NT24k®-12SFP-DM4-POE Industrial PoE+ Switch

N-Tron® Networking Series

RED LION™
a spectris company

▶▶▶ Industrial Managed Gigabit PoE+ Ethernet Switch

Red Lion's N-Tron® series NT24k®-12SFP-DM4-POE compact managed Gigabit Ethernet switch features eight 10/100/1000Base-T ports with PoE+ and four dual-mode 100/1000Base SFP slots with LC fiber or copper connectors, providing a robust solution for transmitting power and data to equipment in harsh environments.

The NT24k-12SFP-DM4-POE managed switch features 12 ports (eight Gigabit IEEE 802.3af/at Power over Ethernet Plus (PoE+) ports and four dual-mode SFP expansion slots, which support 100Base or 1000Base SFP transceivers) 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-12SFP-DM4-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

> Copper & Fiber Ports
> 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

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, supporting PoE+ on each port
  - Four dual-mode SFP expansion slots; supports 100Base or 1000Base SFP transceivers
> Redundant 22 to 49 VDC Power Inputs
  - Boosts power to meet PoE+ output requirements
> IEEE 802.3af/at PoE Output
  - Supports PoE+ on all built-in 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:
  - 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 RoHS compliant EtherNet/IP

NT24k-12SFP-DM4-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
IEEE 1588v2 Software-Based Option
Latency (Typical):1.6 µs
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 24.0 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: 22-49 VDC
Steady Input Current: 11.6 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
1000BaseT SFP: Up to four (4) RJ-45 copper ports
100BaseFX SFP: Up to four (4) LC fiber ports
1000BaseSX/LX SFP: Up to four (4) LC fiber ports
Configuration Port: One (1) USB Type B

NETWORK MEDIA

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

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 @ 5-20 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: 4.28" (10.88 cm)
Depth: 5.54" (14.07 cm)
Weight: 3.19 lbs (1.45 kg)
Mount: DIN Rail 35 mm

WARRANTY

3 Years on Design and Manufacturing Defects

NT24k-12SFP-DM4-POE Specifications

SFP 100BASE 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	-34 dBm	-34 dBm	-34 dBm
Wavelength	1310 nm	1310 nm	1310 nm	1550 nm
Laser Type	FP	FP	FP	DFB

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

SFP GIGABIT FIBER TRANSCEIVER CHARACTERISTICS

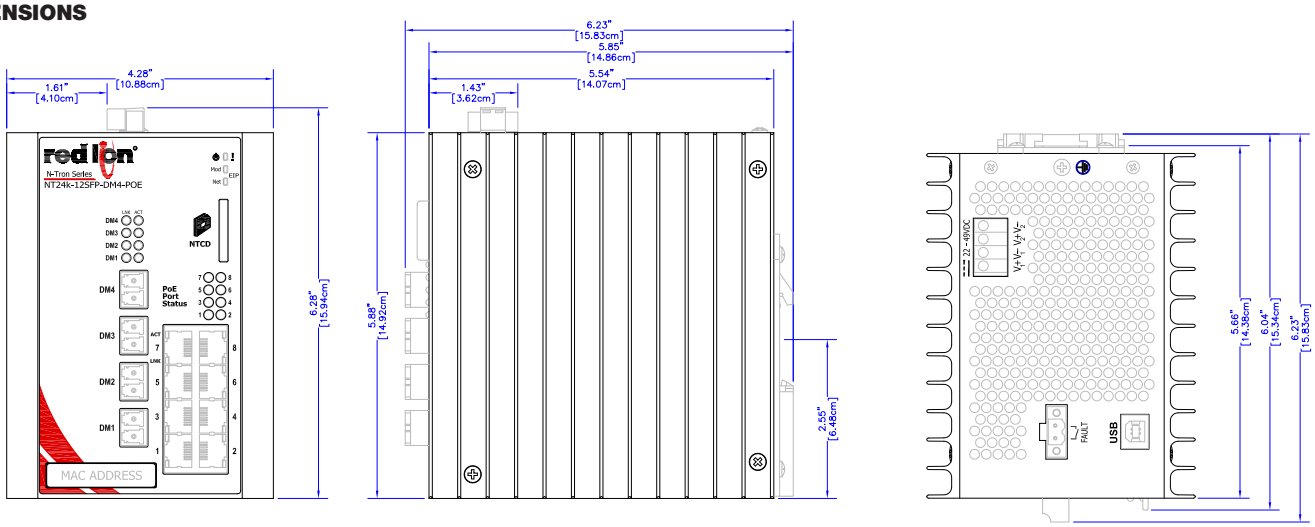
Fiber Mode	MM	SM	SM	SM
Fiber Length*	550m @ 50/125µm 275m @ 62.5/125µm	10 km	40 km	80 km
TX Power Min	-9.5 dBm	-9.5 dBm	-2 dBm	0 dBm
RX Sensitivity Max	-17 dBm	-20 dBm	-22 dBm	-24 dBm
Wavelength	850 nm	1310 nm	1310 nm	1550 nm
Laser Type	VCSEL	FP	DFB	DFB

ORDERING GUIDE

PART NUMBER	DESCRIPTION
NT24K-12SFP-DM4-POE	12-Port Gigabit Managed POE+ Industrial Ethernet Switch (8 10/100/1000BaseT, 4 Dual Mode (100/1000Base) SFP Expansion slots); SFP Transceivers sold separately
NT24K-12SFP-DM4-POE-PT	12-Port Gigabit Managed POE+ Industrial Ethernet Switch (8 10/100/1000BaseT, 4 Dual Mode (100/1000Base) SFP Expansion slots); SFP Transceivers sold separately, PTP Enabled
NTCD-CFG	NT24k Configuration Recovery Device
NTSFP-FX	100BaseFX multimode fiber SFP pluggable mini-GBIC transceiver (LC style connector, 2km)
NTSFP-FXE-YY	100BaseFX singlemode fiber SFP pluggable mini-GBIC transceiver (LC style connector)
NTSFP-TX	1000BaseT copper SFP pluggable mini-GBIC transceiver
NTSFP-SX	1000BaseSX multimode fiber SFP pluggable mini-GBIC transceiver (LC style connector, 550m)
NTSFP-LX-ZZ	1000BaseLX singlemode fiber SFP pluggable mini-GBIC transceiverv (LC style connector)
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
NT24K-KIT-PTP	NT24k Upgrade License to Enable IEEE 1588/PTP on Non-PT NT24k switches

Where YY=15, 40, or 80
Where ZZ=10, 40, or 80

DIMENSIONS



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

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