

### NS-206AF series/NSM-206AF series

4-Port 10/100 Mbps Ethernet with 2 fiber port Switch

NS-206AFC-T/FCS-T/FCS-60T

NS-206AFT-T

NSM-206AFC-T/FCS-T/FCS-60T

NSM-206AFT-T



#### Highlight Information ▶▶▶



#### Features ▶▶▶

- Provides 6 x 100-FX fiber port plus 4 x Ethernet ports
- Each port supports both 10/100 Mbps speed auto negotiation
- Full duplex IEEE 802.3x and half duplex backpressure flow control
- DIN-Rail
- Automatic MDI/MDI-X crossover for plug-and-play
- Store-and-forward architecture
- Redundant dual +12 ~ 48 V<sub>dc</sub> power inputs
- Supports operating temperatures from -30 ~ +75°C

#### Introduction

The NS-206AF/NSM-206AF is a 4-port unmanaged Ethernet with 2 fiber port switch. Using fiber optics, you can prevent noise from interfering with your system and supports high-speed (100 Mbps) and high-distance (up to 60 km) transmissions.

The NS-206AF/NSM-206AF provides a wide 12 to 48 V<sub>dc</sub> power range to fit all the common power standards found in industrial automation, without external power converters. The wide power input lowers installation and maintenance costs.

#### Comparison Table of 6-port 100 Base-FX Fiber Switch

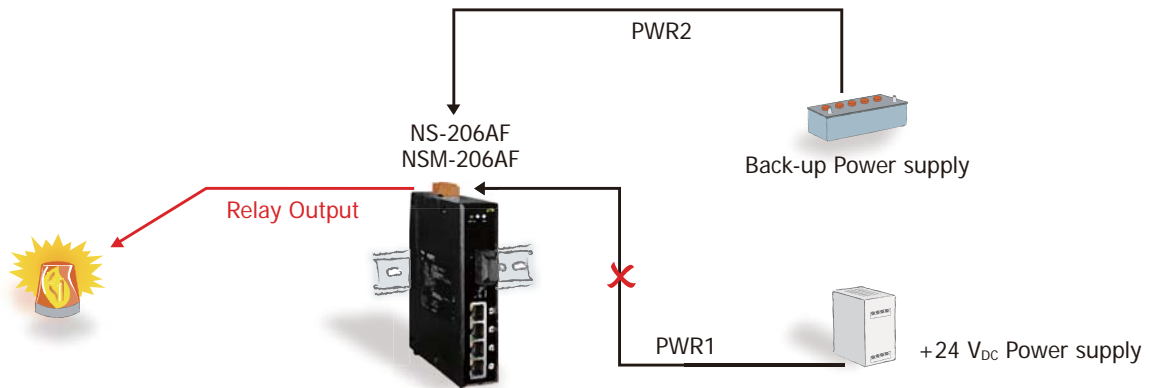
Mode Name	NS-206F	NSM-206F	NS-206AF	NSM-206AF
PoE	-			
Input Voltage Range	+10 ~ 30 V <sub>dc</sub>		+12 ~ 48 V <sub>dc</sub>	
Operating Temperature	0 °C ~ +70 °C		-30 °C ~ +75 °C	
Casing	Plastic	Metal (IP20)	Plastic	Metal (IP30)
Installation	DIN-Rail	DIN-Rail or Wall Mounting	DIN-Rail	
Dimensions (W x H x D) (Unit: mm)	64 x 110 x 98	72.5 x 110 x 102	31 x 157 x 113	25 x 168 x 119

 Specifications

Models		NS-206AF series	NSM-206AF series
<b>Technology</b>			
Standards	IEEE 802.3, 802.3u, 802.3x		
Processing Type	Store & forward; wire speed switching		
MAC Addresses	1024		
Memory Bandwidth	2.0 Gbps		
Frame Buffer Memory	512 Kbit		
Flow Control	IEEE 802.3x flow control, back pressure flow control		
<b>Ethernet Interface</b>			
RJ-45 Ports	10/100 Base-T(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection		
LED Indicators	Power, Link/Act, 10/100M		
Ethernet Isolation	1500 V <sub>rms</sub> 1 minute		
+/-4 kV ESD Protection	Yes		
<b>Fiber Interface (100 Base-FX; SC/ST type)</b>			
Multi-Mode	NS-206AFT-T/FC-T NSM-206AFT-T/FC-T	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 1310nm Min. TX Output: - 20 dBm Max. TX Output: -14 dBm Max. RX Sensitivity: -32 dBm Max. RX Overload: -8 dBm Budget: 12 dBm	
Single-Mode	NS-206AFCS-T NSM-206AFCS-T	Single-mode fiber cables: 8.3/125, 8.7/125, 9/125 or 10/125μm Distance: 30 Km, (9/125 μm recommended) for full duplex Wavelength: 1300 or 1310nm Min. TX Output: - 15 dBm Max. TX Output: -8 dBm Max. RX Sensitivity: -34 dBm Max. RX Overload: -5 dBm Budget: 19 dBm	
Single-Mode	NS-206AFCS-60T NSM-206AFCS-60T	Single-mode fiber cables: 8.3/125, 8.7/125, 9/125 or 10/125μm Distance: 60 Km, (9/125 μm recommended) for full duplex Wavelength: 1300 or 1310nm Min. TX Output: - 5 dBm Max. TX Output: 0 dBm Max. RX Sensitivity: -35 dBm Max. RX Overload: -5 dBm Budget: 30 dBm	
<b>Power Input</b>			
Input Voltage Range	+12 ~ +48 V <sub>dc</sub> (Redundant input)		
Power consumption	0.14 A@ 24 V <sub>dc</sub>		
Protection	Power reverse polarity protection		
+/-4 kV ESD Protection	Yes		
Connection	6-Pin Removable Terminal Block		
<b>Mechanical</b>			
Casing	Plastic (Flammability UL 94V-0)	Metal (IP30 Protection)	
Dimensions (W x L x H)	31 mm x 157 mm x 113 mm		25 mm x 168 mm x 119 mm
Installation	DIN-Rail		
<b>Environmental</b>			
Operating Temperature	-30 °C ~ +75 °C		
Storage Temperature	-40 °C ~ +85 °C		
Ambient Relative Humidity	10% ~ 90% RH, non-condensing		

### Redundant Power Input for NS-206AF/NSM-206AF series

Both power inputs can be connected simultaneously to live DC power sources.  
 If one power source fails, the other live source acts as a backup, and automatically supplies all of NS-205AF/NSM-205AF series power needs.

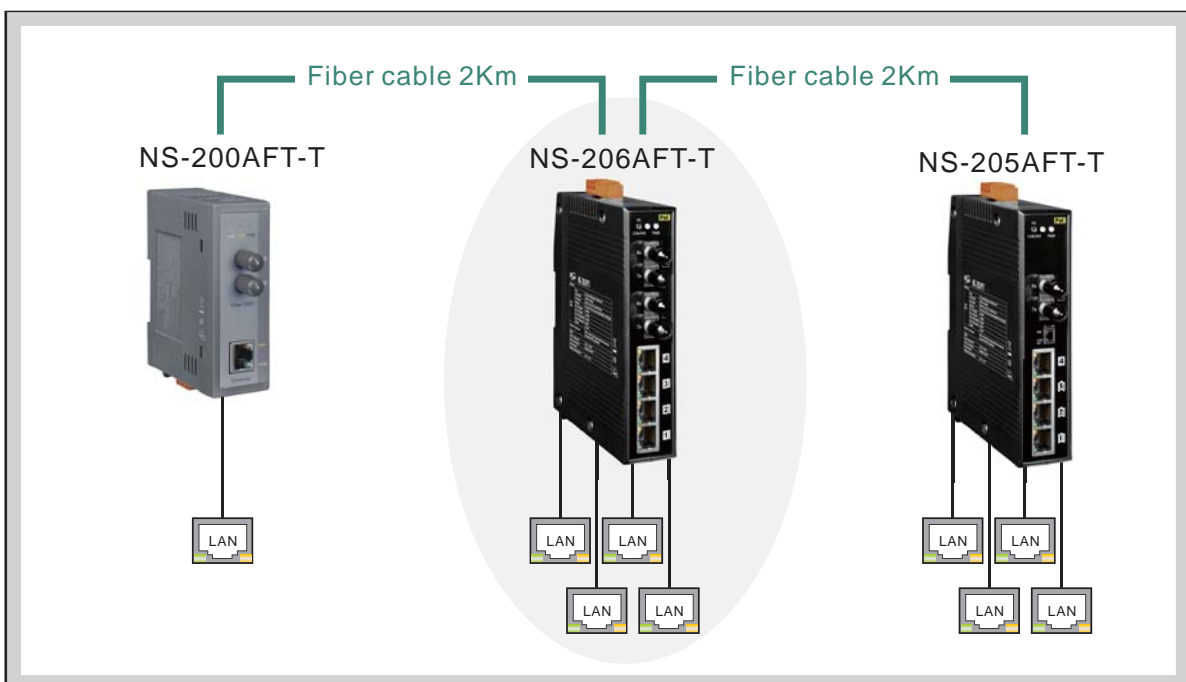


### Pin Functions for Power Input

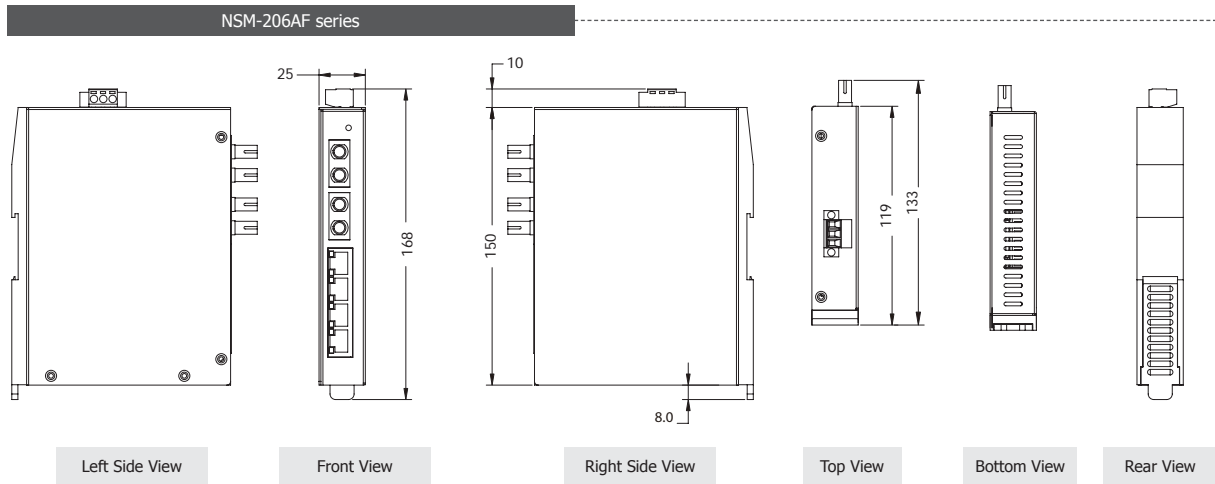
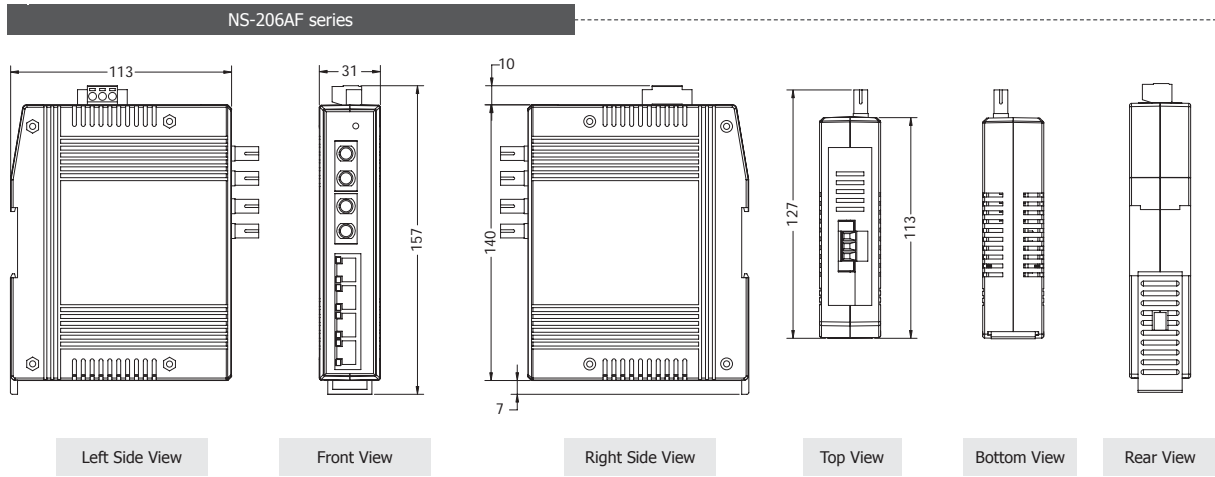
External power supply is connected using the removable terminal block:  
 PWR : Power input and should be connected to the power supply (+)  
 GND: Ground and should be connected to the power supply (-)  
 F.G. : F.G. stands for Frame Ground (protective ground). It is optional. If you use this pin, it can reduce EMI radiation; improve EMI performance and ESD protection.

### Applications

#### Fiber Daisy Chain Configuration



**Dimensions (Units: mm)**



**Ordering Information**

NS-206AFT-T CR	Multi-mode, ST Connector, 4-Port 10/100 Mbps with 2 Fiber ports Switch (RoHS)
NS-206AFC-T CR	Multi-mode, SC Connector, 4-Port 10/100 Mbps with 2 Fiber ports Switch (RoHS)
NS-206AFCS-T CR	Single-mode 30 Km, SC Connector, 4-Port 10/100 Mbps with 2 Fiber ports Switch (RoHS)
NS-206AFCS-60T CR	Single-mode 60 Km, SC Connector, 4-Port 10/100 Mbps with 2 Fiber ports Switch (RoHS)
NSM-206AFT-T CR	Multi-mode, ST Connector, 4-Port 10/100 Mbps with 2 Fiber ports Switch; metal case (RoHS)
NSM-206AFC-T CR	Multi-mode, SC Connector, 4-Port 10/100 Mbps with 2 Fiber ports Switch; metal case (RoHS)
NSM-206AFCS-T CR	Single-mode 30 Km, SC Connector, 4-Port 10/100 Mbps with 2 Fiber ports Switch; metal case (RoHS)
NSM-206AFCS-60T CR	Single-mode 60 Km, SC Connector, 4-Port 10/100 Mbps with 2 Fiber ports Switch; metal case (RoHS)

**Accessories**

MDR-60-48	48 V/1.25 A, 60 W Power Supply with DIN-Rail Mounting
DIN-KA52F-48	48 V/0.52 A, 25 W Power Supply with DIN-Rail Mounting
KA52F-48	48 V/0.52 A, 25 W Power Supply