

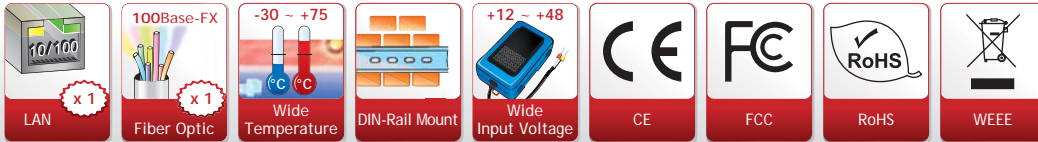
Media Converters

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NS-200AFC-T/NS-200AFCS-T/NS-200AFCS-60T

NS-200AFT-T



Features ▶▶▶

- Automatic MDI/MDI-X crossover for plug-and-play
- Supports both 10/100 Mbps speed auto negotiation
- Store-and-forward architecture
- Full duplex IEEE 802.3x and half duplex backpressure flow control
- 1.4 Gbps high performance memory bandwidth
- Frame buffer memory: 256 Kbit
- 1024 MAC addresses
- Supports +10 V_{DC} ~ +30 V_{DC} Reverse Polarity Protection
- Supports operating temperatures from -30 °C ~ +75 °C
- Slim packaging fits on your DIN-Rail Mounting

Introduction

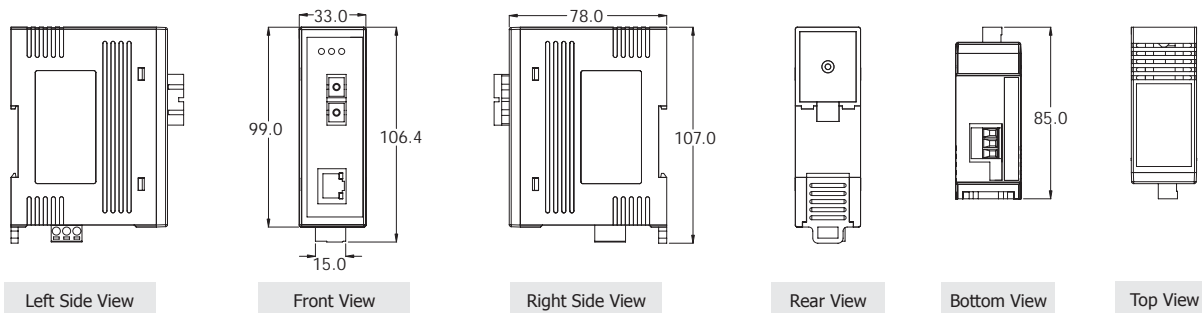
The NS-200AF series is a Ethernet (10/100 Base-TX) to Media (100 Base-FX) converter. The Ethernet supports 10/100M auto negotiation feature and auto MDI/MDI-X function. NS-200AF can work normally from -30 °C ~ +75 °C and accepts a wide voltage range from +12 V_{DC} ~ +48 V_{DC}.

Specifications

Models	NS-200AFC-T	NS-200AFT-T	NS-200AFCS-T	NS-200AFCS-60T
Technology				
Standards	IEEE 802.3, 802.3u, 802.3x			
Processing Type	Store & forward, wire speed switching			
MAC Addresses	1024			
Memory Bandwidth	1.4 Gbps			
Frame Buffer Memory	256 Kbit			
Flow Control	IEEE 802.3x flow control, back pressure flow control			
Interface				
RJ-45 Port	10/100 Base-TX auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection			
Fiber Port	100 Based-FX			
LED Indicators	10/100M, Link/Act, Full duplex/Half duplex (Fiber Port)			
Ethernet Isolation	1500 V _{rms} 1 minute			

Models		NS-200AFC-T	NS-200AFT-T	NS-200AFCS-T	NS-200AFCS-60T
Multi-mode	Multi-mode Fiber Cables	50/125, 62.5/125 or 100/140 μm		-	
	Distance	2 km, (62.5/125 μm recommended) for full duplex		-	
	Wavelength	1300 or 1310 nm		-	
	Min. TX Output	-20 dBm		-	
	Max. TX Output	-14 dBm		-	
	Max. RX Sensitivity	-32 dBm		-	
	Min. RX Overload	-8 dBm		-	
	Budget	12 dBm		-	
Single-mode	Single-mode Fiber Cables	-	8.3/125, 8.7/125, 9/125 or 10/125 μm		
	Distance	-	30 km	60 km	
	Wavelength	-	1300 or 1310 nm		
	Min. TX Output	-	-15 dBm	-5 dBm	
	Max. TX Output	-	-8 dBm	0 dBm	
	Max. RX Sensitivity	-	-34 dBm	-35 dBm	
	Min. RX Overload	-	-5 dBm	-	
	Budget	-	19 dBm	30 dBm	
Ethernet Transmission Distance	Ethernet	2-pair UTP/STP Cat.3, 4, 5, EIA/TIA-568 100 Ω			
	Fast Ethernet	2-pair UTP/STP Cat. 5, EIA/TIA-568 100 Ω			
Power					
Input Voltage Range		+12 Vdc ~ +48 Vdc (Non-isolated)			
Power Consumption		0.12 A @ 24 Vdc			
LED Indicator		Yes			
Protection		Power reverse polarity protection			
Frame Ground for EMS Protection		Yes			
Mechanical					
Casing		Plastic (Flammability UL 94V-0)			
Dimensions (W x L x H)		33 mm x 85 mm x 107 mm			
Installation		DIN-Rail Mounting			
Environmental					
Operating Temperature		-30 °C ~ +75 °C			
Storage Temperature		-30 °C ~ +85 °C			
Ambient Relative Humidity		10% ~ 90% RH, non-condensing			

Dimensions (Units: mm)



Ordering Information

NS-200AFC-T CR	Industrial 10/100 Base-T to 100 Base-FX Media Converter; 1 Multi-mode, SC connector (RoHS)
NS-200AFT-T CR	Industrial 10/100 Base-T to 100 Base-FX Media Converter; 1 Multi-mode, ST connector (RoHS)
NS-200AFCS-T CR	Industrial 10/100 Base-T to 100 Base-FX Media Converter; 1 Single-mode, SC connector (RoHS)
NS-200AFCS-60T CR	Industrial 10/100 Base-T to 100 Base-FX Media Converter; 1 (60 km) Single-mode, SC connector (RoHS)

Accessories

GPSU06U-6	24V/0.25A, 6 W Power Supply
DIN-KA52F	24V/1.04A, 25 W Power Supply with DIN-Rail Mounting

NS-200WDM-A

NS-200WDM-B



LAN x1	Fiber Optic x1	Wide Temperature $\pm 0 \sim +70$	DIN-Rail Mount	Wide Input Voltage $+12 \sim +48$	CE	FCC	RoHS	WEEE
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Features ▶▶▶

- Automatic MDI/MDI-X crossover for plug-and-play
- Supports both 10/100 Mbps speed auto negotiation
- Store-and-forward architecture
- Full duplex IEEE 802.3x flow control
- MAC addresses 1024
- Supports $+12 V_{DC} \sim +48 V_{DC}$
- Supports operating temperatures from $0\text{ }^{\circ}\text{C} \sim +70\text{ }^{\circ}\text{C}$
- Slim packaging fits on your DIN-Rail Mounting

Introduction

Using the fiber optic medium for Ethernet applications has become more popular due to fiber optic's excellent physical features, especially for long distance networks. However, fiber optic cable is very expensive, so if we can apply a solution that uses only 1 cable instead of 2, the infrastructure cost can be cut in half. The NS-200WDM series provides a solution that reduces your expense by 50%!

The NS-200WDM series of Single-Strand Fiber Converters supports Wavelength Division Multiplexing (WDM) technology that allows two independent data communication channels to transmit and receive over one standard, single-mode, fiber optic line. This not only doubles your existing bandwidth, but also effectively reduces the cost of creating a new fiber optic infrastructure.

50% Cost Saving for Fiber Optic Infrastructures

With a pair of NS-200WDM series products (NS-200WDM-A and NS-200WDM-B), you can double the utilization of your existing, costly fiber optic cable, and save 50% of the cost of a newly installed fiber optic application.

The width of the NS-200WDM is just 33 mm, so it can be used where space is limited.

Specifications

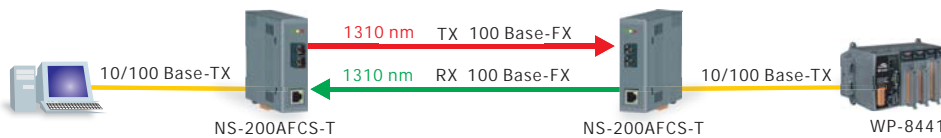
Technology	
Standards	IEEE 802.3, 802.3u, 802.3x
Processing Type	Store & forward, wire speed switching
MAC Addresses	1024
Memory Bandwidth	1.4 Gbps
Frame Buffer Memory	256 Kbit
Flow Control	IEEE 802.3x flow control

Interface		
RJ-45 Port		10/100 Base-TX auto negotiation speed, and auto MDI/MDI-X connection
Fiber Port		100 Base-FX (Single-mode; SC Connector)
LED Indicators		10/100M, Link/Act, Full duplex/Half duplex (Fiber Port)
Ethernet Isolation		1500 V _{rms} 1 minute
Frame Ground for EMS Protection		Yes
Interface		
Single-mode	Single-mode Fiber Cables	8.3/125, 8.7/125, 9/125 or 10/125 μm
	Distance	15 km, (9/125 μm recommended) for full duplex
	Wavelength	TX: 1310, RX: 1550 nm for NS-200WDM-A TX: 1550, RX: 1310 nm for NS-200WDM-B
	Min. TX Output	-14 dBm
	Max. TX Output	-8 dBm
	RX Sensitivity	-31 dBm
Ethernet Transmission Distance	Ethernet	2-pair UTP/STP Cat.3, 4, 5, EIA/TIA-568 100 Ω
	Fast Ethernet	2-pair UTP/STP Cat. 5, EIA/TIA-568 100 Ω
Power		
Input Voltage Range		+12 V _{DC} ~ +48 V _{DC} (Non-isolated)
Power Consumption		0.12 A @ 24 V _{DC}
LED Indicator		Yes
Protection		Power reverse polarity protection
Frame Ground for EMS Protection		Yes
Connector		3-Pin Removable Terminal Block
Mechanical		
Casing		Plastic (Flammability UL 94V-0)
Dimensions (W x L x H)		33 mm x 85 mm x 107 mm
Installation		DIN-Rail Mounting
Environmental		
Operating Temperature		0 °C ~ +70 °C
Storage Temperature		-20 °C ~ +85 °C
Ambient Relative Humidity		10% ~ 90% RH, non-condensing

Applications

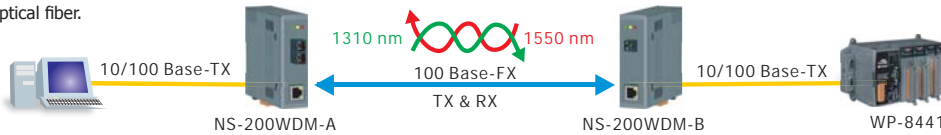
General Media Converter Solution

A general media converter requires a pair of fiber optic cables for data transmission and receiving.

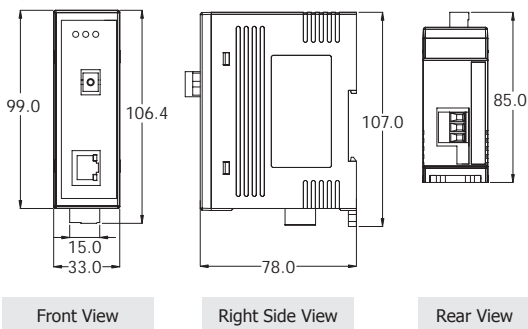


Single-Strand Fiber Converter Solution

Wavelength Division Multiplexing (WDM) supports bi-directional data transmission and receiving using dual wavelengths (1310/1550 nm) over a single strand, of single-mode optical fiber.



Dimensions (Units: mm)



Ordering Information

NS-200WDM-A CR	10/100 Base-TX to 100 Base-FX Single-Strand Media Converter, TX 1310 nm, RX 1550 nm, SC (RoHS)
NS-200WDM-B CR	10/100 Base-TX to 100 Base-FX Single-Strand Media Converter, TX 1550 nm, RX 1310 nm, SC (RoHS)
Important Note: You must purchase both NS-200WDM-A and NS-200WDM-B since these products work as a pair.	

Accessories

GPSU06U-6	24V/0.25A, 6 W Power Supply
DIN-KA52F	24V/1.04A, 25 W Power Supply with DIN-Rail Mounting

NS-200SX *Available soon*

Giga Ethernet to 1000 Base-SX Fiber Converter

NS-200LX *Available soon*

Giga Ethernet to 1000 Base-LX Fiber Converter



NS-200SX/NS-200LX

x1
Gigabit LAN

x1
Fiber Optic

DIN-Rail Mount

+12 ~ +48
Wide Input Voltage

CE

FCC

RoHS

WEEE

For NS-200SX-T
NS-200LX-T

-30 ~ +75
Wide Temperature

Features ▶▶▶

- Provides 1 x 1000 Mbps fiber port with SC type connector for 1000 Base-SX/LX device
- Supports wide operating temperatures from -30 °C ~ +75 °C (NS-200SX-T/NS-200LX-T)
- Supports Jumbo Frames 9K bytes
- Provides Link Fault Pass-through (LFP)
- Supports redundant +12 V_{DC} ~ +48 V_{DC} power input

Introduction

NS-200SX/LX is an enhanced gigabit Ethernet to fiber optic converter. Aside from its standard features, the versatile NS-200SX/LX also has the LFP (Link Fault Pass-through) feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from the disconnected side. NS-200SX/LX will force the link to shut down as soon as noticed that the other link has failed, giving the application software a chance to react to the situation.

Specifications

Models	NS-200SX	NS-200SX-T	NS-200LX	NS-200LX-T
Interface				
RJ-45 Port	10/100/1000 Base-T(X) auto negotiation speed and auto MDI/MDI-X connection			
Fiber Port	Multi-mode: Up to 550 m; Single-mode: Up to 10 km			
LED Indicators	PWR1, PWR2, P-Fail, Link/Act, 1000M			
Optical Fiber	62.5/125 μm (Multi-mode)		10/125 μm (Signal Mode)	
Distance	0.5 km		10 km	
Wavelength	850 nm		1310 nm	
Min. TX Output	-9.4 dBm		-9.4 dBm	
Max. TX Output	-4 dBm		-3 dBm	
Max. RX Sensitivity	-17 dBm		-20 dBm	
Min. RX Overload	-3 dBm		-3 dBm	
Power				
Input Voltage Range	+12 V _{DC} ~ +48 V _{DC} (Non-isolated)			
Power Consumption	0.24 A @ 24 V _{DC}			
Mechanical				
Dimensions (W x L x H)	33 mm x 85 mm x 107 mm			
Installation	DIN-Rail Mounting			
Environmental				
Operating Temperature	-10 °C ~ +70 °C	-30 °C ~ +75 °C	-10 °C ~ +70 °C	-30 °C ~ +75 °C
Storage Temperature	-40 °C ~ +85 °C			
Ambient Relative Humidity	10% ~ 90% RH, non-condensing			

Ordering Information

NS-200SX CR	Industrial 1000 Base-T to 1000 Base-SX Fiber Converter, Multi-mode 850 nm, 0.5 km, SC connector (RoHS)	NS-200LX CR	Industrial 1000 Base-T to 1000 Base-LX Fiber Converter, Single-mode 1310 nm, 10 km, SC connector (RoHS)
NS-200SX-T CR	NS-200SX w/Wide Temperature (-30 °C ~ +75 °C)	NS-200LX-T CR	NS-200LX w/Wide Temperature (-30 °C ~ +75 °C)