N-TRON
THE INDUSTRIAL NETWORK COMPANY

306FX2

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
- Two100BaseFX 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 *306FX*2 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.

306FX2

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
N-TRON Corp.
820 S. University Blvd., Suite 4E
Mobile, AL 36609
TEL: (251) 342-2164
FAX: (251) 342-6353
Website: www.n-tron.com
Email: info@n-tron.com

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

	2km*	15km**	40km**	80km**
Fiber Length:				
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