

EOS-4000 SERIES

Electro-Optical Routing Switcher for 4.25 Gbps Fiber Optic Video Transport



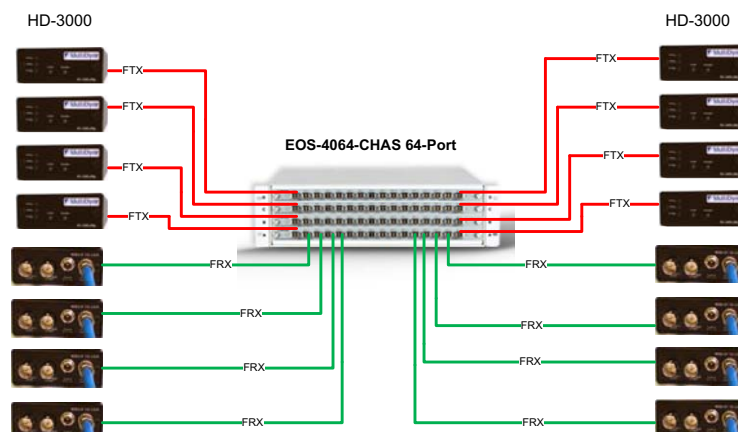
EOS-4000 in 16, 32, 64, 144 & 288 Chassis

SUMMARY

- Routing Switch for Digital Optical Signals.
- Ideal for switching DVI Single & Dual Link, HDMI, RGB-HV, Digital Video, SDI, HD-SDI, 3G HD-SDI and all future standards up to 10 Gbps.
- Fully SMPTE Compliant when using SMPTE SFP optics.
- Supports SMPTE 424M 1080p 3 Gbps HD-SDI; SMPTE 292M 1.485 Gbps and SMPTE 259M 270 Mbps standards.
- Full Matrix, Non-blocking Routing Switcher.
- Point to Multi-Point or Multicast; One Wavelength; One Direction
- Support for AMX and Crestron control via RS232 or Ethernet IP
- Bandwidth through SFP ports of **4.25 Gbps**.
- Scalable Chassis of 16 x 16, 32 x 32, 64 x 64, 144 x 144 and 288 X 288.
- Scalable **10 Gbps XFP I/O Blade for future migration to 10 Gbps Video transport**. Includes 4 XFP ports per blade.
- Scalable I/O blades in increments of 16 ports.
- Hot-swappable I/O Blades, Power supplies, Network management module, XFP & SFP transceivers
- Scalable SFP I/O ports from 1-16 per I/O blade.
- WebX, an embedded web GUI that controls switches remotely from a web browser over a network. Utilizes SSL for security.
- Redundant power supplies

APPLICATION DIAGRAM

Typical EOS-4000 Configuration



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INTRODUCTION

The EOS-4000 Series of electro-optical routing switchers are a versatile, multipurpose, non-blocking, transparent switch that provides high-speed switching between ports with minimal effect on overall network latency. The EOS-4000 series is capable of switching digital optical signals of up to 4.25Gbps via SFP and up to 10 Gbps via XFP. Fiber Optic transport systems from MultiDyne today support transport rates up to 4.25Gbps. There is an engineering road map for fiber transport systems that will support 10Gbps in the future. The EOS-4000 is scalable in size and scalable in bandwidth to support future 10 Gbps technology in the future.

The EOS-4000 is designed to accept a 4.25 Gbps modular IO interface blades with up to 16 SFP Small Form-Factor Pluggable transceiver modules per blade. Each SFP transceiver module provides the physical ports for one input-output pair. Different types of SFP transceivers support a variety of network configurations:

- 4.25, 2.5, 2.125, 1.25 and 1.0625 Gb/s
- 850, 1300 and 1550nm optical media
- CWDM coarse wave-division multiplexing optics supported
- CDWDM dense wave-division multiplexing optics supported

The EOS-4000 is designed to accept a 10 Gbps modular IO interface blades with up to 9 XFP 10G Small Form-Factor Pluggable transceiver modules per blade. Each SFP transceiver module provides the physical ports for one input-output pair. Different types of XFP transceivers support a variety of network configurations:

- 10, 4.25, 2.5, 2.125, 1.25 and 1.0625 Gb/s
- 850, 1300 and 1550nm optical media
- CWDM coarse wave-division multiplexing optics supported
- CDWDM dense wave-division multiplexing optics supported

The EOS-4000 supports hot-swappable power supplies, fans and port cards to allow users to quickly replace parts without affecting system investigate performance. The EOS-4000 controlling software and non-volatile configuration data resides on the module.

FIBER OPTIC VIDEO SWITCHING

Today's signal management demands higher bandwidths and longer transport distances. With SDI, HD-SDI, 3G HD-SDI, DVI Single and Dual Link the transport data rates can range from 270 Mbps to 10 Gbps. These high bit rates limit the transport distance to as little as 10 meters in some applications. Fiber optics is the only solutions for high bandwidth, long distance video transport.

Once we have all our video signals in the optical domain, optical switching is the next logical step. Signal integrity, security and quality are maintains by remaining in the optical domain. Electrical routing switcher for high bandwidth signals, such as DVI Dual Link, do not exist on the market in any scalable size.

The EOS-4000 Series of Electro-optical routings switchers are ideal fro all your routing switcher needs. By switching optically, one routing switcher can support all your your video formats. There is no need for a separate switcher for your many different formats of video, HD and audio. One optical switcher can switch all your signals. As long as the signal is digital and optical, the EOS-4000 can switch it.

CONTROL CAPABILITIES

The EOS4000 configuration commands are sent via a 10/100 Ethernet or RS232 connection using a simple intuitive command set. With regard to network testing, some of the most significant capabilities are:



EOS-4144 144 by 144 Port Switch



SFP Interface IO Blade for EOS Series with 16 SFP Ports at 4.25 Gbps



XFP Interface IO Blade for EOS Series with 4 XFP Ports at 10 Gbps



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SPECIFICATIONS

	EOS Series Fiber Optic Switcher 72, 144 and 288 Ports with Scalable Modular Chassis
EOS-4016-CHAS	Modular, 16-port, 1 Blade, Electro-Optical Switcher Chassis 4.25Gbps with two redundant 90-240VAC power supply. Includes Standard controller card with dual 10/100/1000 management ports WebX Software Command Line Interface (Version 3) • SSL and SSH encryption Redundant Power Supplies 1 Rack-unit (Requires 1 EOS-16PORTSFP)
EOS-4032-CHAS	Modular, 32-port, 2 Blade, Electro-Optical Switcher Chassis 4.25Gbps with two redundant 90-240VAC power supply. Includes Standard controller card with dual 10/100/1000 management ports WebX Software Command Line Interface (Version 3) • SSL and SSH encryption Redundant Power Supplies 2 Rack-units (Requires up to 2 EOS-16PORTSFP)
EOS-4064-CHAS	Modular, 64-port, 4 Blade, Electro-Optical Switcher Chassis 4.25Gbps with two redundant Hot Swappable 90-240VAC power supply. Includes Standard controller card with dual 10/100/1000 management ports WebX Software Command Line Interface (Version 3) • SSL and SSH encryption Redundant Power Supplies 3 Rack-units (Requires up to 4 EOS-16PORTSFP)
EOS-4144-CHAS	Modular, 144-port, 9 Blade, Electro-Optical Switcher Chassis 4.25Gbps with two redundant Hot Swappable 90-240VAC power supply. Includes Standard controller card with dual 10/100/1000 management ports WebX Software Command Line Interface (Version 3) • SSL and SSH encryption Redundant Power Supplies 6 Rack-units (Requires up to 9 EOS-16PORTSFP)
EOS-4288-CHAS	Modular, 288-port, 18 Blade, Electro-Optical Switcher Chassis 4.25Gbps with two redundant Hot Swappable 90-240VAC power supply. Includes Standard controller card with dual 10/100/1000 management ports WebX Software Command Line Interface (Version 3) • SSL and SSH encryption Redundant Power Supplies 11 Rack-units. (Requires up to 18 EOS-16PORTSFP)
	EOS Series SFP I/O Port Blade and Network Management Module
EOS-16PORTSFP	16 Port, SFP Interface, Multi-rate Blade for EOS Series Chassis with 16-SFP Ports, Hot swappable (Requires up to 16 SFP-XXXX-XX-XX-XXXX as listed below) (SDI, HD-SDI and 3G HD-SDI switchers require either SFP-1310-SM-SR-1.5G or SFP-1310-SM-SR-3G)
EOS-SNMP-V3	SNMP V3 (Gets/Sets/Traps) Option - per Switch for EOS Series
	Telecom 4G SFP Small Form Pluggable Optical Transceivers for the EOS Series
SFP-850-MM-SR-4G	Small Form Pluggable (SFP) 4Gbps, Telecom, 850nm Multimode Optical Transceivers, Short Range, 200 meters, two LC Connectors
SFP-1310-SM-SR-4G	Small Form Pluggable (SFP) 4Gbps, Telecom, 1310nm Singlemode Optical Transceivers, Short Range, 2KM, two LC Connectors
	Telecom 2.5G SFP Small Form Pluggable Optical Transceivers for the EOS Series
SFP-1310-SM-SR-2.5G	Small Form Pluggable (SFP) 2.5Gbps, Telecom, OC-48, 1310nm Singlemode Optical Transceivers, Short Range, 2KM, two LC Connectors
SFP-1310-SM-IR-2.5G	Small Form Pluggable (SFP) 2.5Gbps, Telecom, OC-48, 1310nm Singlemode Optical Transceivers, Short Range, 15KM, two LC Connectors
SFP-1310-SM-LR-2.5G	Small Form Pluggable (SFP) 2.5Gbps, Telecom, OC-48, 1310nm Singlemode Optical Transceivers, Short Range, 40KM, two LC Connectors
SFP-1550-SM-IR-2.5G	Small Form Pluggable (SFP) 2.5Gbps, Telecom, OC-48, 1550nm Singlemode Optical Transceivers, Short Range, 40KM, two LC Connectors
SFP-1550-SM-LR-2.5G	Small Form Pluggable (SFP) 2.5Gbps, Telecom, OC-48, 1550nm Singlemode Optical Transceivers, Short Range, 80KM, two LC Connectors
	SMPTE 1.5G or 3G SFP Small Form Pluggable SDI, HD & 3G HD Optical Transceivers for the EOS Series
SFP-1310-SM-SR-1.5G	Small Form Pluggable (SFP) 1.5Gbps, SMPTE, 1310nm Singlemode Optical Transceivers, Optimized for SDI, HD-SDI, Short Range, 24KM, two LC Connectors
SFP-1310-SM-SR-3G	Small Form Pluggable (SFP) 1.5Gbps, SMPTE, 1310nm Singlemode Optical Transceivers, Optimized for SDI, HD-SDI, Short Range, 24KM, two LC Connectors
	SFP Small Form Pluggable BNC SDI and HD-SDI Transcoder for the EOS Series
SFP-BNC-HSDI-TX	Unidirectional BNC Digital Video SFP, 8B/10B Encoder, Dual Rate SDI (270Mbps) and HD-SDI (1.485 Gbps) TX Only. SMPTE standard I/O. Non-SMPTE fiber transport. One BNC input connector.
SFP-BNC-HSDI-RX	Unidirectional BNC Digital Video SFP, 8B/10B Decoder, Dual Rate SDI (270Mbps) and HD-SDI (1.485 Gbps) RX Only. SMPTE standard I/O. Non-SMPTE fiber transport. One BNC input connector.



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