306FX-N Industrial Ethernet Switch

N-Tron Networking Series

Unmanaged Industrial Ethernet Switch

The N-TRON® 306FX2 is an unmanaged six port Industrial Ethernet Switch. It is housed in a ruggedized DIN-RAIL enclosure and is designed for use in industrial data acquisition, control, and Ethernet I/O applications.

PRODUCT FEATURES

- Compact Size, Small Footprint
- Full IEEE 802.3 and 1613 Compliance
- NEMA TS1/TS2 Compliance
- American Bureau of Shipping (ABS) Type Approval
- Extended Environmental Specifications
- Four 10/100 BaseTX RJ-45 Ports
- Two 100BaseFX Port ST (shown) or SC
- RJ-45 Ports Support Full/Half Duplex Operation
- LED Link/Activity Status Indication
- Store-and-Forward Technology
- Auto Sensing Duplex, Speed and MDIX (RJ-45)
- Up to 1.0 Gb/s Maximum Throughput
- Rugged Industrial DIN-RAIL Enclosure
- Redundant Power Inputs (10-30 VDC)
- N-View™ OPC Switch Monitoring Option

PRODUCT OVERVIEW

The 306FX2 industrial network switch is designed to meet and exceed the most demanding industrial communication requirements while providing high throughput and minimum downtime.

The 306FX2 provides four RJ-45 auto sensing 10/100BaseTX ports, plus two fiber-based Fast Ethernet uplink ports. All TX ports utilize state-of-the-art Ethernet switching technology and are full/half duplex capable. The 306FX2 auto-negotiates the speed and flow control capabilities of the four TX port connections and configures itself automatically. The two fiber optic ports utilize industry standard ST or SC duplex connectors and are configured for full duplex operation. Both multimode and singlemode fiber models are available.

The TX ports of the 306FX2 are auto sensing, so there will be no need to make extensive wiring changes due to future upgrades of host computers, plant systems, or Ethernet I/O modules. The switching fabric simply scales up or down automatically to match network environments.

The 306FX2 supports up to 4,000 MAC addresses, enabling these products to support extremely sophisticated and complex network architectures.

The 306FX2 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 306FX2 can simplify plant wiring by eliminating the need to bring data acquisition and control network connections back to a climate controlled environment. The 306FX2 has extended operating environmental specifications to meet the harsh needs of the industrial environment. For cost savings and convenience the 306FX2 can be DIN-Rail mounted alongside Ethernet I/O or other industrial equipment.

The unique compact size provides a small footprint, conserving space in the most critical dimension. The 306FX2 can also be panel mounted if desired.

To increase reliability, the 306FX2 includes redundant power inputs. LED's are provided to display the link status and activity of each port, as well as power on/off status.

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 5 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.

▶▶▶ 306FX2-N Specifications

SPECIFICATIONS

Case Dimensions

Height:	3.5"	(8.9 cm)
Width:	2.1"	(5.4 cm)
Depth:	3.4"	(8.7 cm)
Weight:	0.75 lbs	(0.34 kg)

Electrical

Input Voltage:	10-30 VDC
Input Current:	250 mA@24V
BTU/hr:	20.5@24 VDC
Inrush:	10Amp/0.9ms@24V

Environmental

Operating Temperature:	-20°C to 70°C
Storage Temperature:	-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

Network Media

10BaseT:	≥Cat3 Cable
100BaseTX:	≥Cat5 Cable
100BaseFX :	
Multimode	50-62.5/125µm
Singlemode	7-10/125µm

Connectors

10/100BaseTX:	Four (1) RJ-45 TX Ports
100BaseFX:	Two (2) ST or SC Duplex Ports

Recommended Wiring Clearance

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

Fiber Transceiver Characteristics

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

* Multimode Fiber Optic Cable
** Singlemode Fiber Optic Cable

BENEFITS

Industrial Network Switch

- Compact Size, Small Footprint
- High Reliability/Availability
- Extended Environmental Specifications
- Ruggedized DIN-Rail Enclosure
- High Performance
- High MTBF >2M Hours (measured)

Ease of Use

- Plug & Play Operation
- Four Auto Sensing 10/100BaseTX RJ-45 Ports
- Auto Sensing Duplex, Speed and Cable Type
- Unmanaged Operation
- Compact DIN-Rail Package

Increased Performance

- Full Wire Speed Capable
- 100BaseFX Fiber Uplink
- Full Duplex Capable
- Eliminates Network Collisions
- Increases Network Determinism
- N-View Switch Viewing Option

Regulatory Approvals

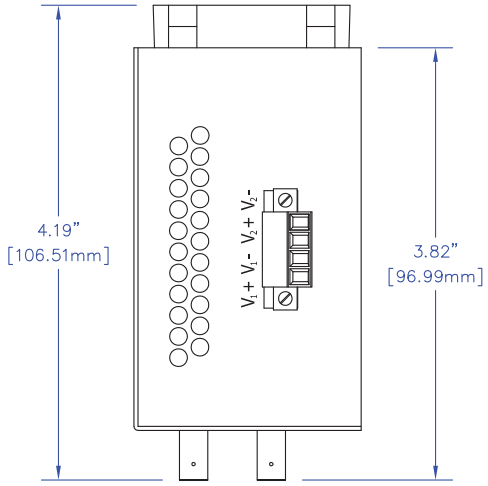
FCC Part 15 Class A
UL Listed 1604 (US and Canada)
CLASS I, DIV 2, GROUPS A,B,C,D,T4A
CE: EN61000-6-2,4, EN55011, EN61000-4-2,3,4,5,6
ABS Type Approval for Shipboard Applications
GOST-R Certified
RoHS Compliant

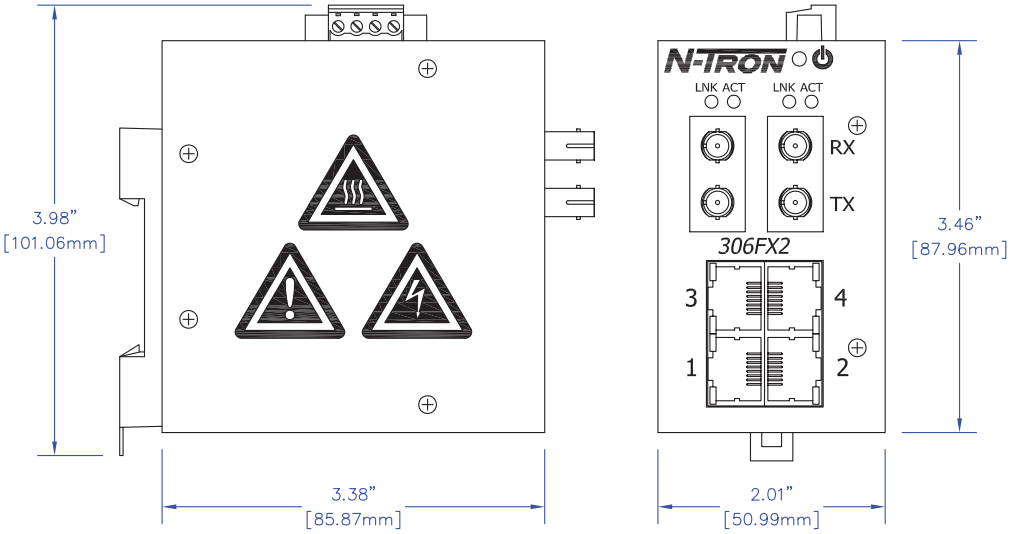
306FX2-N Specifications

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
306FX2-N-XX	6-port (4 10/100BaseTX, 2 100BaseFX Fiber Uplinks) Industrial Ethernet Switch; DIN-Rail mount; Multimode; with N-View technology
306FX2-XX	6-port (4 10/100BaseTX, 2 100BaseFX Fiber Uplinks) Industrial Ethernet Switch; DIN-Rail mount; Multimode
306FXE2-N-XX-YY	6-port (4 10/100BaseTX, 2 100BaseFX Fiber Uplinks) Industrial Ethernet Switch; DIN-Rail mount; Singlemode; with N-View technology
306FXE2-XX-YY	6-port (4 10/100BaseTX, 2 100BaseFX Fiber Uplinks) Industrial Ethernet Switch; DIN-Rail mount; Singlemode
URMK	19" Universal Rack Mount Kit
900-PM	Panel Mount Kit
NTPS-24-1.3	N-TRON Power Supply - (1.3 Amp @ 24VDC)

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





www.redlion.net

Connect. Monitor. Control.

Americas
sales@redlion.net

Asia-Pacific
asia@redlion.net

Europe
Middle East
Africa
europe@redlion.net

+1 (717) 767-6511

As the global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our award-winning technology enables companies worldwide to gain real-time data visibility that drives productivity. Product brands include Red Lion, N-Tron and Sixnet. With headquarters in York, Pennsylvania, the company has offices across the Americas, Asia-Pacific and Europe. For more information, please visit www.redlion.net. Red Lion is a Spectris company.

ADLD0306 062713 ©2013 Red Lion Controls