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## NT24k<sup>®</sup>-14GX6-POE Industrial PoE+ Switch **red**

N-Tron<sup>®</sup> Networking Series

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

Red Lion's N-Tron<sup>®</sup> series NT24k<sup>®</sup>-14GX6-POE compact managed Gigabit Ethernet switch features eight 10/100/1000Base-T(X) ports with PoE+ and six 1000Base-FX fiber ports with SC connectors, providing a robust solution for transmitting power and data to equipment in harsh environments.

The NT24k-14GX6-POE managed switch features 14 ports (eight Gigabit IEEE 802.3af/at Power over Ethernet Plus (PoE+) ports and six 1000Base-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-14GX6-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<sup>™</sup> & N-Link<sup>™</sup> Network Ring Technology

#### **FEATURES & BENEFITS**

- > 14 Copper and Fiber Ports
  - Eight 10/100/1000Base-T(X) copper ports, supporting PoE+ on each port
  - Six 1000Base-FX ports with SC 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:

industrial

- IGMP auto-configuration
- MDIX auto-sensing cable
- Simple network ring configuration
- Backup and restore via recovery card or XML

networking

#### > 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
- Event Log
- SNTP (Simple Network Time Protocol)
- Multi-Member N-Ring technology with ~30ms healing

Rons

- N-Link redundant ring technology
- N-View<sup>™</sup> monitoring technology
- EtherNet/IP<sup>™</sup> CIP<sup>™</sup> messaging







#### **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 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 28 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: 11.37 A @ 24 VDC Inrush: 60 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 1000BaseFX: Six (6) SC duplex fiber ports Configuration Port: One (1) USB Type B

#### **NETWORK MEDIA**

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

#### **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:

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

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) Bail:

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: 3.35 lbs (1.52 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*	550m @ 50/125µm 300m @ 62.5/125µm	10 km	40 km	80 km
TX Power Min	-9.5 dBm	-9.5 dBm	-5 dBm	0 dBm
RX Sensitivity Max	-17 dBm	-20 dBm	-23 dBm	-24 dBm
Wavelength	850 nm	1310 nm	1310 nm	1550 nm
Laser Type	VCSEL	FP	DFB	DFB

\* Fiber Length distances represent typical performance.

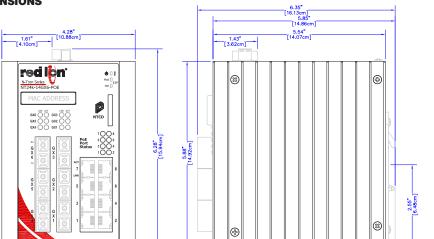
Link budgets should be evaluated based on specific application conditions.

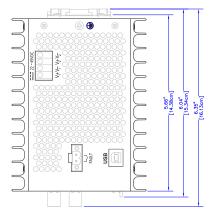
#### **ORDERING GUIDE**

PART NUMBER	DESCRIPTION
NT24K-14GX6-SC-POE	14-Port Gigabit Managed POE+ Industrial Ethernet Switch (8 10/100/1000BaseT, 6 1000BaseSX, multimode 550m ports)
NT24K-14GXE6-SC-ZZ-POE	14-Port Gigabit Managed POE+ Industrial Ethernet Switch (8 10/100/1000BaseT, 6 1000BaseLX, 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 ZZ=10, 40, or 80

#### 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.

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