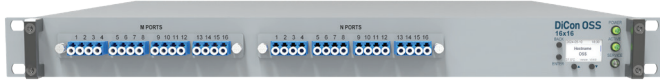


# MEMS 16X16 OPTICAL SWITCHING SYSTEM

## OSS Model, Single Mode Fiber, Network Grade



DiCon's **Optical Switching System (OSS)** 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 **OSS** 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 chassis is compact, taking minimal rack space. It is also lightweight and can be picked up easily for installation. The **OSS** comes with multiple control interfaces so authorized administrators can automate network management and set user permissions in a Software Defined Network (SDN). This product can be ordered in standard simplex or duplex configurations, and customized port arrangements are available upon request. Optical power monitors and attenuators can be added to each path as options.

### Key Features

- Market Leading Performance with Recognized Reliability
- Low Loss with High Stability & No Dithering Artifacts
- Compact, Lightweight, Easy to Transport
- Switches Fast & Consumes Low Power
- Operates Bi-Directionally & Works with Dark Fibers
- Supports Software Defined Networks

### Applications

- Optical Network Management
- Quantum Communications
- Data Center Interconnect
- AI (Artificial Intelligence) Networks
- LLM (Large Language Models) Machine Training
- Cyber Security & Monitoring
- Network Test Automation

## ORDERING INFORMATION

**OSS - N**  -  - **9** - **C** -   -  -

Grade	<b>N</b> Network
Configuration	<b>S16x16</b> Simplex 16x16 <b>SMxN</b> Simplex (M, N≤16) <b>D16</b> Duplex 16 Ports <b>DM</b> Duplex (M≤16)
Function	<b>S</b> Matrix Switch Only <b>MS</b> With Input Power Monitor <b>SN</b> With Output Power Monitor <b>MSN</b> With Both Power Monitors
Fiber Type	<b>9</b> 9/125 μm SMF <i>*Other fiber options available upon request</i>
Optimized Wavelength Range	<b>C</b> 1530-1625 nm
Chassis Height	<b>1U</b> 1U <b>2U</b> 2U <b>3U</b> 3U <i>*Contact Sales for assistance</i>
Power	<b>A1</b> AC 90-264V Single <b>D1</b> DC -48V Single <b>A2</b> AC 90-264V Redundant <b>D2</b> DC -48V Redundant
Connector Type	<b>LC</b> LC/UPC <b>LC/APC</b> LC/APC <b>HLC</b> High Density LC UPC <b>HLC/APC</b> High Density LC APC <b>M8</b> MTP/MPO-8 APC <b>M12</b> MTP/MPO-12 APC <i>*Other connector types available upon request</i>
Connector Location	<b>F</b> Front <b>R</b> Rear

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### OPTICAL SPECIFICATIONS

Wavelength Range	1260 to 1675 nm
Insertion Loss <sup>1</sup>	< 1.0 dB
Insertion Loss (with 1 OPM)	< 1.3 dB
Insertion Loss (with 2 OPM)	< 1.6 dB
Loss Repeatability <sup>2</sup>	+/- 0.03 dB
Connection Stability <sup>3</sup>	+/- 0.03 dB
PDL, C+L Band (1530-1625 nm)	< 0.1 dB
PDL, C+L Band with OPM	< 0.3 dB
WDL, C+L Band (1530-1625 nm)	< 0.3 dB
Crosstalk	< -60 dB
Data Latency	< 20 ns
Back Reflection	< -50 dB
Switching Time, All Channels	< 25 ms
Switch Lifetime	> 1 Billion Cycles
Input Power Range	Dark to +27 dBm
OPM Dynamic Range	-50 to +22 dBm
OPM Accuracy	+/-0.2 dB @ > -30 dBm +/-0.5 dB @ > -50 dBm

1. Measured at optimized  $\lambda$  (e.g. 1550 nm), 25°C, excluding connectors (Each pair of connectors will add extra 0.2 dB loss.)

2. Over 100 cycles

3. 1 Hz sampling rate for 15 min

### ELECTRICAL SPECIFICATIONS

Power Consumption	< 20W Steady State < 30W at Startup
Power Supply Options	Redundant Power Supply, 90-264 VAC or -48 VDC
Network Interface Card	RJ45 Dual Redundant Gigabit Ethernet
SDN & Automation Interfaces	REST API, NETCONF, SNMPv3, TL1, Web GUI, RS232

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	0 to 45°C, < 85% RH
Storage Temperature	-40 to 70°C, < 40% RH

### MECHANICAL SPECIFICATIONS

19" Chassis Depth	559 mm (22")
19" Chassis Height	1U (with LC)