

The N-TRON® 1005TX is a low cost unmanaged five port Gigabit 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 where gigabit capability is required.

## PRODUCT FEATURES

- Compact, Space Saving Package
- Full IEEE 802.3, 802.3u, and 802.3ab Compliance
- Five 10/100/1000BaseT RJ-45 Ports
- Unmanaged Operation
- Extended Environmental Specifications
  - -40°C to 85° Operating Temperature
  - >2M Hours MTBF
- Supports Full/Half Duplex Operation
- Up to 10.0 Gb/s Maximum Throughput
- MDIX Auto Sensing Cable
- Auto Sensing Speed and Flow Control
- Full Wire Speed Communications
- Supports up to 4,000 MAC Addresses
- Store-and-Forward Technology
- Jumbo Frame support
- Redundant Power Inputs (10-30 VDC)
- LED Link/Activity Status Indication
- Hardened Metal DIN-Rail Enclosure

## PRODUCT OVERVIEW

The 1005TX Gigabit Industrial Network Switch is designed to solve the most demanding industrial communication requirements while providing high throughput and minimum downtime.

The 1005TX provides five RJ-45 auto sensing 10/100/1000BaseT ports. All ports are full/half duplex capable, using "state of the art" Ethernet switching technology. The 1005TX auto-negotiates the speed and flow control capabilities of the five TX port connections, and configures itself automatically.

Since the 1005TX 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 your specific network environment.

The 1005TX supports up to 4000 MAC addresses, thus enabling these products to support extremely sophisticated and complex network architectures.

The N-TRON 1005TX 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 1005TX can simplify plant wiring by eliminating the need to bring data acquisition and control network connections back to a climate controlled environment. The 1005TX 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, or panel mounted alongside Ethernet I/O or other Industrial Equipment.

To increase reliability the 1005TX provides dual redundant power inputs. LED's are provided to display the link status and activity of each port.

## SPECIFICATIONS

### Case Dimensions

Height:	4.3"	(11.0 cm)
Width:	1.0"	(2.6 cm)
Depth:	3.7	(9.4 cm)
Weight:	0.61 lbs.	(0.27 kg)
DIN-Rail:	35mm	

### Electrical

Input Voltage:	10-30 VDC
Steady Input Current:	230mA @24V
Inrush:	13Amp/61us@24V

### 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.

### Reliability

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

### Network Media

10BaseT:	>Cat3 Cable
100BaseTX:	>Cat5 Cable
1000BaseT:	>Cat5e Cable

### Connectors

10/100/1000BaseT:	Five (5) RJ-45 TX Copper Ports
-------------------	-----------------------------------

### Recommended Wiring Clearance

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

## Ordering Information

1005TX	Five 10/100/1000BaseT Ports
1000-PM	Panel Mount Kit
NTPS-24-1.3	DIN-Rail Power Supply 24V@1.3 Amp

## BENEFITS

### Industrial Network Switch

- Compact Size / Smaller 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 10/100/1000BaseT
- Auto Sensing 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/CE (CFR 47, Part 15, Subpart B, Class A)*

*EN 61000-6-2/4, IEC 61000-4-2/3/4/5/6*

*EN 55011, ICES-003*

*UL/cUL: Class I, Division 2, Groups A, B, C and D; T4  
UL 508, ICE and ANSI/ISA-12.12.01-2007*

*ABS Type Approval for Shipboard Applications*

*DNV Type Approval Certification*

*RoHS Compliant*

Designed to comply with:

*IEEE 1613 for Electric Utility Substations*

*NEMA TS1/TS2 for Traffic Control*

## Contact Information

**N-TRON Corp.**  
820 S. University Blvd., Suite 4E  
Mobile, AL 36609 USA  
TEL: (251) 342-2164  
FAX: (251) 342-6353  
Website: [www.n-tron.com](http://www.n-tron.com)  
Email: [N-TRON\\_info@n-tron.com](mailto:N-TRON_info@n-tron.com)

**N-TRON Europe GmbH**  
Alte Steinhäuserstr 19  
6330 Cham / Zg Switzerland  
TEL: +41 41 7406636  
FAX: +41 41 7406637

