

516TX-A Industrial Ethernet Switch

N-Tron Networking Series



▶▶▶ Unmanaged Industrial Ethernet Switch

PRODUCT FEATURES

- Full IEEE 802.3 and 1613 Compliance
- NEMA TS1/TS2 Compliance
- American Bureau of Shipping (ABS) Type Approval
- Sixteen (16) 10/100 BaseTX RJ-45 Ports
- -40° to 85°C Operating Temperature
- Auto Sensing 10/100BaseTX, Duplex, and MDIX
- Store-and-Forward Technology
- Up to 2.6 Gb/s Maximum Throughput
- Rugged Industrial DIN-Rail Enclosure
- Redundant Power Inputs (10-30 VDC)
- Bi-Color LEDs For Link, Speed, Activity & Duplex Status



Advanced Management Functions (With -A option only):

- IGMP Snooping
- VLAN
- QoS
- Trunking
- Mirroring
- N-View™ (Remote Monitoring Using OPC Technology)

PRODUCT OVERVIEW

The N-TRON® 516TX Series Industrial Ethernet Switch offers outstanding performance and ease of use. It is ideally suited for connecting Ethernet enabled industrial and/or security equipment and can be optionally configured with advanced Ethernet communication management functions.

Industrial Packaging and Specifications

The 516TX, designed to operate in industrial environments, is housed in a rugged DIN-rail-mounted steel enclosure. Optional panel and rack mount kits are also available. The switch comes standard with extended temperature rating, extended shock and vibration specs, redundant power inputs, and a high MTBF (greater than 2M hours).

Ease of Use

The 516TX requires no setup unless the advanced port functions are utilized. The sixteen 10/100BaseTX ports are auto sensing and auto configuring. Each port automatically negotiates for maximum speed and performance by default. Bi-color LEDs are provided to display the link status, link speed and activity of each port as well as power on/off status.

Performance

The 516TX supports up to 4,000 MAC addresses and uses advanced IEEE 802.3 Fast Ethernet 10/100BaseTX switching technology to eliminate network collisions and increase network determinism. A high-speed processor and backplane provide outstanding throughput performance.

ADVANCED MANAGEMENT FEATURES

The 516TX-A offers several management functions that can be easily configured using the COM Port (DB 9 connector located on the right side of the switch).

IGMP Snooping: Internet Group Management Protocol allows the N-Tron switch to intelligently forward and filter multicast traffic.

VLAN: Virtual Local Area Network allows switch segmentation in order to create two or more separate local area network domains.

QoS: Quality of Service streamlines network operation by managing packet priority. The primary goal of QoS is to improve the latency of prioritized Ethernet packets required for ring management, real-time and other interactive applications.

Trunking: Trunking (aggregation) enables multiple physical ports to be linked together and function as one uplink to another identically configured trunking-capable switch. This feature increases the bandwidth between switches and creates redundancy for applications requiring high levels of fault tolerant operation.

Port Mirroring: Port mirroring allows traffic on one port to be duplicated and sent to a designated mirror port. This function can be used to monitor Ethernet traffic on the designated source port using the assigned mirror port.

N-View OPC Switch Monitoring: (With -A or -N Option Only) N-View OPC server software can be used with popular HMI software packages to transmit operational information from N-View-capable switches. This technology enables network traffic monitoring, as well as alarm and trending details. In all, the N-View OPC Server collects 41 different traffic variables per port and five system level variables per switch, providing a complete overview of network load, service quality, and packet traffic. Empowered with N-View OPC Server data, users can resolve network problems faster and make more informed decisions about overall system performance.

Specifications

Switch Properties

| | |
|--------------------------|--------------------------------|
| Number of MAC Addresses: | 4,000 |
| Aging Time: | 300s, Programmable (-A option) |
| Latency Typical: | 2.1 μ s |
| Switching Method: | Store & Forward |

Case Dimensions

| | |
|-----------|------------------|
| Height: | 2.3" (5.8 cm) |
| Width: | 7.4" (18.8 cm) |
| Depth: | 3.5" (8.8 cm) |
| Weight: | 1.9 lbs (0.9 kg) |
| Din-Rail: | 35 mm |

Electrical

| | |
|--------------------------|-----------------------------|
| Redundant Input Voltage: | 10-30 VDC |
| Input Current: | 400 mA @ 24 VDC |
| Inrush: | 7.0 amp/0.8ms @ 24 VDC |
| N-Tron Power Supply: | NTPS-24-1.3 (1.3A @ 24 VDC) |

Environmental

| | |
|------------------------|-----------------------------|
| Operating Temperature: | -40°C to 85°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 mounted)

| | |
|--------------------|--------------------------|
| Shock: | 200 g @ 10 ms |
| Vibration/Seismic: | 50 g, 5-200 Hz, Triaxial |

Reliability

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

Serial Configuration Port

| | |
|-----------------|------------|
| Com Parameters: | 9600,n,8,1 |
|-----------------|------------|

Network Media

| | |
|------------|-------------------|
| 10BaseT: | \geq Cat3 Cable |
| 100BaseTX: | \geq Cat5 Cable |

Connectors

| | |
|---------------|---------------------------------|
| 10/100BaseTX: | Sixteen (16) RJ-45 Copper Ports |
|---------------|---------------------------------|

Recommended Wiring Clearance

| | |
|--------|-------------|
| Front: | 2" (5.1 cm) |
| Side: | 1" (2.6 cm) |

Regulatory Approvals

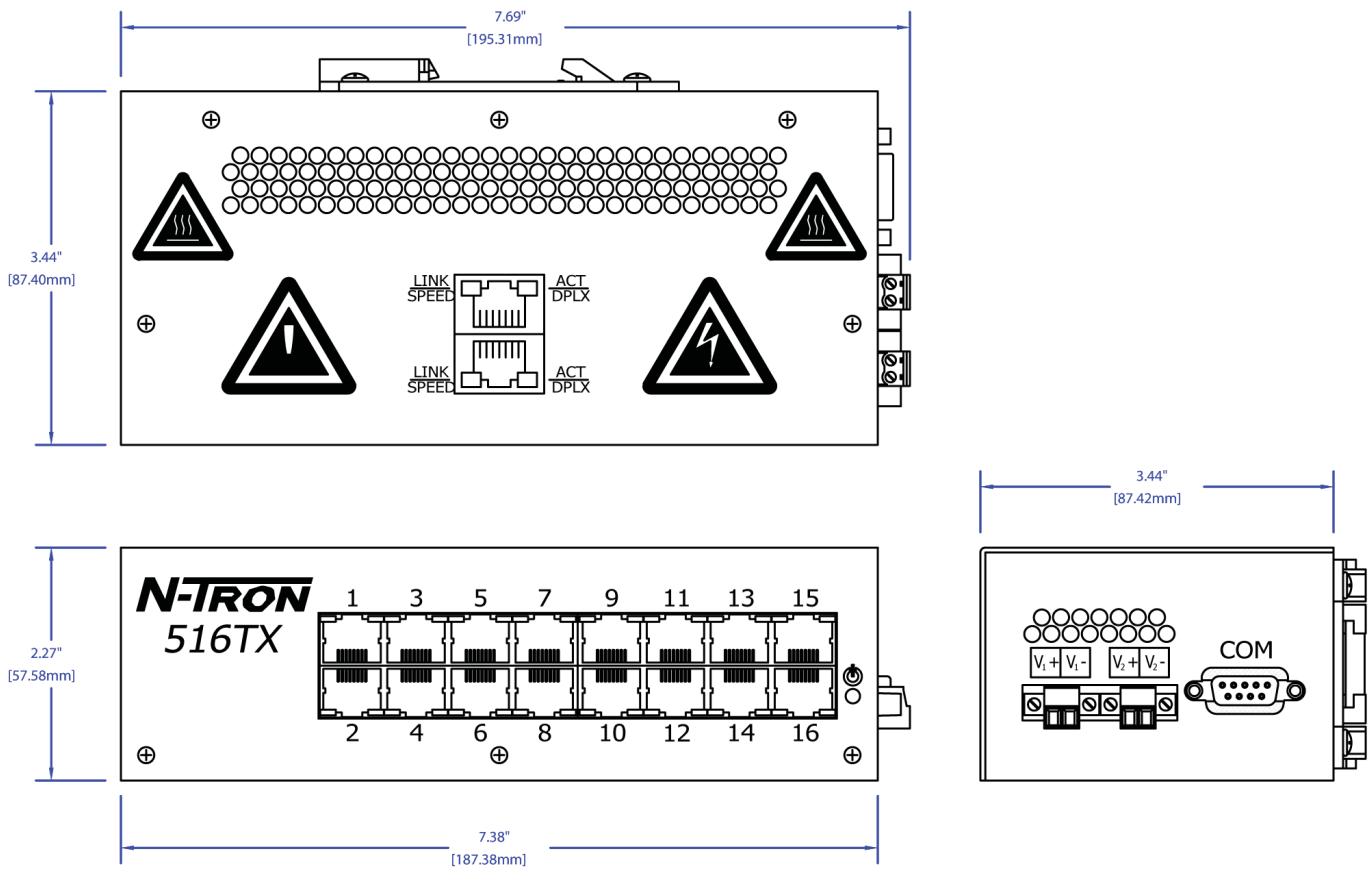
FCC/CE (CFR 47, Part 15, Subpart B, Class A); ICES-003
EMC Dir 89/336/EEC, EN 50204, EN 55011
EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61000-6-2, 4
ANSI C63.4
UL /cUL: Class I, Div 2, Groups A, B, C, D and T4
UL 508 and UL 1604
CAN/CSA-C22.2 No.213, ATEX II 3 G Ex nA
IEEE 1613 for Electric Utility Substations
ABS Type Approval for Shipboard Applications
GOST-R Certified, RoHS Compliant

Designed to comply with:
NEMA TS1/TS2 for Traffic Control

▶▶▶ 516TX-A Specifications

ORDERING INFORMATION

| PART NUMBER | DESCRIPTION |
|------------------|--|
| 516TX-A..... | 16-port 10/100BaseTX, Industrial Ethernet Switch, DIN-Rail with Advanced Management Features (includes N-View) |
| 516TX-N..... | 16-port 10/100BaseTX, Industrial Ethernet Switch, DIN-Rail with N-View OPC switch monitoring |
| 516TX..... | 16-port 10/100BaseTX, Industrial Ethernet Switch, DIN-Rail |
| NTPS-24-1.3..... | N-Tron Power Supply (1.3 amp @ 24 VDC) |
| 900-PM..... | Panel Mount Kit - converts switch mounting from DIN-rail to panel mount |
| URMK..... | Universal Rack Mount Kit |



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