OPTICAL SYSTEMS DESIGN

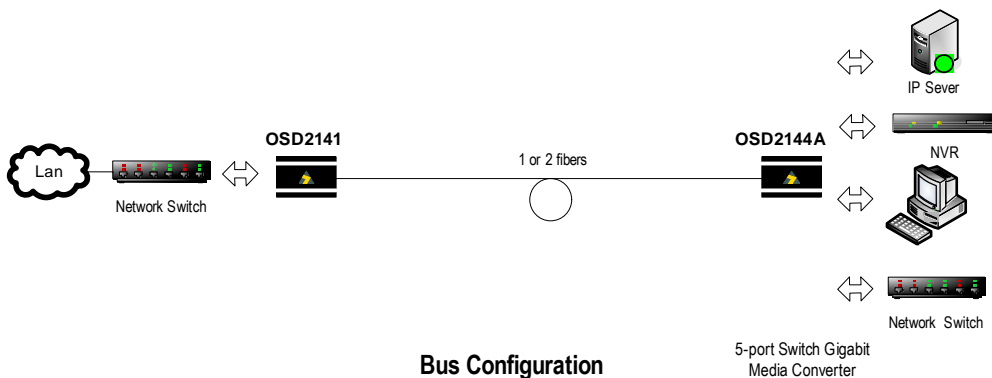## OSD2144A 5 PORT UNMANAGED GIGABIT ETHERNET SWITCH

APPLICATIONS

▲ Any network utilising a mix of copper and fiber

▲ Industrial IP communications
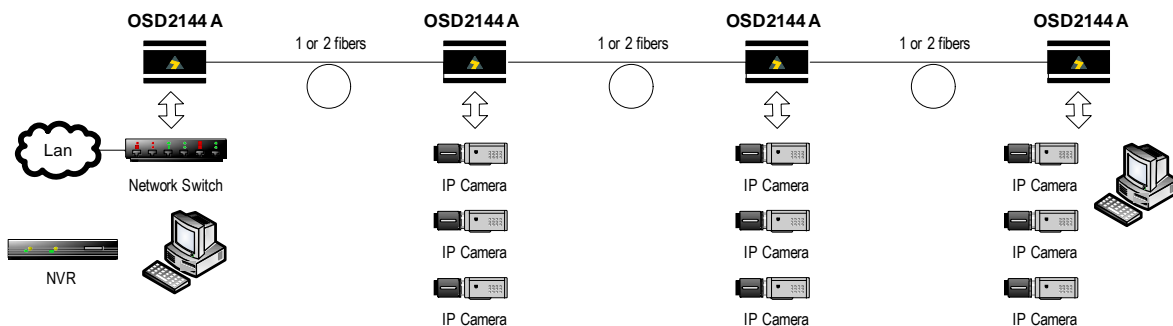
▲ Gigabit backbone networks

FEATURES AND BENEFITS

▲ Complies with IEEE802.3i/802.3u/802.3ab 10/100/1000Base-T, 802.3u 100Base-Fx, IEEE802.3z 1000Base-Lx/Sx standards.

▲ Has a total of five ports: two fixed copper ports for 10/100/1000Base-T and three SFP ports which may be either copper or fiber.

▲ Supports network traffic of 1000Mbps.

▲ Can be used with either singlemode or multimode fiber over a variety of link budgets

▲ Available for operation over 1 or 2 fibers.

▲ Automatic MDI/MDI-X: no need for crossover cables

▲ Auto-Negotiation

▲ Powered by non critical 12VDC or 24VAC supplies

▲ Operates over the temperature range of -20 to +75ºC

▲ SFP modules sold separately

▲ Dual Power Supply Inputs

TYPICAL SYSTEM DESIGN

Point-to-Point Configuration

Bus Configuration

ORDERING INFORMATION

OSD2144A	Singlemode or multimode 5 Port Switch Unmanaged Ethernet Switch
Option M	Standalone module version
SFP Module	See OSD SFP datasheet #102100002

SPECIFICATIONS

ELECTRICAL

Electrical Data Interface	IEEE802.3i 10Base-T IEEE802.3u 100Base-T IEEE802.3ab 1000Base-T
Electrical Data Connector	RJ45 for fixed copper ports (Ports 1 & 2) and for copper SFP modules (Ports 3, 4 & 5)
Data rates	10, 100, 1000Mbps for copper ports 100, 1000Mbps (dip-switch selectable) for fiber SFP modules (Ports 3, 4 & 5)
Operating Modes	Half or full duplex for 10/100 Full duplex for 1000 Pause frames based flow control
Ports 3, 4 and 5 SFP Options	1000Base-Lx/Sx, 100Base-Fx, 10/100/1000Base-T

OPTICAL

Optical Data Interface	IEEE802.3z 1000Base-Lx/Sx or IEEE802.3u 100Base-Fx
Transmitter Wavelength	1310 $\pm$ 30nm for 1000Base-Lx or 100Base-Fx 850 $\pm$ 40nm for 1000Base-Sx
Transmit Optical Power	-10 to -4dBm (-5 and +2dBm @ 1310 and 1550nm are optional)
Receiver Sensitivity	<-21dBm
Standard Optical Link Budget	>11dB: >800m on multimode fiber @ 1310nm (Fiber bandwidth limited) >20km on singlemode fiber @ 1310nm >40km on singlemode fiber @ 1550nm
Optional Optical Link Budget	>23dB: >100km on singlemode with optional 1550nm devices
Various SFP Options Possible	Short haul, long haul, single fiber operation, etc. Please consult OSD datasheet #1002100002 or contact OSD
Multimode Fiber Considerations	Several types of multimode fiber are available, each optimised for a specific wavelength and bandwidth. Contact OSD for advice on the suitability of existing fibers to this product.

PHYSICAL

Operating Temperature Range	-20 to +75ºC
Relative Humidity	0 to 95% non-condensing
Power Requirements	+8V to 35V DC or 22 to 28VAC @ 10VA (with 3 SFPs loaded)
Power Connector	2 way terminal block
Indicators	1x Power 2x Copper Speed/Activity/Link on 2x RJ45s 2x Copper D uplex on 2x RJ45s 3x SFP Speed/Activity/Link for copper or fiber
Dimensions of Module (mm)	114W x 173D x 31H
Weight of Module (kg)	0.5
Dimensions of Card (mm)	25W x 208D x 100H
Weight of Card (kg)	0.3
Chassis Current Consumption (CCC)	0.80 Amp when fully optioned

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