

308FX2-N Industrial Ethernet Switch

N-Tron Networking Series



▶▶▶ Unmanaged Industrial Ethernet Switch

The N-TRON® 308FX2-N, an unmanaged Industrial Ethernet switch, is designed for use in industrial data acquisition, control, and Ethernet I/O applications. The rugged DIN-RAIL enclosure protects the switch from harsh environmental conditions, enabling flawless performance in extreme settings.

PRODUCT FEATURES

- Compact Size
- Full IEEE 802.3 and 1613 Compliance
- NEMA TS1/TS2 Compliance
- Extended Environmental Specifications
- Six 10/100 BaseTX RJ-45 Ports
- Two 100BaseFX Ports, ST (shown) or SC
- Supports Full/Half Duplex Operation
- LED Link/Activity Status Indication
- Store-and-Forward Technology
- Auto Senses Speed and Flow Control
- MDIX Auto Cable Sensing (RJ-45)
- Up to 2.6 Gb/s Maximum Throughput
- Rugged Industrial DIN-Rail Enclosure
- Redundant Power Inputs (10-30 VDC)
- N-View™ OPC Switch Monitoring Option
- Bi-Color Status LEDs For Link, Speed, Activity & Duplex
- Port Control

PRODUCT OVERVIEW

The 308FX2-N switch is designed to meet and exceed the most demanding industrial communication requirements while providing high throughput and minimum downtime. The unit provides six RJ-45 auto sensing 10/100BaseTX ports. All ports are full/half duplex capable, using leading-edge Ethernet switching technology. The 308FX2-N auto-negotiates the speed and flow control capabilities of the TX copper port connection and configures itself automatically. The fiber optic ports support full 200Mb/s communications via 100BaseFX. Bi-color LEDs are provided to display the link status, speed and activity of each port as well as power on/off status.

The 308FX2-N is auto sensing, so there is no need to make extensive wiring changes if upgrades are made to host computers, plant systems, or Ethernet I/O modules. The switching fabric simply scales up or down automatically to match network environments. The device supports up to 4,000 MAC addresses, enabling these products to support extremely sophisticated and complex network architectures.

The 308FX2-N is an ideal candidate for upgrading existing hubs and repeaters to increase bandwidth and determinism by virtually eliminating network collisions. The product provides a cost-effective solution while maintaining the plug & play simplicity of an unmanaged hub. The switch simplifies plant wiring by eliminating the need to bring data acquisition and control connections back to a climate controlled environment.



The 308FX2-N simplifies plant wiring by eliminating the need to bring data acquisition and control connections back to a climate controlled environment. The switch has extended operating specifications to meet the harsh needs of the industrial environment, including extended temperature rating, extended shock and vibration specs, redundant power inputs, and a high MTBF (greater than 2M hours). To increase reliability, the unit contains redundant power inputs. LED's are provided to display power on/off status as well as the link status and activity of each port. For cost savings and convenience, the switch can be DIN-RAIL mounted alongside Ethernet I/O or other Industrial Equipment. It can also be panel mounted.

N-VIEW OPC PORT MONITORING (With -N Option Only)

The N-TRON N-View OLE for Process Control (OPC) Server Software can be combined with popular HMI software packages to add network traffic monitoring, trending and alarming to any application using N-TRON switches configured with the N-View option. N-TRON's N-View OPC Server collects 41 different traffic variables per port and five system level variables per switch. This information can provide a complete overview of the network load, service quality, and packet traffic. OPC client software can use N-View OPC Server data to resolve network problems quickly and improve system reliability.

Specifications

Switch Properties

Number of MAC Addresses: 4,000
 Latency (typical): 2.1 μ s
 Backplane Speed: 2.6 Gb/s
 Switching Method: Store & Forward

Case Dimensions

Height: 5.9" (15cm)
 Width: 2.3" (5.8cm)
 Depth: 3.8" (9.7cm)
 Weight: 1.7 lbs (0.8kg)
 Din-Rail: 35mm

Electrical

Redundant Input Voltage: 10-30 VDC
 Input Current: 380 mA@24V
 Inrush: 8.5Amp/0.2ms@24V
 BTU/hr: 31.1@24V

Environmental

Operating and Storage Temp: -40°C to 85°C
 Operating Humidity: 10% to 95% (Non Condensing)
 Operating Altitude: 0 to 10,000 ft.

Shock and Vibration (bulkhead mounting)

Shock: 200g@10ms
 Vibration/Seismic: 50g, 5-200Hz, Triaxial

Reliability

MTBF: >2 Million Hours

Network Media

10BaseT: \geq Cat3 Cable
 100BaseTX: \geq Cat5 Cable
 100BaseFX:
 Multimode 50-62.5/125 μ m
 Singlemode 7-10/125 μ m

Connectors

10/100BaseTX: Six (6) RJ-45 Copper Ports
 100BaseFX: Two (2) SC or ST Duplex Ports

Serial Configuration Port

Com Parameters: 9600,n,8,1

Recommended Wiring Clearance

Front: 4" (10.16 cm)
 Top: 1" (2.54 cm)

Regulatory Approvals

FCC (CFR 47, Part 15, Subpart B, Class A and ANSI C63.4)
 ICES-003
 CE (IEC 60068: 2-1/2/6/30 and IEC 60533-7)
 UL/cUL: Class I, Div 2, Groups A, B, C, and D; T4
 (ANSI/ISA 12.12.01-2007)
 EN 60079-0/15 ATEX
 GOST-R Certified, RoHS Compliant

Designed to comply with:

IACS UR E10 (ABS Type-Approval)
 IEEE 1613 for Electric Utility Substations
 NEMA TS1/TS2 for Traffic Control

Fiber Transceiver Characteristics

Fiber Length	2km*	15km**	40km**	80km**
<i>TX Power Min</i>	-19dBm	-15dBm	-5dBm	-5dBm
<i>RX Sensitivity Max</i>	-31dBm	-31dBm	-34dBm	-34dBm
<i>Wavelength</i>	1310nm	1310nm	1310nm	1550nm

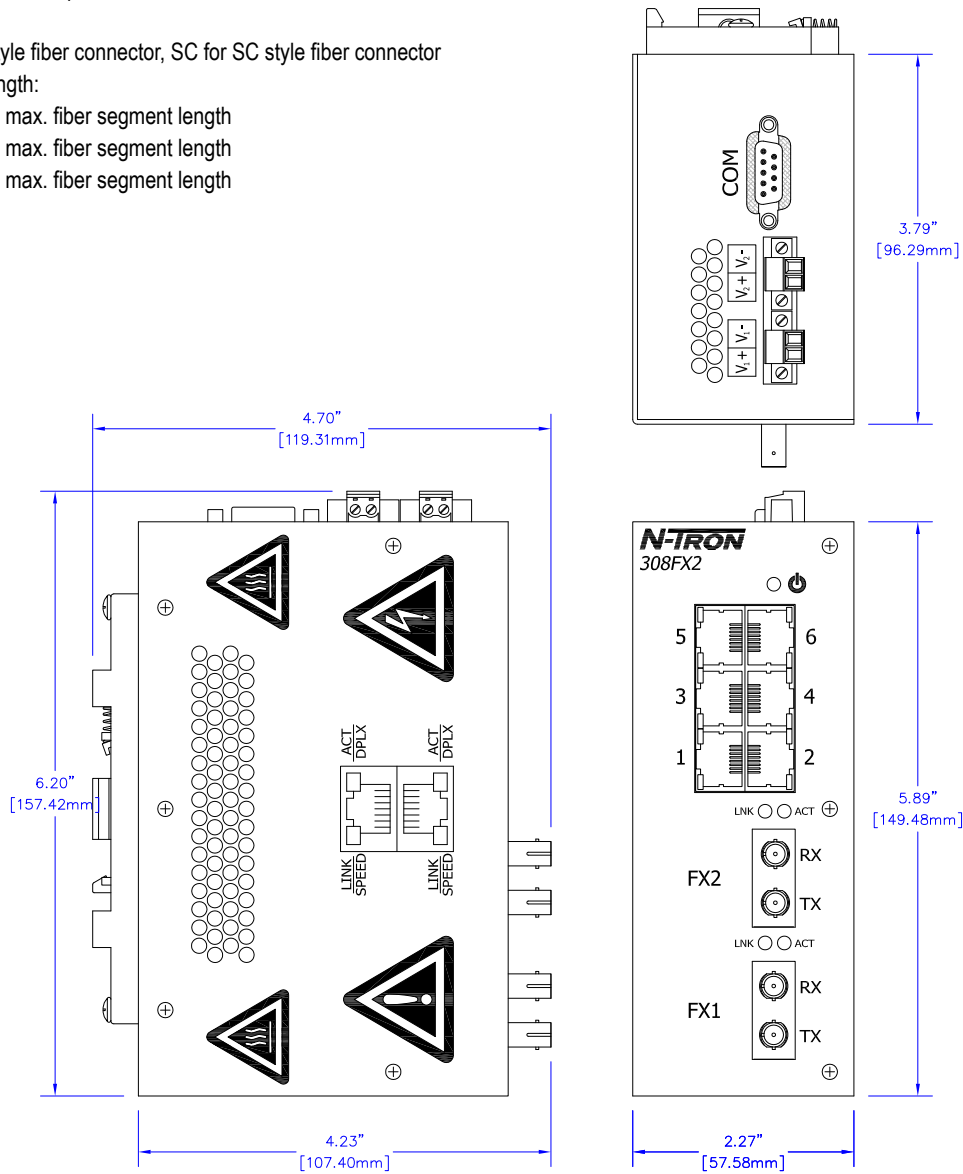
* Multimode Fiber Optic Cable
 ** Singlemode Fiber Optic Cable

▶▶▶ 308FX2-N Specifications

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
308FX2-N-XX	8-port (6 10/100BaseTX, 2 100BaseFX Fiber Uplink) Industrial Ethernet Switch, DIN-Rail
308FXE2-N-XX-YY	8-port (6 10/100BaseTX, 2 100BaseFX Fiber Uplink) Industrial Ethernet Switch, singlemode, DIN-Rail
URMK	19" Universal Rack Mount Kit
900-PM	Panel Mount Kit
NTPS-24.1.3	N-TRON Power Supply (1.3 amp@24 VDC)

Where: N = N-View Firmware Option
 E = Singlemode
 XX = ST for ST style fiber connector, SC for SC style fiber connector
 YY = Segment length:
 15 for 15km max. fiber segment length
 40 for 40km max. fiber segment length
 80 for 80km max. fiber segment length



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