

# NT24k™-12FX4-POE Industrial PoE+ Switch

N-Tron® Networking Series



## ▶▶▶ Industrial Managed Gigabit PoE+ Ethernet Switch

Red Lion's N-Tron series NT24k-12FX4-POE compact managed Gigabit Ethernet switch features eight 10/100/1000Base-T(X) ports with PoE+ and four 100Base-FX fiber ports with SC or ST connectors, providing a robust solution for transmitting power and data to equipment in harsh environments.

The NT24k-12FX4-POE managed switch features 12 ports (eight Gigabit IEEE 802.3af/at Power over Ethernet Plus (PoE+) ports and four 100Base-FX fiber ports) and is housed in a compact, hardened metal DIN-rail enclosure with redundant 22-49 VDC power inputs. Designed to handle the most demanding environments, the NT24k-12FX4-POE provides up to 30 Watts of power per port, high shock and vibration ratings and a wide -40° to 80°C operating temperature range.



### APPLICATIONS

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

### PRODUCT HIGHLIGHTS

- > IEEE 802.3af/at PoE+ Output
- > Smart Plug-and-Play Operation
- > 22 to 49 VDC Redundant Power Inputs
- > -40° to 80°C Wide Operating Temperature
- > Robust Remote Monitoring
- > N-Ring™ & N-Link™ Network Ring Technology

### FEATURES & BENEFITS

- > 12 Copper and Fiber Ports
  - Eight 10/100/1000Base-T(X) copper ports, supporting PoE+ on each port
  - Four 100Base-FX ports with SC/ST connectors
- > Redundant 22 to 49 VDC Power Inputs
  - Boosts power to meet PoE+ output requirements
- > IEEE 802.3af/at PoE Output
  - Supports PoE+ output on all copper ports simultaneously
- > Extended Environmental Specifications
  - -40° to 80°C operating temperature range
  - > 2M 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 Features Include:
  - 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
  - SNTP (Simple Network Time Protocol)
  - Multi-Member N-Ring technology with ~30ms healing
  - N-Link redundant ring technology
  - N-View™ monitoring technology
  - EtherNet/IP™ CIP™ messaging

industrial  
networking



# ▶▶▶ NT24k-12FX4-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  
Supports 30 Watts per Port (25.5 Watts at the PD)  
LED Status Indicators  
Configurable Alarm Contact  
Onboard Temperature Sensor  
Supports Full/Half Duplex Operation  
Maximum Throughput: Up to 16.8 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: 60.8 A / .2 ms @ 24 VDC  
BTU/HR: 122

## POWER OVER ETHERNET

PoE Standard: IEEE 802.3af/at Gigabit PSE  
PoE Output Power: 57 VDC / 30 Watts Output (25.5 W at PD)  
Power Pin Assignment: Pins 1/2 (-), Pins 3/6 (+)  
PSE Type: Type 2

## CONNECTORS

10/100/1000BaseT: Eight (8) RJ-45 ports  
ESD and surge protection diodes on all copper ports  
100Base-FX: Four (4) ST or SC duplex fiber ports  
Configuration Port: One (1) USB Type B

## NETWORK MEDIA

10BaseT:  $\geq$  Cat3 cable  
100BaseTX:  $\geq$  Cat5 cable  
1000BaseT:  $\geq$  Cat5e cable  
100Base-FX Multimode: 50-62.5/125  $\mu$ m  
100Base-FXE Singlemode: 7-10/125  $\mu$ m

## RECOMMENDED WIRING CLEARANCE

Front: 4" (10.16 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: UL/cUL ANSI/ISA 12.12.01-2013, Class I and II,  
Division 2 and Class III, Division 1 and 2 Hazardous (Classified)  
Locations Groups A, B, C and D, T4 and UL 508. Canadian Standards  
C22.2 No. 213-M1987 Non-incendive Electrical Equipment for Use  
in Class I, Division 2 Hazardous Locations and C22.2 No. 14-M1987  
ABS Type Approval for Shipboard Applications  
Designed to Comply with: IEEE 1613 (Electric Utility Substations),  
NEMA TS1/TS2 (Traffic Control)  
Immunity: CE, EN 61000-6-2/4, IEC 61000-4-2/3/4/5/6/8/11  
Emissions: EN 55011, ICES-003, FCC/CE (CFR 47, Part 15,  
Subpart B, Class A)  
RoHS Compliant

## MECHANICAL

Case Dimensions:  
Height: 5.88" (14.92 cm)  
Width: 4.28" (10.87 cm)  
Depth: 5.54" (14.07 cm)  
Weight: 3.32 lbs (1.51 kg)  
Mount: DIN Rail 35 mm

## WARRANTY

3 Years on Design and Manufacturing Defects

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## FIBER TRANSCEIVER CHARACTERISTICS

Fiber Mode	MM	SM	SM	SM
Fiber Length	2 km	15 km	40 km	80 km
TX Power Min	-19 dBm	-15 dBm	-5 dBm	-5 dBm
RX Sensitivity Max	-31 dBm	-31 dBm	-34 dBm	-34 dBm
Wavelength	1310 nm	1310 nm	1310 nm	1550 nm

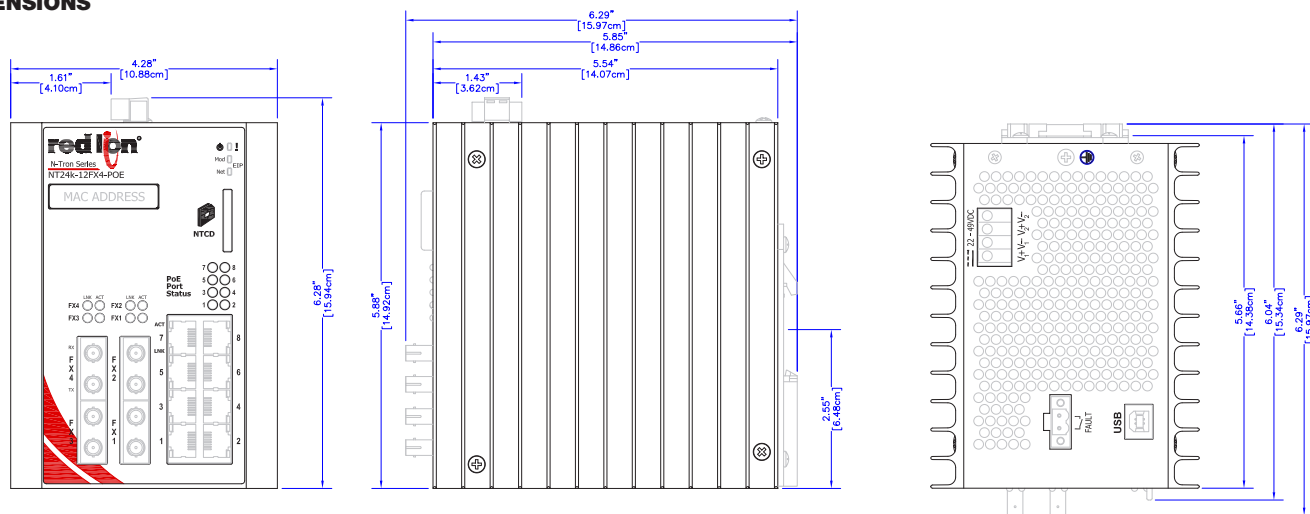
## ORDERING GUIDE

PART NUMBER	DESCRIPTION
NT24K-12FX4-XX-POE	12-Port Gigabit Managed POE+ Industrial Ethernet Switch (8 10/100/1000BaseT, 4 100BaseFX, multimode 2km ports)
NT24K-12FXE4-XX-YY-POE	12-Port Gigabit Managed POE+ Industrial Ethernet Switch (8 10/100/1000BaseT, 4 100BaseFX, singlemode ports)
NTCD-CFG	NT24k Configuration Recovery Device
NTPS-24-20	DIN-Rail Power Supply, 20 Amp @ 24VDC
NTPS-48-10	DIN-Rail Power Supply, 10 Amp @ 48VDC
NT24K-NM-PMK	NT24k Non-Modular Panel Mount Kit

Where XX=ST or SC connector

Where YY=15, 40, or 80

## DIMENSIONS



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



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