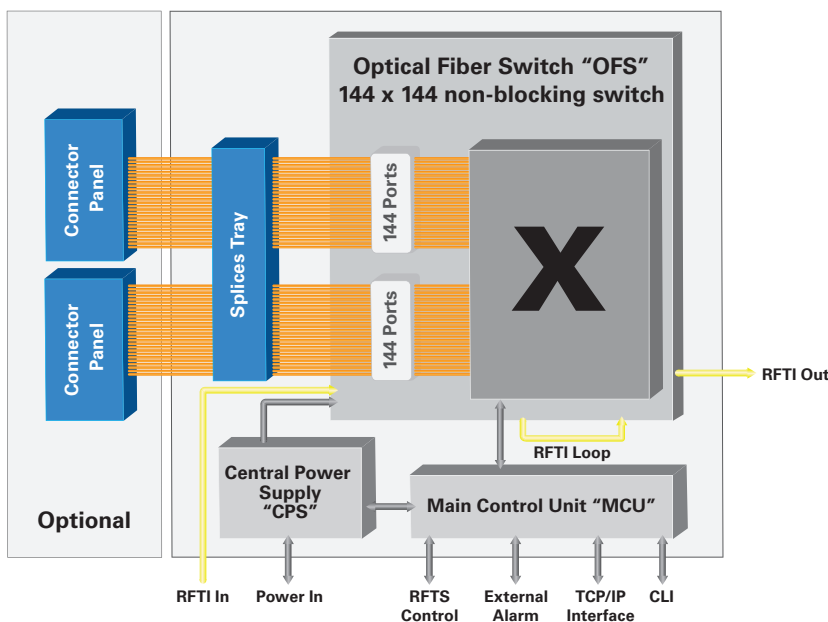


# XENOptics Advanced Remote Fiber Management Solutions

## REMOTE FIBER MANAGEMENT

The XENOptics Remote Smart Optical Switch (SOS) fiber management family breaks new ground by replacing manual Optical Distribution Frames (ODFs) and patch panels with remotely managed and fully automated systems. The foundation of the SOS is our proprietary patented 3D optical switching (3DOS) topology which delivers superb optical performance and complete traffic protection. Once the SOS is installed by splicing the system, all reconfiguration, monitoring, troubleshooting and maintenance operations are done remotely. This capability dramatically lowers the total cost of ownership of the fiber infrastructure and offers very rapid return on investment.

## SOS- FAMILY: PRODUCT ARCHITECTURE



## XO-288 FEATURES

- **Optical Switching:** A non-blocking of a 144x144 (XO-288) optical port fabric.
- **High optical performance:** Maintains uniform insertion loss of less than 0.5dB
- **Power-independent Traffic:** Proprietary latching mechanism consumes power only while switching, maintains traffic transmission in the event of power failure, and enables the unit to be repaired under operation without any traffic interruption.
- **High Density:** An optical switching capability is based on 3DOS technology provides unique fiber density that allow fiber port management of up to 1728 ports using one side of a single standard 19" rack or up to 3456 ports by using dual sides of the 19" rack (back to back).
- **Synchronized Database and Auto-Discovery:** Configurations are immediately reflected in the management systems and recovered automatically in case of failure.
- **RFTS:** Integrated Remote Fiber Testing System.
- **Carrier-Class System:** Meets applicable Telecordia and ITU recommendations. Highly reliable field-proven system units.
- **Flexible Fiber Termination:** Connectivity via splices and/or connectors.
- **Standard Software Interfaces:** SNMP/TL1 equipment interfaces.

## SOS-FAMILY INTERFACES

Panel Ports	Description
CLI (optional)	RS-232 interface for local or maintenance operation
Debugging Port	USB interface for R&D and technician use
TCP/IP Interface	Standard TL1/SNMP interfaces into XENOptics's Element Manager and Network Manager
RFTS In	An optical interface that connects an OTDR interface to the matrix in order to scan and monitor any fiber is connected to the system
RFTS Out	An optical interface that connects the OTDR signal to the adjacent matrix's system in order to scan and monitor any fiber is connected to the adjacent system
RFTS Control	100BT OTDR control interface
Power In	110 / 220 Volt AC interface



## MAIN COMPONENTS

- **Optical Fiber Switch:** The OFS offers breakthrough functionality as compared to manual patch cords in legacy ODFs by enabling remote, non-blocking switching capabilities. Unlike other solutions available on the market, XENOptics's OFS-288 matrix features three main advantages:
  - **Low Cost:** The system is using standard optical components that are available in the market. It reduced the product cost to a level of direct competition with the manual systems.
  - **Phenomenal Density:** It is achieved by the unique 3D-OS patented technology that saves space to be able to manage over 3000 fibers in one rack.
  - **High Reliability:** The switching technology is based on standard highest performance components from the best manufacturers are available in the optical market.

The OFS optical switching technology is based on proprietary patented 3D structure robotic system that combines an active switching system and a passive latching mechanism, enabling automated provisioning and configuration while ensuring traffic flow in case of power loss or field replacement operation of any active unit or module.

- **Main Control Unit:** The MCU controls all switching elements, monitors real-time status of cross-connections and network performance, and transmits data and alarms to the central network management system. In addition, the MCU provides SNMP/TL1 interfaces, which connect to existing operational support systems (OSS) and enable the SOS system to be controlled, managed, and maintained remotely.

## MANAGEMENT

**Local Terminal Management:** The Local Terminal Management provides a simple interface to a dumb terminal with a command line interface, and is primarily used in installation and maintenance modes by technicians during unit servicing.

**Element Management System (EMS):** The remote EMS offers an overall system view, topology connectivity and provisioning of the overall fiber infrastructure, system by system, interfaced through the equipment SNMP/TL1 interface.

**Network Management System:** Provides full network view and supports end-to-end operations using SNMP/TL1 interfaces.

## APPLICATIONS

- Data Center high density switching layer
- Server farm Storage safety (no stuff entry)
- Metro connectivity layer
- Remote sites of Long Haul networks
- RFTS: Remote Fibers Testing System
- Dynamic Enterprise Offices Management
- FTTH in the US public Telecom network
- FTTH in Municipality & Public EU Telecom Networks
- Large Metro Central Office Applications
- Internal Central Office connectivity
- Carrier Hotels
- Open platform of Municipality applications
- Enterprise and Data Centers

## SPECIFICATIONS

Parameter	Unit	Min	Typical	Max
OPTICAL CHARACTERISTICS				
Operating Range	nm	1260		1630
Insertion Loss	dB		0.25	0.5
Insertion Loss Repeatability	dB	0.1	0.06	
Crosstalk	dB			-70
Return Loss (UPC/APC)	dB			-55 / -65
PDL	dB			0.15
PMD	psec			0.1
Input Power	dBm	-32		25
Switching Time	Sec		30	40
POWER REQUIREMENTS				
Input Voltage	VDC	-40		-75
Power Consumption	W	0		5
Switching Operation	W			50
ENVIRONMENTAL CONDITIONS				
Temperature Range	0C	-5		+45
Temperature Range (street cabinet)	0C	-40		+65
Temperature Range (Transport)	0C	-40		+70
Relative Humidity	%	10		95
RELIABILITY				
Service Life Time	Years	20		

## DIMENSIONS

XO-288	Height	Width	Depth
Splices configuration	300 mm	445 mm	450 mm
Connectors configuration	300 mm	445 mm	480 mm
19' 300mm rack installation	450 mm	445 mm	300 mm
Weight	19.8 Kg		

## APPLICABLE STANDARDS

Environmental	ETSI 300019 CLASS 3.2
EMC	EN 55022 CLASS B, IEC 1000-4-2-6
Safety	EN 60950; IEC 825-1; IEC 825-2, GR-1089-CORE
ESD	IEC-61000-4-2
EU Environmental	ETS-300 019
US Environmental	NEBS 3, GR-63-CORE



TO LEARN MORE ABOUT THE XO-288, PLEASE VISIT:  
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