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# NT24k<sup>®</sup>-16TX-POE Industrial PoE+ Switch

N-Tron<sup>®</sup> Networking Series



## ▶▶▶ Industrial Managed Gigabit PoE+ Switch

Red Lion's N-Tron<sup>®</sup> series NT24k<sup>®</sup>-16TX-POE industrial managed Gigabit Ethernet switch features 16 10/100/1000Base-T(X) ports and IEEE802.3af/at (PoE+), providing a robust solution for transmitting power and data to equipment in harsh environments.

Housed in a compact, hardened DIN-rail enclosure, the NT24k-16TX-POE managed switch features 16 Gigabit ports, redundant 22-49 VDC power inputs, high shock and vibration tolerance and a wide -40° to 80°C operating temperature range. Rugged, reliable and easy to use, the NT24k-16TX-POE switch offers a 240 Watt PoE budget that can be allocated to any of its 16 ports, up to 30 Watts per port.



### APPLICATIONS

- > Alternative Energy
- > Manufacturing
- > Oil & Gas
- > Transportation
- > Water/Wastewater

### PRODUCT HIGHLIGHTS

- > IEEE 802.3af/at output up to 30 Watts per port/ 240 Watts per switch
- > Smart Plug-and-Play Operation
- > 22 to 49 VDC Redundant Power Inputs
- > Wide -40° to 80°C Operating Temperature
- > Robust Remote Monitoring
- > N-Ring<sup>™</sup> and N-Link<sup>™</sup> Network Ring Technology

### FEATURES & BENEFITS

- > 16 Copper Ports
  - 10/100/1000Base-T(X) copper ports
- > Redundant 22 to 49 VDC Power Inputs
  - Boosts power to meet PoE+ output requirements
- > IEEE 802.3af/at PoE Output
  - 240 Watt PoE budget configurable across all 16 ports, up to 30 Watts per port
- > Extended Environmental Specifications
  - Wide -40° to 80°C operating temperature range
  - Ultra-reliable > 2 million hours MTBF
  - UL/cUL: Class I, Div. 2 Groups A, B, C and D
- > Plug-and-Play Operation
  - IGMP auto-configuration
  - MDIX auto-sensing cable
  - Simple network ring configuration
  - Backup and restore via recovery card or XML
- > Fully Managed Networking Functionality
  - Jumbo frame support
  - SNMP v1, v2, v3
  - Web browser management
  - Detailed ring map and fault location charting
  - RSTP - 802.1d, 802.1w, 802.1D
  - Trunking and port mirroring
  - 802.1Q tag VLAN and port VLAN
  - IEEE 802.1x with RADIUS remote server authentication
  - 802.1p QoS, port QoS and DSCP
  - DHCP client
  - Event log
  - SNTP (Simple Network Time Protocol)
  - Multi-Member N-Ring technology with ~30ms healing
  - N-Link redundant ring technology
  - N-View<sup>™</sup> monitoring technology
  - EtherNet/IP<sup>™</sup> CIP<sup>™</sup> messaging

industrial  
networking



EtherNet/IP<sup>™</sup>

# ▶▶▶ NT24k-16TX-POE Specifications

## SWITCH PROPERTIES

Operation: Managed  
Number of MAC Addresses: 16,000  
IEEE Compliant: 802.3, 802.3u, 802.3ab, 802.3x, 802.3af/at,  
802.1d/D/w, 802.1p, 802.1Q, 802.1x  
Latency (Typical): 1.6  $\mu$ s  
Switching Method: Store-and-Forward  
PoE Budget: Configurable up to 240 Watts  
Up to 30 Watts per port (25.5 at the PD)  
LED Status Indicators  
Configurable Alarm Contact  
Onboard Temperature Sensor  
Supports Full/Half Duplex Operation  
Maximum Throughput: Up to 32 Gb/s  
MDIX Auto Sensing Cable  
Auto Sensing Speed and Flow Control  
Communications: Full Wire Speed  
MTBF: >2 million hours

## POWER INPUT

Input Voltage: 22-49 VDC  
Steady Input Current: 11.24 A @ 24 VDC  
Inrush: 67 A / .096 ms @ 24 VDC  
BTU/HR: 122

## POWER OVER ETHERNET

PoE Standard: IEEE 802.3af/at Gigabit PSE  
PoE Budget: Configurable up to 240 Watts  
Up to 30 Watts per port (25.5 at the PD)  
PoE Output Power: 57 VDC  
Power Pin Assignment: Pins 1/2 (-), Pins 3/6 (+)  
PSE Type: Type 2

## CONNECTORS

10/100/1000BaseT: Sixteen (16) RJ-45 ports  
ESD and surge protection diodes on all copper ports  
Configuration Port: One (1) USB Type B

## NETWORK MEDIA

10BaseT:  $\geq$  Cat3 cable  
100BaseTX:  $\geq$  Cat5 cable  
1000BaseT:  $\geq$  Cat5e cable

## RECOMMENDED WIRING CLEARANCE

Front: 2" (5.08 cm)  
Top: 4" (10.16 cm)

## 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.  
Shock: 200 g @ 10 ms (bulkhead mounted)  
Vibration: 50 g @ 5-200 Hz, Triaxial (bulkhead mounted)

## CERTIFICATION & COMPLIANCE

Product Safety:  
ANSI/ISA 12.12.01-2013 Class I and II, Div. 2 and Class III, Div. 1 and 2, Groups A, B, C and D Hazardous Locations  
UL508 Industrial Control Equipment  
CAN/CSA-C22.2 No. 213-M1987 Class I Div. 2 Hazardous Locations  
CAN/CSA-C22.2 No. 14-M1987 Industrial Control Equipment  
Emissions:  
FCC Title 47, Part 15, Radio Frequency Devices, Subpart B ANSI C63.4-2009; Industry Canada ICES-003, EN 55011; EN 61000-6-4, EN 61000-3-2, EN61000-3-3, EN 55032  
Immunity:  
EN 55024, EN 61000-6-2; IEC 61000-4-2 (ESD); IEC 61000-4-3 (RFAM); IEC 61000-4-4 (EFT); IEC 61000-4-5 (SURGE); IEC 61000-4-6 (RFCM); IEC 61000-4-8 (PFMF); IEC 61000-4-11 (VDI)  
Rail:  
EN 50155, EN 50121 and EN 61373  
Designed to Comply with:  
IEEE 1613 (Electric Utility Substations), NEMA TS1/TS2 (Traffic Control)  
Other:  
ABS Type Approval for Shipboard Applications; EMC Directive 2014/30/EU; LV Directive 2014/35/EU GOST-R, RoHS Compliant

## MECHANICAL

Case Dimensions:  
Height: 5.88" (14.92 cm)  
Width: 4.28" (10.88 cm)  
Depth: 5.54" (14.07 cm)  
Weight: 3.25 lbs (1.48 kg)  
Mount: DIN Rail 35 mm

## WARRANTY

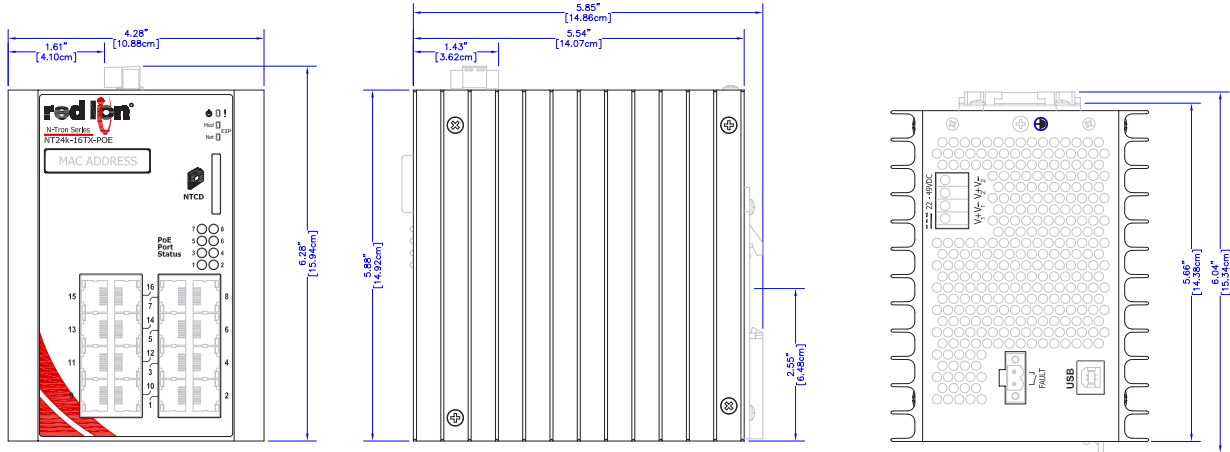
3 Years on Design and Manufacturing Defects

## ORDERING GUIDE

MODEL NUMBER	DESCRIPTION
NT24K-16TX-POE	16 Port 10/100/1000BaseT Managed PoE+ Industrial Ethernet Switch
NTCD-CFG	NT24k Configuration Recovery Device
NTPS-24-20	DIN-Rail Power Supply 20 Amp @ 24 VDC
NTPS-48-10	DIN-Rail Power Supply 10 Amp @ 48 VDC
NT24K-NM-PMK	NT24k Non-Modular Panel Mount Kit

# ▶▶▶ NT24k-16TX-POE Specifications

## DIMENSIONS



All specifications are subject to change. Consult the company website for more information.



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As the global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our automation, Ethernet and cellular M2M technology enables companies worldwide to gain real-time data visibility that drives productivity. Product brands include Red Lion, N-Tron and Sixnet. With headquarters in York, Pennsylvania, the company has offices across the Americas, Asia-Pacific and Europe. Red Lion is part of Spectris plc, the productivity-enhancing instrumentation and controls company. For more information, please visit [www.redlion.net](http://www.redlion.net).

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