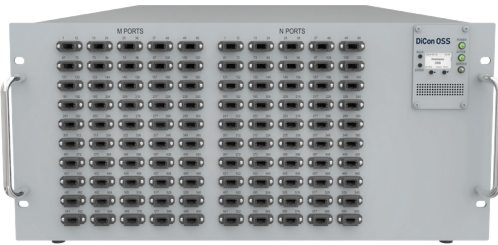


MEMS 600X600 OPTICAL SWITCHING SYSTEM

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 | Network |
| N | Network |
| Configuration | |
| S600x600 | Simplex 600x600 |
| SMxN | Simplex (M, N≤600) |
| D600 | Duplex 600 Ports |
| DM | Duplex (M≤600) |
| Function | |
| S | Matrix Switch Only |
| MS | With Input Power Monitor |
| SN | With Output Power Monitor |
| MSN | With Both Power Monitors |
| Fiber Type | |
| 9 | 9/125 μm SMF |
| | <i>*Other fiber options available upon request</i> |
| Optimized Wavelength Range | |
| C | 1530-1625 nm |
| Chassis Height | |
| 5U | 5U |
| 6U | 6U |
| 8U | 8U |
| | <i>*Contact Sales for assistance</i> |
| Power | |
| A1 | AC 90-264V Single |
| D1 | DC -48V Single |
| A2 | AC 90-264V Redundant |
| D2 | DC -48V Redundant |
| Connector Type | |
| LC | LC/UPC |
| LC/APC | LC/APC |
| HLC | High Density LC UPC |
| HLC/APC | High Density LC APC |
| M8 | MTP/MPO-8 APC |
| M12 | MTP/MPO-12 APC |
| | <i>*Other connector types available upon request</i> |
| Connector Location | |
| F | Front |
| R | Rear |

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OPTICAL SPECIFICATIONS

| | |
|-----------------------------------|--|
| Wavelength Range | 1260 to 1675 nm |
| Insertion Loss ¹ | < 1.5 dB |
| Insertion Loss (with 1 OPM) | < 1.9 dB |
| Insertion Loss (with 2 OPM) | < 2.3 dB |
| Loss Repeatability ² | +/- 0.03 dB |
| Connection Stability ³ | +/- 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 | < 15 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 @ > -30dBm +/-0.5 dB @ > -50dBm |

1. Measured at optimized λ (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 | < 100W Steady State < 110W 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 | 889 mm (35") |
| 19" Chassis Height | 5U (with MTP/MPO-8) |