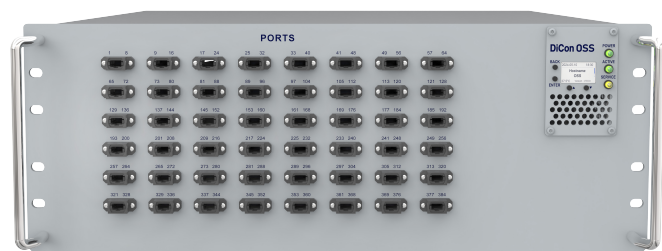


MEMS 384-PORT ANYPORT OPTICAL SWITCHING SYSTEM

OSS Model, Single Mode Fiber, Anyport-to-Anyport



The **DiCon Optical Switching System (OSS)** is a high-density, rack-mount, all-optical non-blocking cross-connect switch powered by DiCon’s proprietary **3D MEMS mirror technology**. Built on a versatile 384-Port **Anyport-to-Anyport (ATA)** architecture, any port can be dynamically routed to any of the remaining 383 ports—allowing users to seamlessly reconfigure system topologies (from a **1x383** switch to a **192x192** matrix) without manual recabling. Engineered without internal position sensors or feedback loops, the **OSS** delivers pristine optical signals with zero dithering artifacts, high repeat accuracy, and long-term connection stability even in the absence of an active optical signal.

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 is available with customized port arrangements 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 - - - - -

Grade	
N	Network
Configuration	
A384	Anyport 384 Ports
A#	Anyport (#<384)
Function	
S	Switch Only
SA	Switch & VOA
SB	Switch & Bidirectional OPM
SAB	Switch, VOA & Bidirectional OPM
Fiber Type	
9	9/125 μm SMF
*Other fiber options available upon request	
Test Wavelength	
O	1310 nm
C	1550 nm
L	1590 nm
Chassis Type	
5U	5U
6U	6U
8U	8U
*Please consult DiCon	
Chassis Depth	
17	17"
22	22"
30	30"
35	35"
40	40"
*Please consult DiCon **See "Mechanical Specifications"	
Power	
A1	AC 90-264V Single
D1	DC -48V Single
A2	AC 90-264V Redundant
D2	DC -48V Redundant
Bulkhead Connector Type	
LC	LC/UPC
LC/APC	LC/APC
RLC	LC/UPC on Removable Panel
RLC/APC	LC/APC on Removable Panel
HLC	High Density LC/UPC
HLC/APC	High Density LC/APC
M8F	MTP-8 Female APC
M8M	MTP-8 Male APC
M12F	MTP-12 Female APC
M12M	MTP-12 Male APC
M24F	MTP-24 Female APC
M24M	MTP-24 Male APC
*Other connector types are available upon request	
Connector Location	
F	Front
R	Rear

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OPTICAL SPECIFICATIONS¹

Test Wavelength	1260 to 1675 nm
Insertion Loss ²	2.1 dB max.
Insertion Loss with OPM ²	2.7 dB max.
Loss Repeatability ³	+/- 0.03 dB
Connection Stability ^{4,5}	+/- 0.03 dB
PDL ⁵	0.1 dB max.
PDL with OPM ⁵	0.3 dB max.
WDL ^{5,6}	0.3 dB max.
Crosstalk ⁵	-60 dB max.
Data Latency ⁵	15 ns max.
Back Reflection	-45 dB max.
Optical Transition Time ^{5,7}	25 ms max.
Switch Lifetime	1 Billion Cycles min.
Input Power Range	Dark to +27 dBm
OPM Dynamic Range	-50 to +22 dBm
OPM Relative Accuracy	+/-0.2 dB @ -30 dBm min. +/-0.5 dB @ -50 dBm min.
VOA Accuracy (Closed-Loop) ^{5,8,9}	+/-0.3 dB @ 20 dB Attn +/-0.5 dB @ 30 dB Attn
VOA Accuracy (Open-Loop) ^{8,10}	+/-1.5 dB @ 20 dB Attn +/-1.5 dB @ 30 dB Attn

1. Measured separately for each Test Wavelength at room temperature
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. Test Wavelength +/-20 nm
7. Optical transition time for all ports switching concurrently, not including command processing overhead
8. 98th percentile of optical connections; defined as the average +2 standard deviations
9. Requires Power Monitoring
10. Corresponds to accuracy using Constant Attenuation Mode. Both Constant Power Mode and Relative Attenuation Mode will have better accuracy due to Closed-Loop feedback

ELECTRICAL SPECIFICATIONS

Power Consumption	70W max. Steady State 100W max.at Startup
Power Supply Options	Redundant Power Supply, 100-240 VAC or -48 VDC
Network Interface Card	RJ45 Dual Redundant Gigabit Ethernet
SDN & Automation Interfaces	REST API, NETCONF, SNMPv3, TL1, Web GUI, RS232, gNMI, Telnet, SSH

*Power is measured with a redundant AC power supply and power monitoring. When using a redundant DC power supply, the total power consumption may increase by 5-10 W.

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") 559 mm (22") 762 mm (30") 889 mm (35") 1016 mm (40")
Chassis Height	4U (with HD LC)

*Please consult DiCon. Depends on connectors and options.

