

# MEMS 32X32 OPTICAL SWITCHING SYSTEM

## GP800 Model, Multimode 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 -  - MX -  - 50 -  -  - N -

#### Chassis Type

<b>1U</b>	1U
<b>2U</b>	2U
<b>3U</b>	3U
<b>4U</b>	4U

*\*Please consult DiCon*

#### Product Type

<b>MX</b>	MEMS Matrix Switch
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#### Configuration

<b>T32x32</b>	32x32
<b>TMxN</b>	MxN (M, N≤32)

#### Fiber Type

<b>50</b>	50 µm
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*\*Other fiber options available upon request*

#### Test Wavelength

<b>850</b>	850 nm
<b>O</b>	1310 nm
<b>C</b>	1550 nm
<b>850/O</b>	850/1310 nm
<b>O/C</b>	1310/1550 nm

*\*Other wavelength options are available upon request*

#### Connector Type

<b>FC</b>	FC/UPC
<b>FC/APC</b>	FC/APC
<b>SC</b>	SC/UPC
<b>SC/APC</b>	SC/APC
<b>LC</b>	LC/UPC
<b>LC/APC</b>	LC/APC
<b>RLC</b>	LC/UPC on Removable Panel
<b>RLC/APC</b>	LC/APC on Removable Panel

*\*Other connector types available upon request*

#### Connector Key Orientation

<b>N</b>	None
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#### Connector Location

<b>F</b>	Front
<b>R</b>	Rear

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### OPTICAL SPECIFICATIONS<sup>1,2,3</sup>

Wavelength Range	850 / 1310 / 1550 nm
Insertion Loss	< 1.6 dB
Loss Repeatability <sup>4</sup>	+/- 0.03 dB
Connection Stability <sup>5,6</sup>	+/- 0.03 dB
Crosstalk <sup>6</sup>	< -60 dB
Back Reflection	< -30 dB
Optical Transition Time <sup>6,7</sup>	< 25 ms
Switch Lifetime <sup>6</sup>	> 1 Billion Cycles
Input Power Range <sup>6</sup>	Dark to +27 dBm

1. Measured separately for each Test Wavelength at room temperature

2. Tested with Encircled flux compliant light source

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

4. Over 100 cycles

5. 1 Hz sampling rate for 15 min

6. Met by design, not measured

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, gNMI

### 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)