# MEMS 144X144 OPTICAL SWITCHING SYSTEM

**GP800 Model, Polarization Maintaining Fiber** 

	M PORTS		N PORTS	(0)
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DiCon's **GP800 144x144 Optical Switching System** is an all-optical non-blocking cross-connect switch. This rack-mount device is designed with DiCon's proprietary 3D MEMS mirror technology and delivers industry-leading optical performance. The unit works without any position sensor or feedback loop, and the optical signals can pass through the equipment without any observable dithering artifacts. The **GP800 System** can switch repeatedly with great accuracy and maintain long-term connectivity with superior stability even when there is no optical signal in the fiber.

The **GP800 System** comes with multiple control interfaces for users to choose from and there are many options to customize the product, including adding other optical components, to meet unique requirements.

- · High-density non-blocking Matrix Switches
- · Interfaces Web GUI, SSH, RS232, REST API, Telnet
- · Powerful and intuitive user access
- Low insertion loss
- Fast switching concurrent switching < 25 ms
- · Lifetime > 1 billion switch cycles
- No position sensor nor feedback-loop used
- · Works even when there is no light in the fiber
- · Excellent stability with no observable dithering artifacts
- Low power consumption
- · Proven MEMS platform commercial deployment since 2001
- · Low MEMS drive voltage simple and reliable electronics
- · Intelligent hardware field serviceable electronics

#### **ORDERING INFORMATION**

	GP800 - 🗌 - SX - 🗌 - 🗌 - 🗌 - 🗌 - 🗌 -
Chassis Ty	pe
3U	3U
4U	4U
5U	5U
6U	6U
*Please con	sult DiCon
Product Ty	pe
SX	MEMS Matrix Switch
Confirment	
Configurati	
T144x144	
TMxN	MxN (M, N≤144)
Fiber Type	
PM13	Corning PM 1310 Fiber
PM15	Corning PM 1550 Fiber
*Other fiber	options available upon request
O C L *Use "/" to a	1310 nm 1550 nm 1590 nm <i>dd multiple wavelengths. E.g., O/C or O/C/L</i>
Connector	Туре
FC	FC/UPC
FC/APC	FC/APC
SC	SC/UPC
SC/APC	SC/APC
LC	LC/UPC
	LC/APC
LC/APC	
LC/APC RLC	LC/UPC on Removable Panel
RLC RLC/APC	LC/UPC on Removable Panel
RLC RLC/APC	LC/UPC on Removable Panel LC/APC on Removable Panel
RLC RLC/APC	LC/UPC on Removable Panel LC/APC on Removable Panel
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RLC RLC/APC *Other connor Connector	LC/UPC on Removable Panel LC/APC on Removable Panel ector types available upon request
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RLC RLC/APC *Other connor Connector S	LC/UPC on Removable Panel LC/APC on Removable Panel ector types available upon request Key Orientation Slow Axis
RLC RLC/APC *Other connor Connector S	LC/UPC on Removable Panel LC/APC on Removable Panel ector types available upon request Key Orientation Slow Axis
RLC RLC/APC *Other connector Connector S	LC/UPC on Removable Panel LC/APC on Removable Panel ector types available upon request Key Orientation Slow Axis Fast Axis



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R	Rear



## **MEMS 144X144 OPTICAL SWITCHING SYSTEM**

**GP800 Model, Polarization Maintaining Fiber** 

### **OPTICAL SPECIFICATIONS<sup>1</sup>**

Wavelength Range	1260 to 1675 nm	
Insertion Loss <sup>2</sup>	< 1.9 dB	
Loss Repeatability <sup>3</sup>	+/- 0.03 dB	
Connection Stability <sup>4,5</sup>	+/- 0.03 dB	
Polarization Extinction Ratio (PER) <sup>6</sup>	> 18 dB	
WDL <sup>5,7</sup>	< 0.3 dB	
Crosstalk⁵	< -60 dB	
Back Reflection	< -50 dB	
Optical Transition Time <sup>5,8</sup>	< 25 ms	
Switch Lifetime	> 1 Billion Cycles	
Input Power Range	Dark to +27 dBm	

### **ELECTRICAL SPECIFICATIONS**

Power Supply	100-240 VAC, 50/60 Hz
Connectors	RJ45 (Ethernet) DB9 (RS232) USB-C (Service)
Control Interface	Web GUI, SSH, RS232, REST API, Telnet

#### **ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature	0 to 50°C, < 85% RH	
Storage Temperature	-40 to 70°C, < 40% RH	

#### **MECHANICAL SPECIFICATIONS**

Chassis Width	483 mm (19")	
Chassis Depth	435 mm (17")	
Chassis Height	5U/6U (Front/Back, FC) 6U/6U (Front/Back, SC) 3U/4U (Front/Back, LC) 3U/4U (Front/Back, RLC)	

1. Measured separately for each Test Wavelength

2. Measured with 3-jumper method or equivalent. See TIA/EIA 526-7.

3. Over 100 cycles

4. 1 Hz sampling rate for 15 min

5. Met by design, not measured

6. PER with connectors is 18 dB typical, 16 dB minimum

7. WDL is defined within Test Wavelength ±20 nm

8. Optical transition time for all ports switching concurrently, not including command processing overhead