

104TX Industrial Ethernet Switch

N-Tron Networking Series



▶▶▶ Unmanaged Industrial Ethernet Switch

The *N-TRON*[®] *104TX* is a low cost unmanaged four 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
- Four 10/100BaseTX RJ-45 Ports
- Unmanaged Operation
- Extended Environmental Specifications
 - -40°C to 80° Operating Temperature
 - >2M Hours MTBF
- Supports Full/Half Duplex Operation
- Up to 800 Mb/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)
- LED Link/Activity Status Indication
- Hardened Metal DIN-Rail Enclosure

PRODUCT OVERVIEW

The *104TX* Industrial Network Switch is designed to solve the most demanding industrial communication requirements while providing high throughput and minimum downtime.

The *104TX* 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 *104TX* auto-negotiates the speed and flow control capabilities of the four TX port connections, and configures itself automatically.

Since the *104TX* is 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 specific network environments.



The *104TX* supports up to 2,000 MAC addresses, enabling these products to support extremely sophisticated and complex network architectures.

The *104TX* is an ideal candidate for upgrading existing hubs and repeaters to increase bandwidth and determinism by virtually eliminating network collisions. The *N-TRON 104TX* combines affordability and the plug & play simplicity of the unmanaged hub.

The *104TX* can simplify plant wiring by eliminating the need to bring data acquisition and control network connections back to a climate controlled environment. The *104TX* 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 *104TX* provides dual redundant power inputs. LED's are provided to display the link status and activity of each port.

104TX SPECIFICATIONS

Case Dimensions

| | | |
|-----------|----------|-----------|
| Height: | 2.9" | (7.3cm) |
| Width: | 1.5" | (3.8 cm) |
| Depth: | 3.6" | (9 cm) |
| Weight: | 0.6 lbs. | (0.28 kg) |
| DIN-Rail: | 35mm | |

Electrical

| | |
|-----------------------|------------------|
| Input Voltage: | 10-30 VDC |
| Steady Input Current: | 215mA@24V |
| Inrush: | 7.8Amp/0.7ms@24V |

Environmental

| | |
|------------------------|--------------------------------|
| Operating Temperature: | -40°C to 80°C |
| Storage Temperature: | -40°C to 85°C |
| Operating Humidity: | 10% to 95% (Non Condensing) |
| Operating Altitude: | 0 to 10,000 ft. |

Reliability

| | |
|-------|------------------|
| MTBF: | >2 Million Hours |
|-------|------------------|

Network Media

| | |
|------------|-------------|
| 10BaseT: | >Cat3 Cable |
| 100BaseTX: | >Cat5 Cable |

Connectors

| | |
|---------------|-----------------------------------|
| 10/100BaseTX: | Four (4) RJ-45 TX Copper Ports |
|---------------|-----------------------------------|

Recommended Wiring Clearance

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

Ordering Information

| | |
|-------------|-----------------------------------|
| 104TX | Four 10/100BaseTX Ports |
| NTPS-24-1.3 | DIN-Rail Power Supply 24V@1.3 Amp |
| 100-MDR-1 | Metal Din Rail Option* |

* 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 RJ-45 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

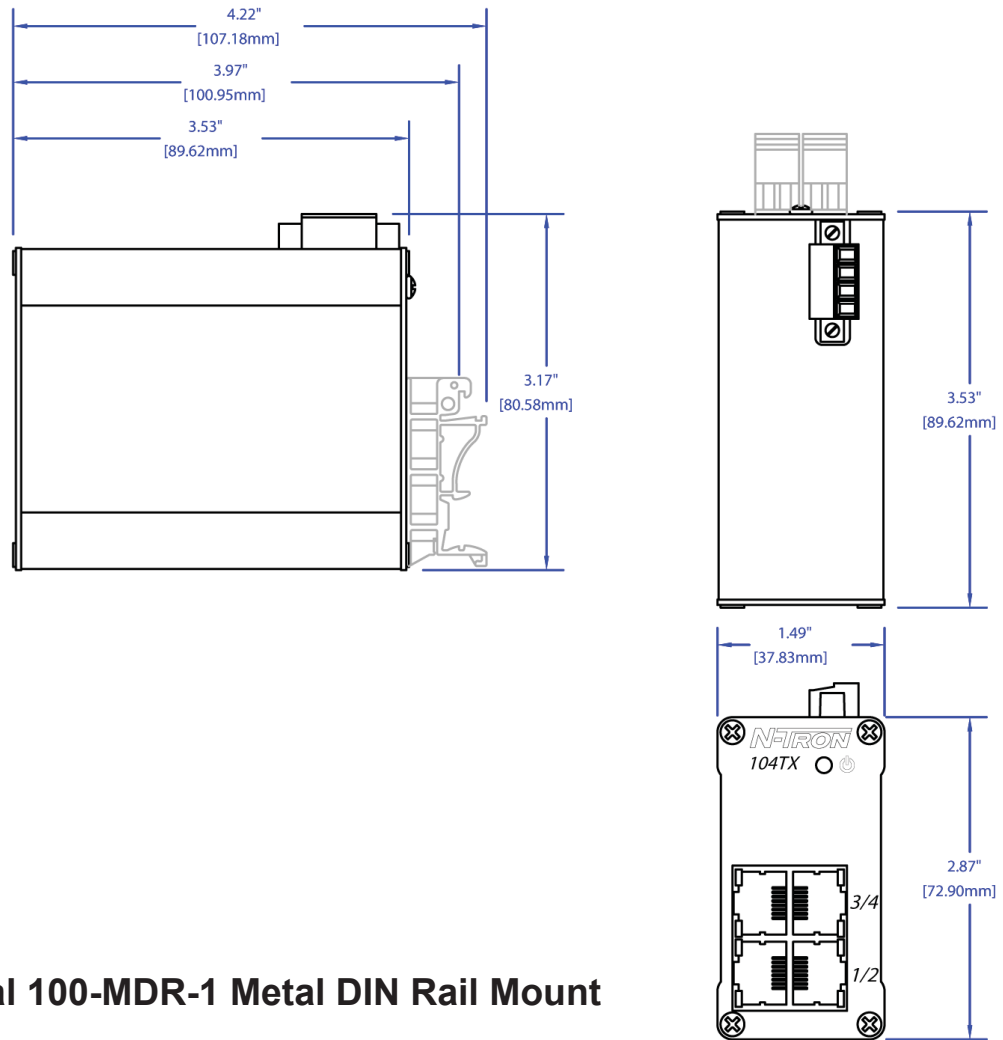
Regulatory Approvals

*FCC Title 47 Part 15 Class A; ICES-003-Class A
CE: EN61000-6-2,4; EN61000-4-2,3,4,5,6; EN55011
UL Listed (US and Canada) per ANSI/ISA-12.12.01-2007,
Class I, Div 2, Groups A,B,C,D, T4A
ABS Type Approval for Shipboard Applications
DNV-GL Type Approval Certification
EN50155 for Railway Applications
RoHS Compliant; GOST-R Certified*

Designed to comply with:

*IEEE 1613 for Electric Utility Substations;
and NEMA TS1/TS2 for Traffic Control Equipment*

104TX with Standard DIN rail Mount



Optional 100-MDR-1 Metal DIN Rail Mount

