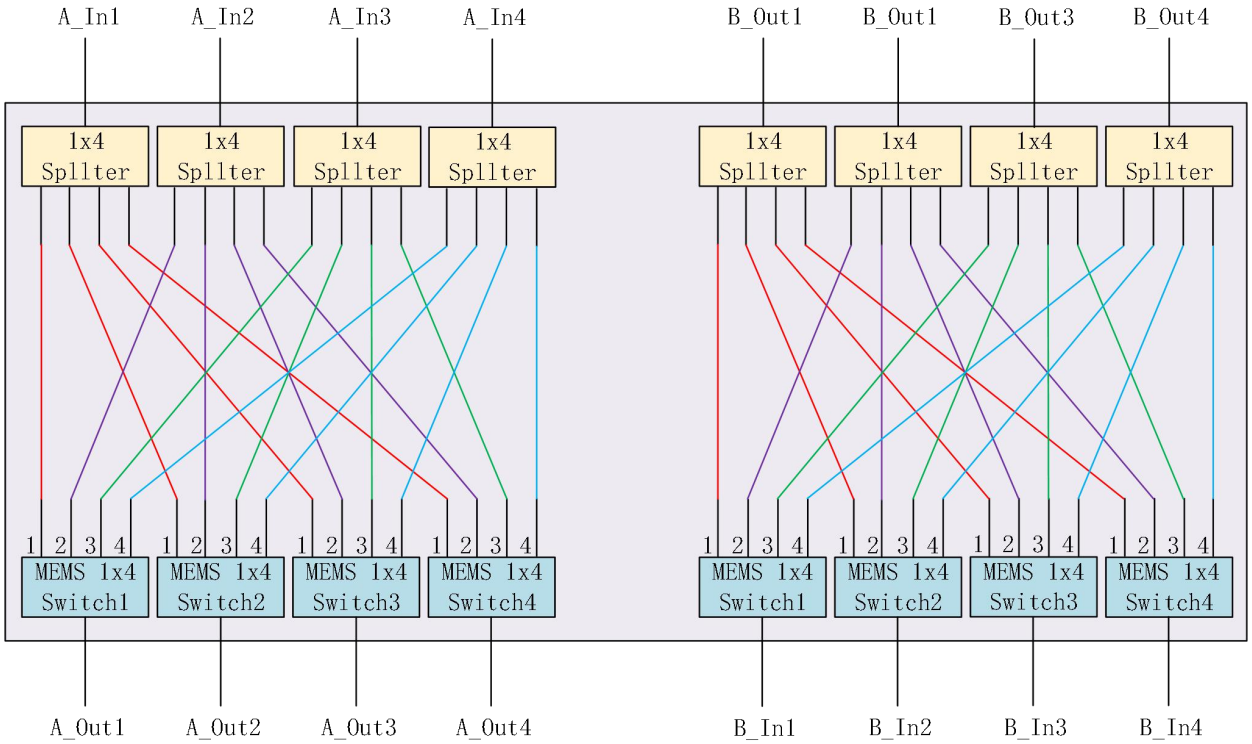
Product Presentation

MEMS Dual 4x4 Multicast Switch is based proven MEMS 1xN Switch, and incorporates two 4x4 Multicast Switches for add/drop functionality in a single package. For the drop side, input signals are first broadcast via 1x4 optical splitters into 4 optical switches, which are then used to independently route network traffic from any input to any or all output ports. For the add side, each switch receives an input and selects one of the N splitters to receive traffic for broadcast to the network. The MEMS Dual 4x4 Multicast Switch is ideal for colorless, directionless and contentionless add/drop multiplexing.

Features

- Compact Form Factor
- Excellent Thermal Stability
- Proven MEMS Durability and Reliability

Block Diagram



Specifications

Product Number	MEMS-D4×4-MCS-M
Fiber Type	SM（9/125）
Wavelength Range	1550nm
Insertion Loss	≤8.0dB
Wavelength Dependent Loss	≤0.5dB
Polarization Dependent Loss	≤0.5dB
Return Loss	≥40 dB
Crosstalk	≥50 dB
Repeatability	≤±0.05dB
Switching Time	≤15ms
Durability	≥10^9 cycles
Connector Type	FC/PC
Pigtail Length	1.0m
Optical Power	≤500 mW
Power Supply	5V / 250mA
Working Temperature	-5 ~ 70 °C
Storage Temperature	-40 ~ 85 °C
Packaging Dimensions	90(L) x 160(W) x 15(H) ±0.2mm

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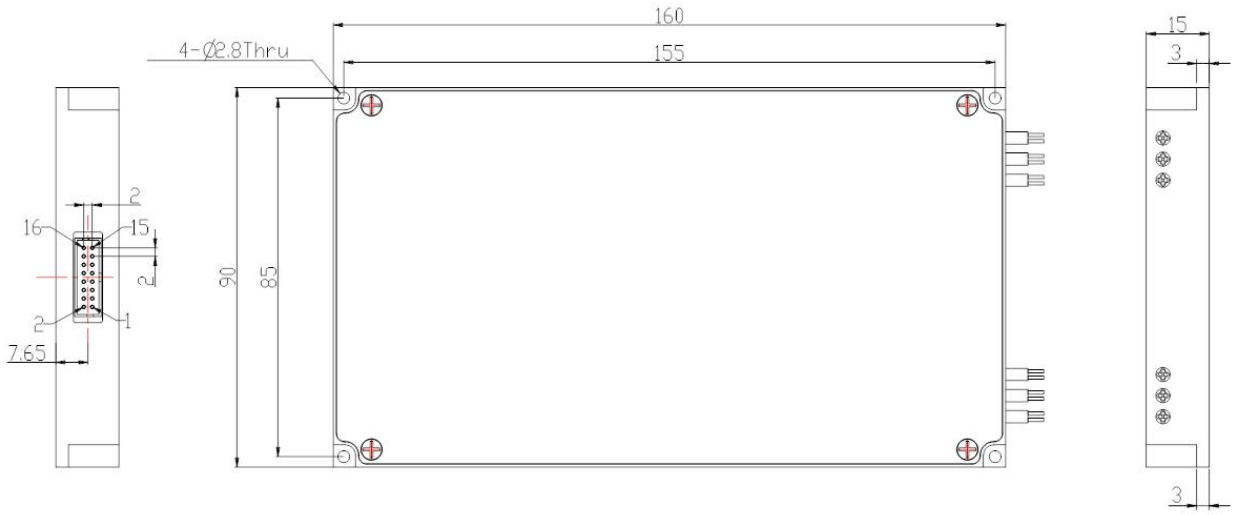
Dimension(mm)



Electrical-pins definition

PIN	definition	Signal	Function
1	NC		No physical internal connection
2	NC		No physical internal connection
3	VCC	Power	Power supply, 5V/0.25A
4	NC		No physical internal connection
5	NC		No physical internal connection
6	GND	Power	GND
7	NC		No physical internal connection
8	SDA	I/O	I2C DATA
9	TXD	Output	RS232: Transmit Data;
10	RXD	Input	RS232: Receive Data
11	SCL	I/O	I2C CLK
12	NC		No physical internal connection
13	NC		No physical internal connection
14	NC		No physical internal connection
15	NC		No physical internal connection
16	NC		No physical internal connection

Note: the electrical interface of the module uses Molex 87833-1620, and the customer's connector is recommended to use Molex 87568-1694.

Program Control Order

This module can receive control signals through RS232 interface to realize automatic measurement or real-time monitoring.

(1) This module can only execute one instruction at a time. Usually, the next instruction can be entered only after the program returns the corresponding value

(2) Please use capital letters.

(3) In actual operation, enter the sharp bracket "<" as the start character and the sharp bracket ">" as the end character

(4) Instruction error return < Er >.

Program control instruction set

Order	**Describe**	**Example**
<RESET>	Restart module	Successful return：<RESET_OK>
<RESTORE>	Restore factory settings	Successful return：<RESET_OK>
<INFO_?>	Query module information	Successful return：<MEMS-D4X4_VER1.00_ SN01234567890_C08.04.00051>
<BAUD_x>	Set or query serial port baud rate 1.x is 1~9，Baud rate 2400、4800、9600、14400、	set：<BAUD_5> Successful return: <BAUD_5_OK>

	19200、38400、56000、57600、115200 Successful return: <BAUD _x _OK> 2. Send < BAUD_? > Query Baud Rate	Set the baud rate of the serial port of the device to 19200 After saving the configuration, restart it to take effect!
<OSW_xx_SW_s1_s2_s3_s4>	Set current channel xx：00~02，00 mean is A and B simultaneous switching， 01 indicates 4x4 switching of group A and 02 indicates 4x4 switching of group B； s1~s4：mean is Switch1 ~Switch4，value 00~04，0 ~ 4 channels respectively； Successful return ：<OSW_xx_SW_s1_s2_s3_s4_OK>	set：<OSW_01_SW_01_02_03_04> Successful return：<OSW_01_SW_01_02_03_04_OK> Indicates that A group 4X4 switches to：In1→Out1 、 In2→Out2 、 In3→Out3 、 In4→Out4
<OSW_A_?>	Query channel status Successful return：<OSW_A_a1_a2_a3_a4_b1_b2_b3_b4> a1~a4 ： Respectively represent the current channels of Switch1 ~ switch4 of group A； b1~b4 ： Respectively represent the current channels of Switch1 ~ switch4 of group B；	Return：<OSW_A_01_02_03_04_01_02_03_04> Indicates that the channels of group A and group B are ： In1→Out1 、 In2→Out2、In3→Out3、In4→Out4
<SAVE_ALL>	Save configuration Successful return：<SAVE_ALL_OK>	Save the configuration, such as channel status。

Fiber Length and Boot Length definition

Note: including boot and connector length.

Factory default configuration

Item	Factory default configuration	Note
Serial baud rate	115200	8 data bits, 1 stop bit, no parity
Working channel	In1→Out1、In2→Out2 In3→Out3、In4→Out4	Group A and group B are the same optical path identification