NT24k®-12FX4 Industrial Ethernet Switch

N-Tron® Networking Series

RL RED LION®

▶▶▶ Industrial Managed Gigabit Ethernet Switch

Red Lion's N-Tron® series NT24k®-12FX4 compact managed Gigabit Ethernet switch features eight 10/100/1000Base-T(X) ports and four 100Base-FX fiber ports with SC or ST connectors, providing a reliable and secure communication network to equipment in harsh environments.

The versatile NT24k-12FX4 managed switch features 12 ports (eight Gigabit copper ports and four 100Base-FX fiber ports) and is housed in a compact, hardened metal DIN-rail enclosure with redundant 10-49 VDC power inputs. Designed to handle the most demanding environments, the NT24k-12FX4 offers wire-speed throughput, expanded shock and vibration ratings and wide -40° to 85°C operating temperature rating. IGMP auto-configuration, IEEE 802.1x with RADIUS remote server authentication and N-Ring™ fast healing ring technology ensure quick deployment and robust secure network communications.

APPLICATIONS

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

PRODUCT HIGHLIGHTS

- > Copper & Fiber Ports
- > Smart Plug-and-Play Operation
- > 10 to 49 VDC Redundant Power Inputs
- > -40° to 85°C Wide Operating Temperature
- > Robust Remote Monitoring
- > N-Ring & N-Link Network Ring Technology

IEEE 1588v2 PTP OPTIONS

- • Boundary Clock
- • Transparent Clock

IEEE 1588v2 applications include
- • Coordinated motion control
- • Time-stamped data logging
- • Time-stamped fault detection

PTP Models & Upgrade Kit Available

FEATURES & BENEFITS

- > 12 Copper and Fiber Ports
  - • Eight 10/100/1000Base-T(X) copper ports
  - • Four 100Base-FX ports with SC/ST connectors
- > Redundant 10 to 49 VDC Power Inputs
  - • Keeps network running in the event of a power supply failure
- > Extended Environmental Specifications
  - • -40° to 85°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:
  - • SSH/SSL/HTTPS
  - • 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
  - • DHCP Server, Option 82 relay, Option 61, IP fallback
  - • Port Security – MAC address based
  - • 802.1p QoS, port QoS and DSCP
  - • Event Log/Syslog
  - • SNTP (Simple Network Time Protocol)
  - • IEEE 1588v2 (PTP) models available
  - • Multi-Member N-Ring technology with ~30ms healing
  - • N-Link redundant ring technology
  - • N-View™ monitoring technology
  - • EtherNet/IP™ CIP™ messaging
  - • 802.1AB-2005 LLDP (Link Layer Discovery Protocol)

industrial networking

FC c(UL)us LISTED 65SN CE ABS TYPE APPROVED PRODUCT PC RoHS compliant EtherNet/IP™

SWITCH PROPERTIES

Operation: Managed
Number of MAC Addresses: 16,000
IEEE Compliance: 802.3, 802.3u, 802.3ab, 802.3x,
802.1d/D/w, 802.1p, 802.1Q, 802.1x
IEEE 1588v2 Software-Based Option
Latency (Typical): 1.6 µs
Switching Method: Store-and-Forward
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
Jumbo Frame Support

POWER INPUT

Input Voltage: 10-49 VDC
Steady Input Current: 750 mA @ 24 VDC
Inrush: 21 A / .3 ms @ 24 VDC
BTU/HR: 61.44

CONNECTORS

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

NETWORK MEDIA

10BaseT: ≥ Cat3 cable
100BaseTX: ≥ Cat5 cable
1000BaseT: ≥ Cat5e cable
100BaseFX Multimode: 50-62.5/125 µm
100BaseFX Singlemode: 7-10/125 µm

RECOMMENDED WIRING CLEARANCE

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

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: 200 g @ 10 ms (bulkhead mounted)
Vibration: 50 g @ 5-20 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: 3.10" (7.87 cm)
    Depth: 5.54" (14.07 cm)
Weight: 2.05 lbs (0.93 kg)
Mount: DIN Rail 35 mm

WARRANTY

3 Years on Design and Manufacturing Defects

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

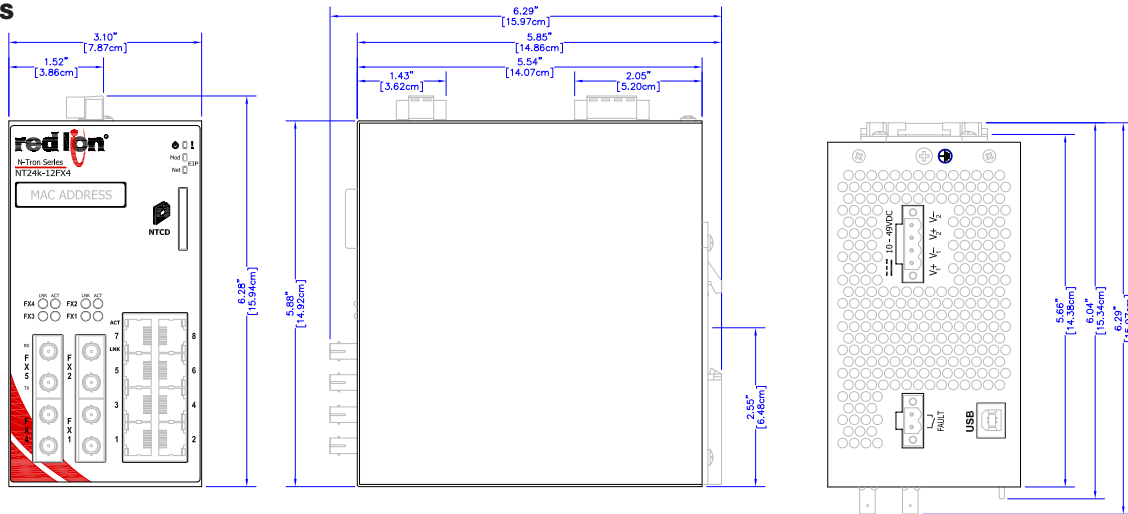* Fiber Length distances represent typical performance.
  Link budgets should be evaluated based on specific application conditions.

ORDERING GUIDE

PART NUMBER	DESCRIPTION
NT24K-12FX4-XX	12-Port Gigabit Managed Industrial Ethernet Switch (8 10/100/1000BaseT, 4 100BaseFX, multimode 2km ports)
NT24K-12FX4-XX-PT	12-Port Gigabit Managed Industrial Ethernet Switch (8 10/100/1000BaseT, 4 100BaseFX, multimode 2km ports), PTP Enabled
NT24K-12FXE4-XX-YY	12-Port Gigabit Managed Industrial Ethernet Switch (8 10/100/1000BaseT, 4 100BaseFX, singlemode ports)
NT24K-12FXE4-XX-YY-PT	12-Port Gigabit Managed Industrial Ethernet Switch (8 10/100/1000BaseT, 4 100BaseFX, singlemode ports), PTP Enabled
NTCD-CFG	NT24k Configuration Recovery Device
NTPS-24-1.3	DIN-Rail Power Supply 1.3 Amp @ 24 VDC
NT24K-NM-PMK	NT24k Non-Modular Panel Mount Kit
NT24K-KIT-PTP	NT24k Upgrade License to Enable IEEE 1588/PTP on Non-PT NT24k Switches

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.