



N x M MEMS Optical Cross Connect

OVERVIEW

The **sercalo** *NxM MEMS Optical Cross Connects (OXC)* series are all optical switch solutions for demanding applications in fiber optic instrumentation or communication.

The optical connections are set by a 3D MEMS switch network, where micromachined silicon mirrors redirect light from the specified input port to the selected output port. The use of MEMS technology offers low cost together with excellent optical performance.

The switch is designed for integration into a network system. Over a RS232 or USB interface the individual ports can be addressed.

APPLICATIONS

- Optical Network Switching
- Fiber Optic Cross Connect
- Fiber Optic Test and Measurement
- Data Center Optical Switching

FEATURES

- Low Insertion Loss
- Non-Blocking
- Fully Bi-Directional
- Single or Multi Mode Fiber
- Standard Port Counts
 - 16 x 16
 - 24 x 24
 - 32 x 32
- Custom Port Count NxM

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DESCRIPTION

The Optical Cross Connect is built using Sercalo's established MEMS technology. The MEMS mirrors are stable enough to operate the switch in open loop.

The switch is **fully bi-directional** and **transparent** to the full wavelength range of the installed fiber.

The switch architecture is **non blocking**: Any of the input ports can go to any of the free output ports.

TECHNICAL SPECIFICATIONS				
	Unit	Min	Typ	Max
Switch				
Wavelength Range	nm	1240	1550	1650
Insertion Loss ¹	dB	0.5	1.0	2.5
Return Loss	dB			35
Cross Talk	dB			60
Polarisation Dependent Loss	dB		0.1	0.25
Response Time	ms		<100	
Fiber Pigtail	µm		SMF 28	
Durability	cycles		no wear out	
Maximum Optical Power	dBm		21	
Package				
Power Supply Voltage	V		5.0 V DC	
Power Consumption	W		1.2	5
Control interface			USB and RS232	
Operation Temperature	°C	15	20	45
Storage Temperature	°C	-40		80
Size (WxHxL) (8x8 up to 20x20)	mm		130x95x40	
Size (wxlxh) (24x24 up to 40x40)	mm		130x190x40	
¹ without connectors				

ORDERING INFORMATION	OXC	16	-	16	-	9	n	LC-PC
Optical Ports Input x Output <i>N x M</i> <i>1 < N < 40</i> <i>1 < M < 40</i>								
Packaging O = OEM								
Fibre type 9 = SMF28								
Fiber Sleeve B = bare fiber N = 900 µm loose tube								
Connector type - = bare fiber LC/UPC SC/APC MTP-Female								