

# MEMS 32X32 OPTICAL SWITCHING SYSTEM

## GP800 Model, Single Mode Fiber



DiCon's **GP800 32x32 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
- Advanced WebGUI for port partitions
- Low insertion loss - 0.8dB typical (excluding connector 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 - [ ] - 9 - [ ] - [ ] - N - [ ]**

#### Chassis Type

**1U** 1U  
**2U** 2U  
**3U** 3U  
**4U** 4U

*\*Please consult DiCon*

#### Product Type

**SX** MEMS Matrix Switch

#### Configuration

**T32x32** 32x32  
**TMxN** MxN (M, N≤32)

#### Fiber Type

**9** 9/125 μm SMF

*\*Other fiber options available upon request*

#### Test Wavelength

**O** 1310 nm  
**E** 1410 nm  
**S** 1490 nm  
**C** 1550 nm  
**L** 1590 nm  
**U** 1650 nm

*\*Use "/" to add multiple wavelengths. E.g., O/C or O/C/L*

#### Connector Type

**FC** FC/UPC  
**FC/APC** FC/APC  
**SC** SC/UPC  
**SC/APC** SC/APC  
**LC** LC/UPC  
**LC/APC** LC/APC  
**RLC** LC/UPC on Removable Panel  
**RLC/APC** LC/APC on Removable Panel

*\*Other connector types available upon request*

#### Connector Key Orientation

**N** None

#### Connector Location

**F** Front  
**R** Rear

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

Wavelength Range	1260 to 1675 nm
Insertion Loss <sup>2</sup>	< 1.0 dB
Loss Repeatability <sup>3</sup>	+/- 0.03 dB
Connection Stability <sup>4,5</sup>	+/- 0.03 dB
PDL <sup>5</sup>	< 0.1 dB
WDL <sup>5,6</sup>	< 0.3 dB
Crosstalk <sup>5</sup>	< -60 dB
Back Reflection	< -50 dB
Optical Transition Time <sup>5,7</sup>	< 25 ms
Switch Lifetime	> 1 Billion Cycles
Input Power Range	Dark to +27 dBm

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. WDL is defined within Test Wavelength  $\pm 20$  nm
7. Optical transition time for all ports switching concurrently, not including command processing overhead

### 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	2U/2U (Front/Back, FC) 2U/2U (Front/Back, SC) 1U/2U (Front/Back, LC) 1U/2U (Front/Back, RLC)