

# 108TX Industrial Ethernet Switch

N-Tron Networking Series



## ▶▶▶ Unmanaged Industrial Ethernet Switch

The N-TRON® 108TX is a low cost, unmanaged eight port Industrial Ethernet switch. It is housed in a hardened, metal, DIN-Rail enclosure, and is designed for use in mission critical data acquisition, control, and Ethernet I/O applications.

### PRODUCT FEATURES

- Compact, Space Saving Package
- Full IEEE 802.3 Compliance
- American Bureau of Shipping (ABS) Type Approval
- EN50155 for Railway Applications
- Eight 10/100BaseTX RJ-45 Ports
- Unmanaged Operation
- Extended Environmental Specifications
  - -40°C to 70°C Operating Temperature
  - >2M Hours MTBF
- Supports Full/Half Duplex Operation
- Up to 1.6 Gb/s Maximum Throughput
- MDIX Auto Sensing Cable
- Auto Sensing Speed and Flow Control
- Full Wire Speed Communications
- Store-and-Forward Technology
- Redundant Power Inputs (10-30 VDC)
- ESD Protection Diodes on all Ports
- Surge Protection Diodes on Power Inputs
- LED Link/Activity Status Indication
- Hardened Metal DIN-Rail Enclosure

### PRODUCT OVERVIEW

The 108TX industrial network switch is designed to meet the most demanding industrial communications requirements while providing high throughput and minimum downtime.

The 108TX provides eight RJ-45 auto sensing 10/100BaseTX ports. All ports are full/half duplex capable, using leading-edge Ethernet switching technology. The 108TX auto-negotiates the speed and flow control capabilities of the eight TX port connections, and configures itself automatically.

Since the 108TX is auto sensing, 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 specific network environments.



The 108TX supports up to 2,000 MAC addresses, enabling these products to support extremely sophisticated and complex network architectures.

The 108TX is an ideal candidate for upgrading existing hubs and repeaters to increase bandwidth and determinism by virtually eliminating network collisions. The 108TX combines affordability and the plug & play simplicity of the unmanaged hub.

The 108TX can simplify plant wiring by eliminating the need to bring data acquisition and control network connections back to a climate controlled environment. The 108TX 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.

To increase reliability the 108TX includes dual redundant power inputs. LEDs are provided to display the link status and activity of each port.

## **108TX SPECIFICATIONS**

### **Case Dimensions**

<i>Height:</i>	3.5"	(8.9 cm)
<i>Width:</i>	1.5"	(3.8 cm)
<i>Depth:</i>	3.6"	(9.0 cm)
<i>Weight:</i>	0.7 lbs.	(0.4 kg)
<i>DIN-Rail:</i>	35mm	

### **Electrical**

<i>Input Voltage:</i>	10-30VDC
<i>Steady Input Current:</i>	250mA@24V
<i>Inrush:</i>	8.1Amp/0.7ms@24V
<i>BTU/hr:</i>	20.5@24VDC

### **Environmental**

<i>Operating Temperature:</i>	-40°C to 70°C
<i>Storage Temperature:</i>	-40°C to 85°C
<i>Operating Humidity:</i>	10% to 95% (Non Condensing)
<i>Operating Altitude:</i>	0 to 10,000 ft.

### **Reliability**

<i>MTBF:</i>	>2 Million Hours
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### **Network Media**

<i>10BaseT:</i>	>Cat3 Cable
<i>100BaseTX:</i>	>Cat5 Cable

### **Connectors**

<i>10/100BaseTX:</i>	Eight (8) RJ-45 Copper Ports
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### **Recommended Wiring Clearance**

<i>Front:</i>	2" (5.08 cm)
<i>Top:</i>	1" (2.54 cm)

### **Ordering Information**

108TX	Eight 10/100BaseTX Ports, 10-30VDC
100-MDR-2	Metal Din Rail Option*
NTPS-24-1.3	DIN-Rail Power Supply 24V@1.3 Amp

\* MDR option must be specified with switch order - not field upgradable

## **BENEFITS**

### **Industrial Network Switch**

- Compact Size / Small Footprint
- Extended Environmental Specifications
- Hardened Metal DIN-Rail Enclosure
- High Performance
- High MTBF >2M Hours
- ESD Protection Diodes on all Ports
- Surge Protection Diodes on Power Inputs

### **Ease of Use**

- Plug & Play Operation
- Auto Sensing 10/100BaseTX
- Auto Negotiation Full/Half Duplex
- MDIX Auto Cable Sensing
- Unmanaged Operation

### **Increased Performance**

- Full Wire Speed Capable
- Full Duplex Capable
- Eliminates Network Collisions
- Increases Network Determinism

### **Regulatory Approvals**

*FCC Title 47 Part 15 Class A*

*ICES-003- Class A*

*CE: EN61000-6-2:2001; ,EN61000-6-4:2001  
EN61000-4-2,3,4,5,6*

*EN55011:1998+A1: 1999+A2: 2002 - Class A*

*UL Listed (US and Canada) 1604*

*ANSI/ISA-12.12.01-2000,  
Class I, Div 2, Groups A,B,C,D,T4A;*

*ABS Type Approval for Shipboard Applications*

*DNV Type Approval Certification*

*EN50155 for Railway Applications*

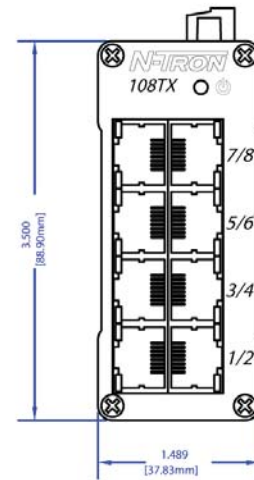
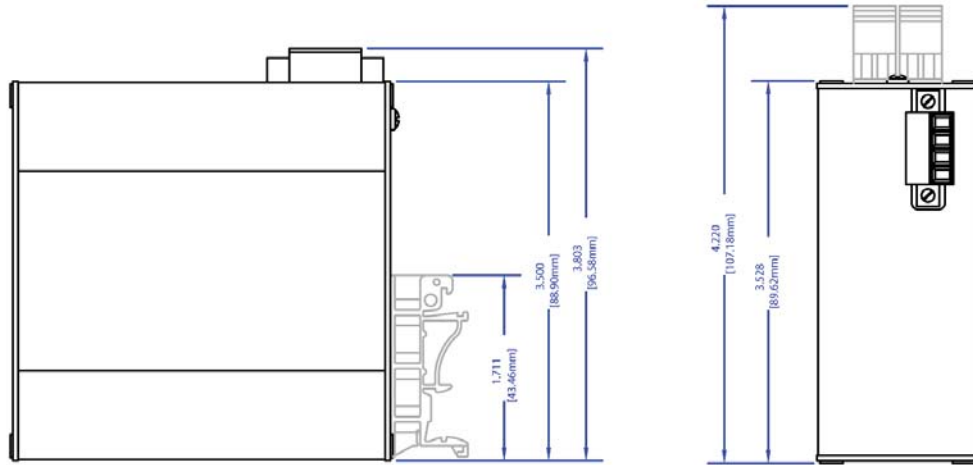
*GOST-R Certified; RoHS Compliant*

Designed to comply with:

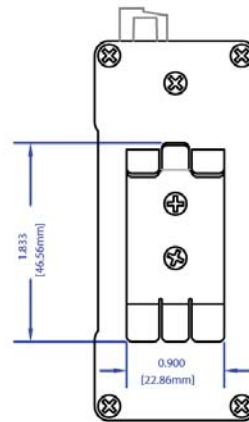
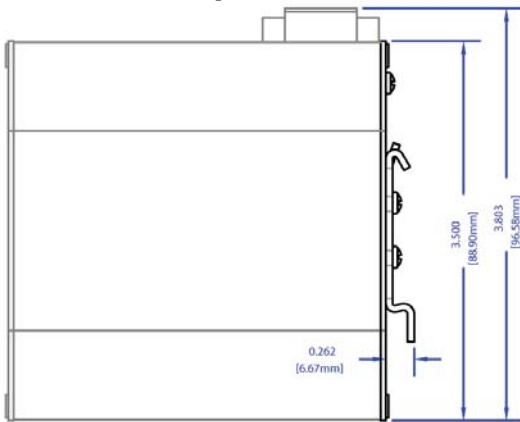
*IEEE 1613 for Electric Utility Substations;*

*NEMA TS1/TS2 for Traffic Control Equipment*

108TX with Standard DIN rail Mount



Optional 100-MDR-2 Metal DIN Rail Mount



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