

The N-Tron® 304TX is an unmanaged four 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
- 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 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

N-Tron's 304TX Industrial Network Switch is designed to meet and exceed the most demanding industrial communication requirements while providing high throughput and minimum downtime.

The 304TX provides four RJ-45 auto sensing 10/100BaseTX ports. All ports are full/half duplex capable, using state-of-the-art Ethernet switching technology. The 304TX auto-negotiates the speed and flow control capabilities of the TX copper port connection, and configures itself automatically.

The 304TX is auto sensing, so there will be 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 304TX supports up to 4,000 MAC addresses, enabling these products to support extremely sophisticated and complex network architectures.

The 304TX is an ideal candidate for upgrading existing hubs and repeaters, in order to provide increased 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 304TX simplifies plant wiring by eliminating the need to bring data acquisition and control network connections back to a climate controlled environment. The 304TX has extended operating environmental specifications to meet the harsh needs of the industrial environment. For cost savings and convenience the network switch 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 304TX can also be panel mounted if desired. To increase reliability, the 304TX 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.

### 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-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

### Case Dimensions

Height:	3.1"	(7.9 cm)
Width:	2.1"	(5.4 cm)
Depth:	3.4"	(8.7 cm)
Weight:	0.75 lbs	(0.3 kg)

### Electrical

Input Voltage:	10-30 VDC
Input Current:	250 mA@24V
Inrush:	8.0Amp/0.6ms@24V

### Environmental

Operating Temperature:	-40°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

### Connectors

10/100BaseTX:	Four (4) RJ-45 TX Ports
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### Recommended Wiring Clearance

Front:	2" (5.08 cm)
Top:	1" (2.54 cm)

### 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  
IEEE 1613 for Electric Utility Substations  
GOST-R Certified  
RoHS Compliant

## BENEFITS

### Industrial Network Switch

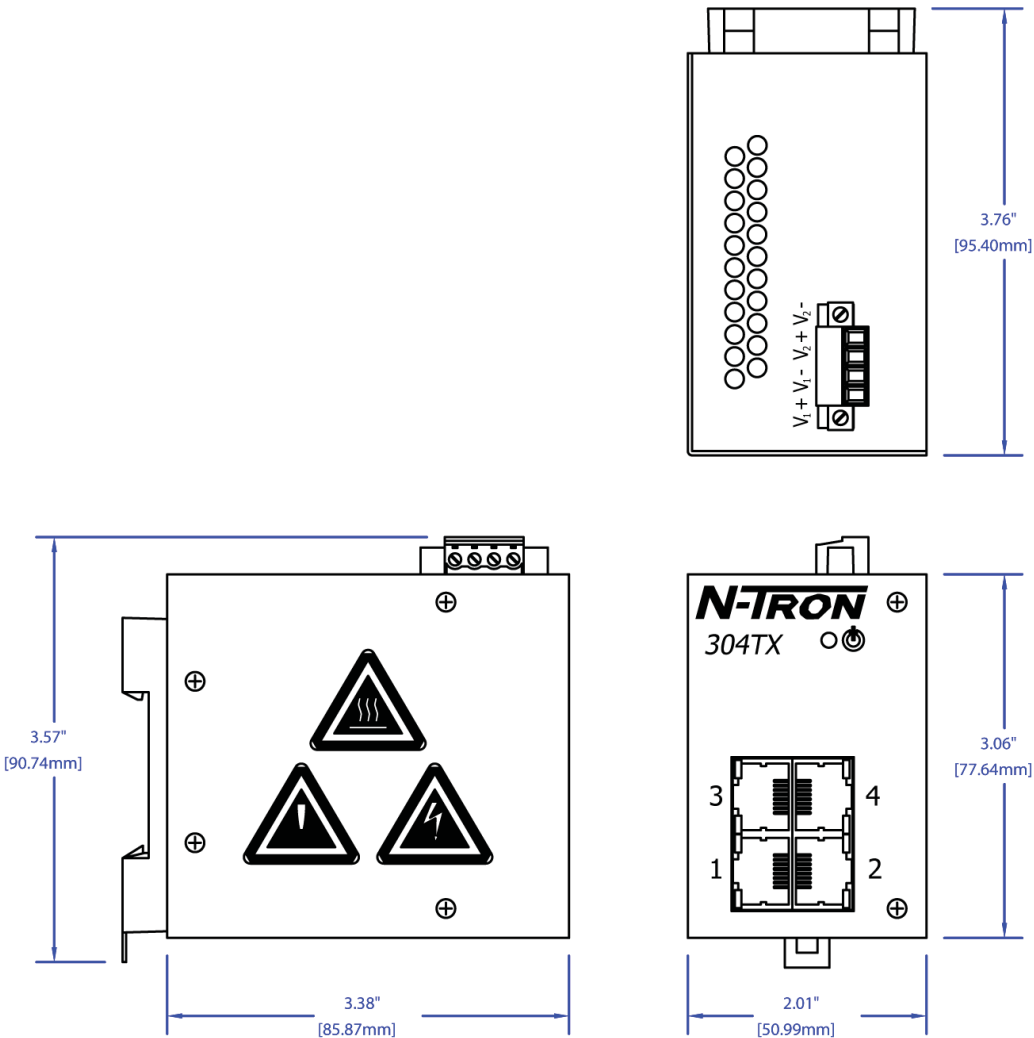
- Compact Size, Small Footprint
- High Reliability/Availability
- Extended Environmental Specifications
- Ruggedized DIN-RAIL Enclosure
- High Performance
- High MTBF >2M Hours (measured)

### Ease of Use

- Plug & Play Operation
- 4 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
- Full Duplex Capable
- Eliminates Network Collisions
- Increases Network Determinism
- N-View Switch Viewing Option



## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
304TX-N .....	4-port 10/100BaseTX Industrial Ethernet Switch, DIN-Rail with N-View Firmware Option
304TX.....	4-port 10/100BaseTX Industrial Ethernet Switch, DIN-Rail

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**QUALITY MANAGEMENT SYSTEM**  
**CERTIFIED BY DNV**  
**== ISO 9001:2008 ==**