# NS-200WDM Series

## Industrial Single-Strand 10/100 Base-TX to 100 Base-FX Media Converter

NS-200WDM-A    NS-200WDM-B

| LAN x 1 | Fiber Optic 100Base-FX x 1 | Wide Temperature ±0 ~ +70 | DIN-Rail Mount | Wide Input Voltage +12 ~ +48 | CE | FCC | RoHS | WEEE |

## 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 $V_{DC}$ ~ +48 $V_{DC}$
- Supports operating temperatures from 0 °C ~ +70 °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<br>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.
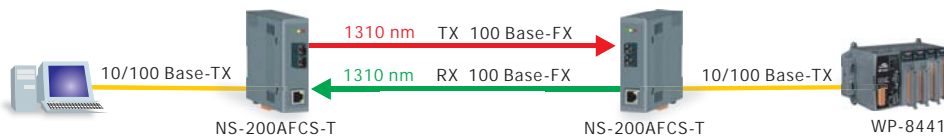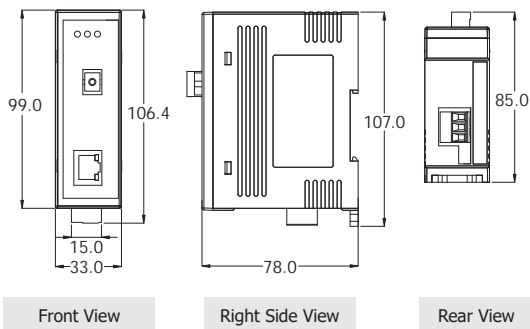


### Single-Strand Fiber Converter Solution

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)



Front View    Right Side View    Rear View
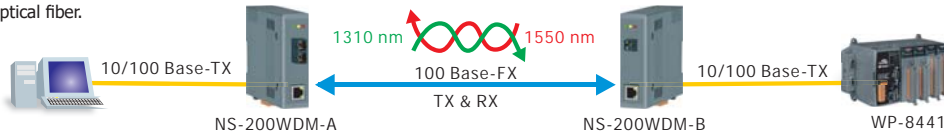
## Ordering Information

| 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 |