

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

## PRODUCT FEATURES

- Compact Size, Smaller Footprint
- Full IEEE 802.3 and 1613 Compliance
- NEMA TS1/TS2 Compliance
- American Bureau of Shipping (ABS) Type Approval
- Four 10/100BaseTX RJ-45 Ports
- Two 100BaseFX Ports ST (shown) or SC
- Extended Environmental Specifications
- RJ-45 Ports Support Full/Half Duplex Operation
- LED Link/Activity Status Indication
- Auto Sensing Duplex, Speed and MDIX (RJ-45)
- Store-and-forward Technology
- Up to 1.2 Gb/s Maximum Throughput
- Rugged Industrial DIN-Rail Enclosure

## PRODUCT OVERVIEW

The N-TRON™ 306FX2 Industrial Network Switch is designed to solve the most demanding industrial communications requirements while providing high throughput and minimum downtime.

The 306FX2 provides four RJ-45 auto sensing 10/100BaseTX ports, plus two 100BaseFX fiber optic ports. All TX ports are full/half duplex capable, using "state of the art" Ethernet switching technology. 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.

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

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

The N-TRON 306FX2 is an ideal candidate for upgrading existing hubs and repeaters to increase bandwidth and determinism by virtually eliminating



network collisions. The product also keeps the network affordable, while maintaining the plug & play simplicity of the 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 smaller footprint, conserving space in the most critical dimension. In addition, as with other DIN-Rail devices, the 306FX2 can be panel mounted.

To increase reliability, the 306FX2 contains 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 SWITCH MONITORING OPTION

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.

## BENEFITS

### Industrial Network Switch

- Compact Size, Smaller 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
- Two 100BaseFX Fiber Ports
- Full Duplex Capable
- Eliminates Network Collisions
- Increases Network Determinism
- N-View Switch Viewing Option

### Contact Information

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### Ordering Information

306FX2-XX Four 10/100BaseTX Ports,  
Two 100BaseFX Multimode Ports  
306FX2-N-XX with N-View Firmware Option  
306FXE2-XX-YY Four 10/100BaseTX Ports,  
Two 100BaseFX Singlemode Ports  
306FXE2-N-XX-YY with N-View Firmware Option

Where "XX" is: ST for ST style fiber connector  
SC for SC style fiber connector

Where "YY" is: 15 for 15km max. fiber segment length  
40 for 40km max. fiber segment length  
80 for 80km max. fiber segment length

## SPECIFICATIONS

### Physical

Height: 3.46" (8.80 cm)  
Width: 2.01" (5.10 cm)  
Depth: 3.38" (8.59 cm)  
Weight: 0.75 lbs (0.34 kg)

### Electrical

Input Voltage: 10-30 VDC  
Input Current: 250 mA @ 24V  
Inrush: 10.0Amp/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

### Fiber Transceiver Characteristics

Fiber Length:	2km*	15km**	40km**	80km**
TX Power Min:	-19dBm	-15dBm	-5dBm	-5dBm
RX Sensitivity Max:	-32dBm	-29dBm	-34dBm	-34dBm
Wavelength:	1310nm	1310nm	1310nm	1550nm

\* Multimode Fiber Optic Cable  
\*\* Singlemode Fiber Optic Cable

### Connectors

10/100BaseTX: Four (4) RJ-45 TX Ports  
100BaseFX: Two (2) SC or ST Duplex Ports

### Recommended Wiring Clearance

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

### Regulatory Approvals

FCC Part 15 Class A  
UL 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

REV 070914