

**OSD2166M 10/100/1000Base-T to 1000Base-Sx/Lx
ETHERNET MEDIA CONVERTER MODULE**

APPLICATIONS

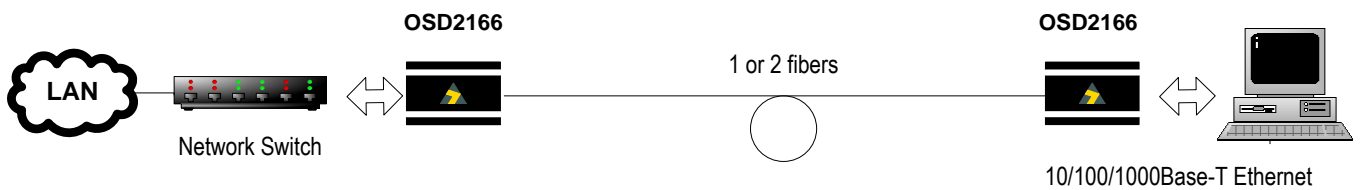
- ▲ Any network utilising a mix of copper and fiber
- ▲ Secure, noise immune extensions of gigabit Ethernet backbone networks
- ▲ Commercial IP communications



FEATURES AND BENEFITS

- ▲ Complies with IEEE802.3i/802.3u/802.3ab 10/100/1000BaseT, IEEE802.3z 1000BaseSx/Lx standards
- ▲ Supports network traffic of 1000Mbps
- ▲ Has one fixed 10/100/1000BaseT copper port and one fixed 1000BaseSx or 1000BaseLx optical port
- ▲ Automatic MDIX: no need for crossover cables
- ▲ Complies with the IEEE802.3az Energy-Efficient Ethernet standard
- ▲ Supports jumbo frames of up to 10KB
- ▲ Multimode or singlemode fiber operation
- ▲ Available for operation over 2 fibers, 1-fiber operation is optional
- ▲ Powered by a non-critical 12VDC power supply
- ▲ Operates over the temperature range of -10 to +55°C
- ▲ Optionally available to operate over the temperature range -20 to +75°C

TYPICAL SYSTEM DESIGN



ORDERING INFORMATION

- OSD2166M/Sx 10/100/1000BaseT to 1000BaseSx Media Converter Module for multimode fiber
- OSD2166M/Lx 10/100/1000BaseT to 1000BaseLx Media Converter Module for singlemode fiber
- Option E Extended temperature version



SPECIFICATIONS

Electrical Data Interface	IEEE802.3i/802.3u/802.3ab, 10/100/1000Base-T Ethernet
Electrical Data Rate	10, 100, 1000Mbps with energy detect, auto negotiate, auto MDIX
Optical Data Interface	IEEE802.3z 1000Base-Sx/Lx
Optical Data Rate	1000Mbps
Copper Operating Mode	Half or full duplex for 10/100 Full duplex for 1000 Pause frames for 1000Mbps flow control
Copper Data Connector	RJ45
Optical Connectors	SC
Large Frame Support	10KB
Transmitter Wavelength	850nm (OSD2166M/Sx) 1310nm (OSD2166M/Lx)
Transmit Optical Power	-9 to -3dBm into 50/125um multimode fiber @850nm(OM2, OM3, OM4)(OSD2166M/Sx) -6 to -0dBm into 62.5/125um multimode fiber @850nm (OM1) (OSD2166M/Sx) -9 to -3dBm into 9/125um singlemode fiber @1310nm (OSD2166M/Lx)
Receiver Sensitivity	<-17dBm @850nm <-22dBm @1310nm
Receiver Saturation	>0dBm
Multimode Fiber Link Budget	>8dB: > 550m on OM2 or OM3 multimode limited by fiber bandwidth (OSD2166M/Sx)
Singlemode Fiber Link Budget	>13dB > 30km (OSD2166M/Lx)

PHYSICAL

Operating Temperature Range	-10°C to +55°C
Relative Humidity	0 to 95% non-condensing
Power Requirements	8 to 35VDC @ 4W
Power Connector	OSD2166M: Male jack suitable for standard 2.1mm/5.5mm power plugs such as Switchcraft S761K or equivalent OSD2166ME: 2-way terminal block
Indicators	TP activity TP link speed Fiber link OK Fiber link activity Power
Dimensions of Module (mm)	60W x 94D x 26H
Weight of Module (kg)	0.3
Mean Time Between Failures	>420,000 hours at 25°C, Ground Benign Environment per MIL-HDBK-217F