

The **305FX** is an unmanaged five 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
- One 100BaseFX Port 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 1.0 Gb/s Maximum Throughput
- Rugged Industrial DIN-Rail Enclosure

PRODUCT OVERVIEW

The **N-TRON™ 305FX** Industrial Network Switch is designed to solve the most demanding industrial communications requirements while providing high throughput and minimum downtime.

The **305FX** provides four RJ-45 auto sensing 10/100BaseTX ports, plus a fiber based Fast Ethernet uplink port. All TX ports are full/half duplex capable, using "state of the art" Ethernet switching technology. The **305FX** auto-negotiates the speed and flow control capabilities of the four TX port connections, and configures itself automatically. The 5th port is a 100BaseFX fiber optic uplink utilizing industry standard ST or SC duplex connectors.

Since the TX ports of the **305FX** 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 **305FX** supports up to 4,000 MAC addresses, thus enabling these products to support extremely sophisticated and complex network architectures.

The **N-TRON 305FX** 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 **305FX** can simplify plant wiring by eliminating the need to bring data acquisition and control network connections back to a climate controlled environment. The **305FX** has extended operating environmental specifications to meet the harsh needs of the industrial environment. For cost savings and convenience the **305FX** 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 **305FX** can be panel mounted.

To increase reliability, the **305FX** 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
- 100BaseFX Fiber Uplink
- Full Duplex Capable
- Eliminates Network Collisions
- Increases Network Determinism
- N-View Switch Viewing Option

Contact Information

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Ordering Information

305FX-XX	100BaseFX multimode fiber
305FX-N-XX	with N-View Firmware Option
305FXE-XX-YY	100BaseFX singlemode fiber
305FXE-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:	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

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:	One (1) SC or ST Duplex Port

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