N-TRON
THE INDUSTRIAL NETWORK COMPANY

105TX-POE

The 105TX-POE Unmanaged Industrial Ethernet Switch is designed to trasmit power, along with data, over an Ethernet network and is ideal for PoE capable devices where running an AC power feed is either not possible or cost effective. This feature allows an end user to power a PoE camera, wireless access point, or any other PoE capable device without the need for running separate wires for power. This also allows the ability for a centralized battery backup for all these devices.

PRODUCT FEATURES

- Compact, Space Saving Package
- Full IEEE 802.3 and 802.3af Compliance
- Five 10/100BaseTX RJ-45 Ports (4 PoE Ports)
- Unmanaged Operation
- Extended Environmental Specifications
  - -40ºC to 85º Operating Temperature
- Automatic Detection of Connected PoE Devices
- Support for Full/Half Duplex Operation
- Auto-sensing Duplex, Speed, and MDIX
- Up to 1.0 Gb/s Maximum Throughput
- Full Wire Speed Communications
- Supports 15.4 Watts per port (13 Watts at the PD)
- Redundant Power Inputs (46-49 VDC)
- Power Fault Status LED's
- LED Link/Activity Status Indication
- LED PoE Status Indication
- Hardened Metal DIN-Rail Enclosure

PRODUCT OVERVIEW

The N-TRON® 105TX-POE Industrial Network Switch is designed to solve the most demanding industrial communications requirements by providing high throughput and minimum downtime while also providing power to PoE capable devices over the Ethernet network.

The 105TX-POE provides five RJ-45 auto sensing 10/100BaseTX ports. All ports are full/half duplex capable, using "state of the art" Ethernet switching technology. Four of the five RJ-45 ports also act as PoE ports allowing power to pass through four of the eight strands of CAT5 cable. Each PoE port supports up to 15.4 watts of power.

The 105TX-POE auto-negotiates the speed and flow control capabilities of the five TX port connections, and configures itself automatically.

The N-TRON 105TX-POE also supports up to 2,000 MAC addresses, thus enabling these products to support extremely sophisticated and complex network architectures.

The 105TX-POE automatically detects any PoE device that is connected and powers it accordingly. Auto-disconnect is another feature of this device. When a PoE fault is detected on a particular port the PoE feature is disabled on that port, allowing only data communications to pass, and thus reducing the risk of damaging costly equipment.

The 105TX-POE is an ideal candidate for providing data and power to wireless LAN access points, network cameras, VoIP, and other PoE capable devices. The product also keeps the network affordable by simplifying the need for costly electrical wiring and electrician expenses.

The 105TX-POE 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 105TX-POE provides dual redundant power inputs. Two power LED's are also provided on this unit indicating a valid power source on both the redundant power inputs and also indicating when a power fault bus occurs.

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BENEFITS

PoE Industrial Network Switch

- Compact Size / Small Footprint
- Ability to Power Devices via LAN
- Eliminates need for Costly Electrical Wiring
- 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 Sensing Full/Half Duplex
- MDIX Auto Cable Sensing
- Unmanaged Operation
- Auto Detection of Connected PoE Devices
- Redundant Power Status LED's

Increased Performance

- Full Wire Speed Capable
- Full Duplex Capable
- Eliminates Network Collisions
- Increases Network Determinism
- Auto-Disconnect of PoE Port if Fault is Detected

Contact Information

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Ordering Information

105TX-POE	Five 10/100BaseTX Ports Four POE Ports
NTPS-48-5	DIN-Rail Power Supply 48V@ 5 Amp

SPECIFICATIONS

Physical

Height:	3.50" (8.89cm)
Width:	1.50" (3.81 cm)
Depth Incl. DIN-Rail Mount:	4.22" (10.72 cm)
Weight:	0.7 lbs. (0.3 kg)
DIN-Rail:	35mm

Electrical

Input Voltage:	46-49 VDC
Steady Input Current Under Full Load:	1.6 A@48V
Steady Input Current with No PoE, Switch Full Load:	65mA@48V
Inrush:	26Amp/1.3ms@48V

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.

Reliablity

MTBF:	>2 Million Hours

Network Media

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

Connectors

10/100BaseTX+PoE:	Four (4) RJ-45 TX/PoE Copper Ports
10/100BaseTX:	One (1) RJ-45 TX Copper Port

Recommended Wiring Clearance

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

Regulatory Approvals

FCC Title 47 Part 15 Class A, ICES-003- Class A,
CE: EN61000-6-2,4, EN55011, EN61000-4-2,3,4,5,6,
UL Listed (US and Canada) per ANSI/ISA-12.12.01-2000
Class I, Div. 2 Groups A,B,C,D,T4,
GOST-R Certification, RoHS Compliant
Designed to comply with:
IEEE 1613 for Electric Utility Substations,
ABS Standards for Shipboard Applications,
and NEMA TS1/TS2 for Traffic Control Equipment

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