

MEMS 16X16 OPTICAL SWITCHING SYSTEM

GP800 Model, Single Mode Fiber



DiCon's **GP800 16x16 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

- T16x16** 16x16
- TMxN** MxN (M, N≤16)

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 SPECIFICATIONS¹

Wavelength Range	1260 to 1675 nm
Insertion Loss ²	< 1.0 dB
Loss Repeatability ³	+/- 0.03 dB
Connection Stability ^{4,5}	+/- 0.03 dB
PDL ⁵	< 0.1 dB
WDL ^{5,6}	< 0.3 dB
Crosstalk ⁵	< -60 dB
Back Reflection	< -50 dB
Optical Transition Time ^{5,7}	< 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 ± 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	1U/2U (Front/Back, FC) 1U/2U (Front/Back, SC) 1U/1U (Front/Back, LC) 1U/1U (Front/Back, RLC)