NSM-200G-SFP

1000Base-T to 1000Base-X SFP Media Converter

NSM-200SX/SX2/LX

1000Base-T to 1000Base-SX/LX Fiber Media Converter



ICP DAS's line of feature rich 10/100/1000 SFP Media Converters transparently connects copper to SFP for multi-mode or single-mode fiber. Our 10/100/1000 Ethernet to Fiber Converters provide an economical path to extend the distance of an existing network, the life of non-fiber based equipment, or the distance between two devices. The pluggable fiber optics port allows for flexible network configurations using SFP transceivers supplied by ICP DAS or other manufacturers of MSA (Multi-source Agreement) compliant SFPs.

Gigabit Media Converters are also available with support for LFP (Link Fault Pass-through) feature.

Features:

- Provides 1 x 1000 Mbps fiber port with SC type connector for 1000 Base-SX/LX device
- Provides Link Fault Pass-through (LFP)
- Supports 10 KB jumbo frames
- Pluggable SFP transceiver port for NSM-200G-SFP
- Supports Dual +12 ~ 48 VDC power input and 1 relay output
- Supports operating temperatures from -30 ~ +75°C
- DIN-Rail, Wall Mounting (optional)

Specifications:

Models	**NSM-200SX**	**NSM-200SX2**	**NSM-200LX**	**NSM-200G-SFP**
Technology				
Standards	IEEE 802.3 for 10Base-T; IEEE 802.3u for 100Base-TX; IEEE 802.3ab for 1000Base-T IEEE 802.3x for Flow Control Energy Efficient Ethernet (EEE) as per 802.3az; this provides power savings during idle network activity			
Processing Type	Store & forward, wire speed switching			
MAC Addresses	8K			
Memory Bandwidth	10 Gbps			
Frame buffer memory	1 Mbit			
Jumbo Frames	10K for Speed 1000M			
Interface				
RJ-45 Ports	10/100/1000 BaseT(X), 10/100BaseT(X) auto negotiation speed, full/half duplex mode, and auto MDI/MDI-X connection			
Fiber Port	Multi-mode:0.55 Km (50/125 μm)	Multi-mode:2 Km (50/125 μm)	Single-mode:10 km (10/125 μm)	1000BaseSFP slot/100BaseSFP slot

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Wavelength	850 nm	1310 nm	1310 nm	--
Min. TX Output	-9.5 dBm	-9 dBm	-9.4 dBm	--
Max. TX Output	-4 dBm	-1 dBm	-3 dBm	--
Max. RX Sensitivity	-17 dBm	-19 dBm	-20 dBm	--
Min. RX Overload	-3 dBm	-1 dBm	-3 dBm	--
LED Indicators	PWR1, PWR2, Power fail, 10/100M, 1000M, Link/Act			
Ethernet Isolation	1500 Vrms 1 minute			
DIP Switch	100BaseSFP/1000BaseSFP and LFP setting			
Power Input				
Redundant Input Range	+12 ~ +48 VDC.			
Power Consumption	0.1 A @ 24 VDC			
Alarm Contact	One relay output with current carrying capacity of 1A @ 30 VDC			
Protection	Power reverse polarity protection			
Connector	6-Pin Removable Terminal Block (Power & Relay)			
Mechanical				
Chassis	Metal with an IP30 ingress protection rating			
Dimensions (W x L x H)	34 mm x 111 mm x 121 mm			
Installation	DIN-Rail or Wall Mounting (with optional kit)			
Environmental				
Operating Temperature	-40 °C ~ + 75 °C (-40° F to 167° F)			
Storage Temperature	-40 °C ~ + 85 °C (-40 F to 185° F)			
Ambient Relative Humidity	10 ~ 90% RH, non-condensing			

Getting to know your NSM-200 series

Package Contents:

· NSM-200G-SFP or NSM-200SX or NSM-200SX2 or NSM-200LX
· DIN-Rail mounting (pre-installed on the unit)
· This manual

Note – optional wall mounting kits may be ordered

LED Indicator Functions:

LED	Color	Description
Ethernet Port	Green On	Link/Act to 1000 Mbps
	Yellow On	Link/Act to 10/100 Mbps
Fiber Port	Green On	Link/Act to 1000 Mbps
	Yellow On	Link/Act to 10/100 Mbps
PWR1	Green On	This yellow LED is turned on when power is applied to the PWR1 input
PWR2	Yellow On	This yellow LED is turned on when power is applied to the PWR2 input
Power fail	Red On	Power is not being supplied to power input PWR1 and PWR2
	Red Off	Power is being supplied to power input PWR1 and PWR2

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Redundant Power Input:

Both power inputs can be connected simultaneously to live DC power sources. If one power source fails, the other live source will act as a backup, and automatically supplies all of NSM-200 series power needs.

External power supply is connected using the removable terminal block:
PWR (Power) : Power input (+12 ~ +48 VDC) and should be connected to the power supply (+)
P.GND**:** Ground and should be connected to the power supply (-)

SW1 DIP Switch Settings:

DIP Switch	Setting	Description
SFP Speed (NSM-200G-SFP only)	ON	100BaseSFP
	OFF	1000BaseSFP (default)
LFP	ON	Enable
	OFF	Disable (default)

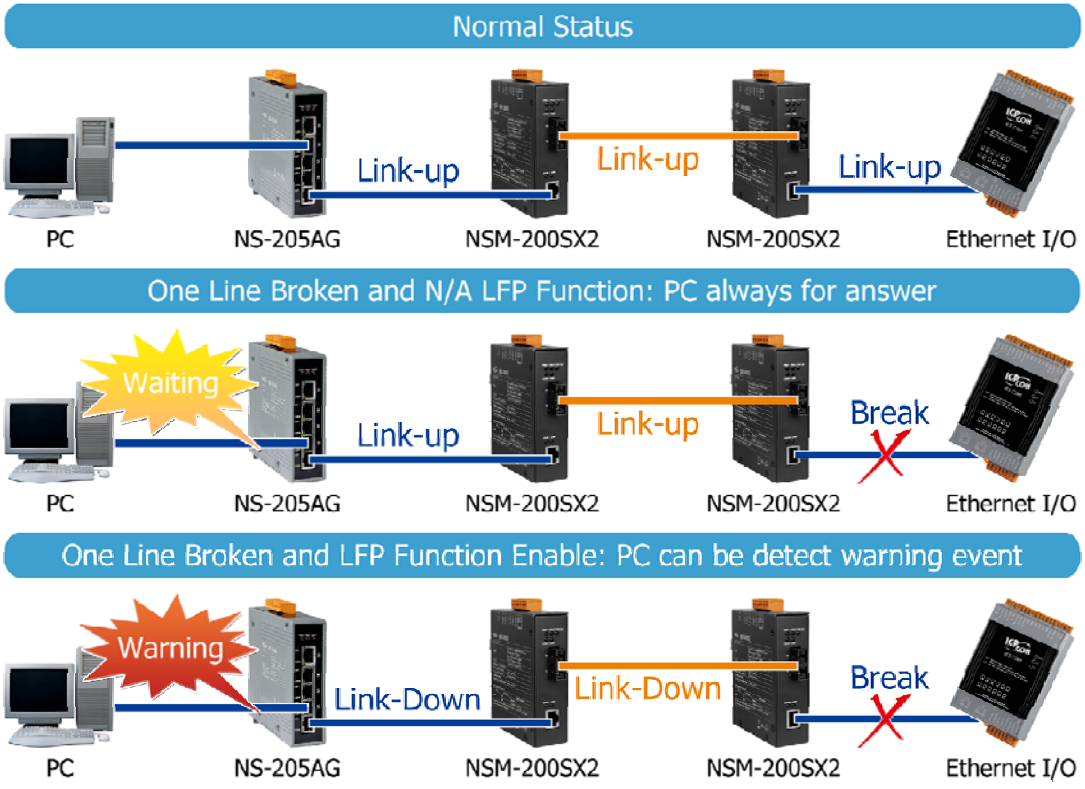
To actively update DIP switch settings, power off and then power on the NSM-200 series.

LFP (Link Fault Pass-through) function:

The LFP (link fault pass through) means the link fault on the one side (local side) media converter will be passed to the media converter on the other side (remote side). For example, the media converter on side A (local side) has the Ethernet link loss, the media converter will disconnect the link of transmit on fiber. The media converter on the side B (remote side) will know there is the linkage error and also disconnect it Ethernet link.

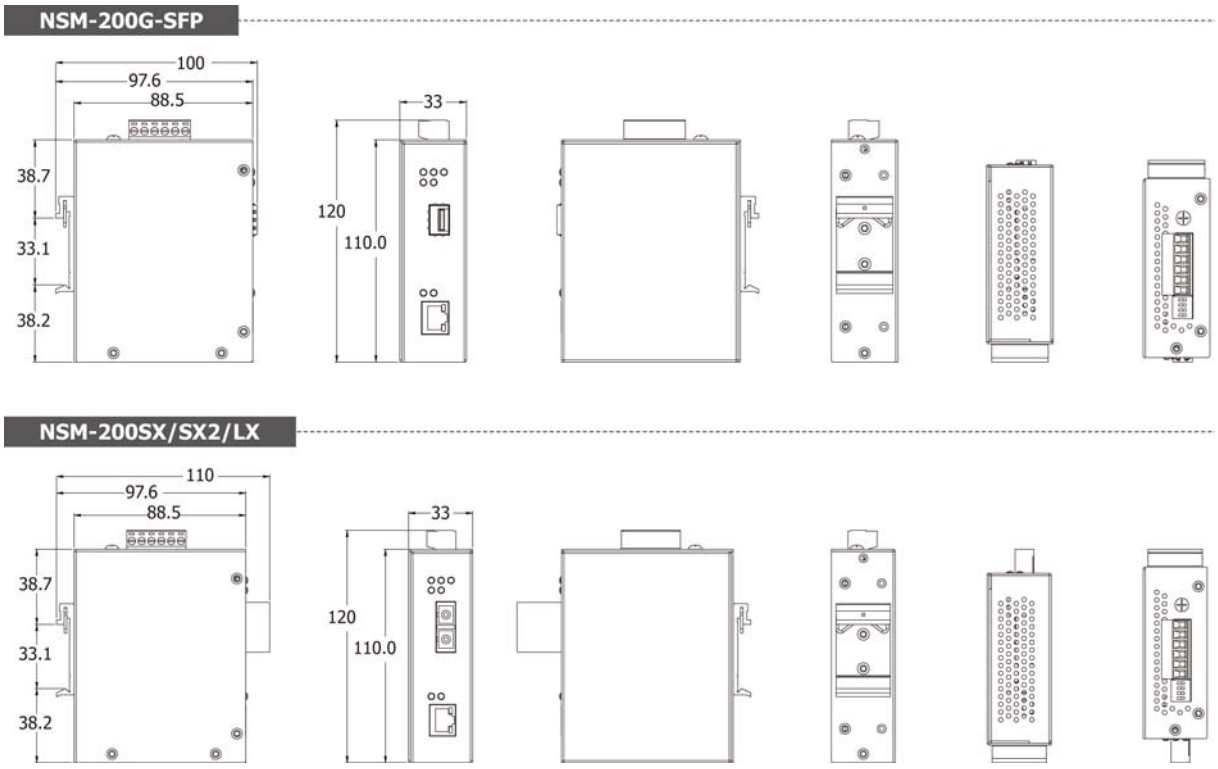
The LFP function can immediately alarm network administrators the problem of the link media and provide efficient solution to monitor the network, which can minimize the loss caused by the link problem.

ICP DAS's LFP fiber media converter has a DIP switch to enable or disable the LFP (link fault pass through) function.



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Dimensions (unit = mm):



Power Supply Accessories:

DR-120-48	48 V/2.5 A, 120 W Single Output Industrial DIN Rail Power Supply
MDR-60-48	48 V/1.25 A, 60 W Single Output Industrial DIN Rail Power Supply
MDR-20-24	24 V/1 A, 24 W Single Output Industrial DIN Rail Power Supply
GPSU06U-6	24V/0.25A, 6 W Power Supply

SFP Transceiver Accessories:

SFP-1G85M-SX	Multi-mode 850 nm, 0.5 km SFP module
SFP-1G13M-SX2	Multi-mode 1310 nm, 2 km SFP module
SFP-1G13S-LX	Single-mode 1310 nm, 10 km SFP module
SFP-1G13S-LX20	Single-mode 1310 nm, 20 km SFP module
SFP-1G13S-LHX	Single-mode 1310 nm, 40 km SFP module
SFP-1G15S-XD	Single-mode 1550 nm, 60 km SFP module



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