

# NT24k<sup>®</sup>-11GX3 Industrial Ethernet Switch

N-Tron<sup>®</sup> Networking Series



## ▶▶▶ Industrial Managed Gigabit Ethernet Switch

Red Lion's N-Tron<sup>®</sup> series NT24k<sup>®</sup>-11GX3 compact managed Gigabit Ethernet switch features eight 10/100/1000Base-T(X) ports and three 1000Base-FX fiber ports with SC connectors, providing a reliable and secure communication network to equipment in harsh environments.

The versatile NT24k-11GX3 managed switch features 11 ports (eight Gigabit copper ports and three 1000Base-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-11GX3 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 in alternative energy, factory automation applications, transportation and water/wastewater.



### 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

### FEATURES & BENEFITS

- > 11 Copper and Fiber Ports
  - Eight 10/100/1000Base-T(X) copper ports
  - Three 1000Base-FX ports with SC 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:
  - 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™ monitoring technology
  - EtherNet/IP™ CIP™ messaging

industrial  
networking



EtherNet/IP™

# ▶▶▶ NT24k-11GX3 Specifications

## 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  
Latency (Typical): 1.6  $\mu$ s  
Switching Method: Store-and-Forward  
LED Status Indicators  
Configurable Alarm Contact  
Onboard Temperature Sensor  
Supports Full/Half Duplex Operation  
Maximum Throughput: Up to 22.0 Gb/s  
MDIX Auto Sensing Cable  
Auto Sensing Speed and Flow Control  
Communications: Full Wire Speed  
MTBF: >2 million hours

## POWER INPUT

Input Voltage: 10-49 VDC  
Steady Input Current: 780 mA @ 24 VDC  
Inrush: 22.6 A / .3 ms @ 24 VDC  
BTU/HR: 63.89

## CONNECTORS

10/100/1000BaseT: Eight (8) RJ-45 ports  
ESD and surge protection diodes on all copper ports  
1000BaseFX: Three (3) 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  
1000BaseSX Multimode: 50-62.5/125  $\mu$ m  
1000BaseLX 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 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: 1.96 lbs (0.89 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*      | 550m @ 50/125µm<br>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     |

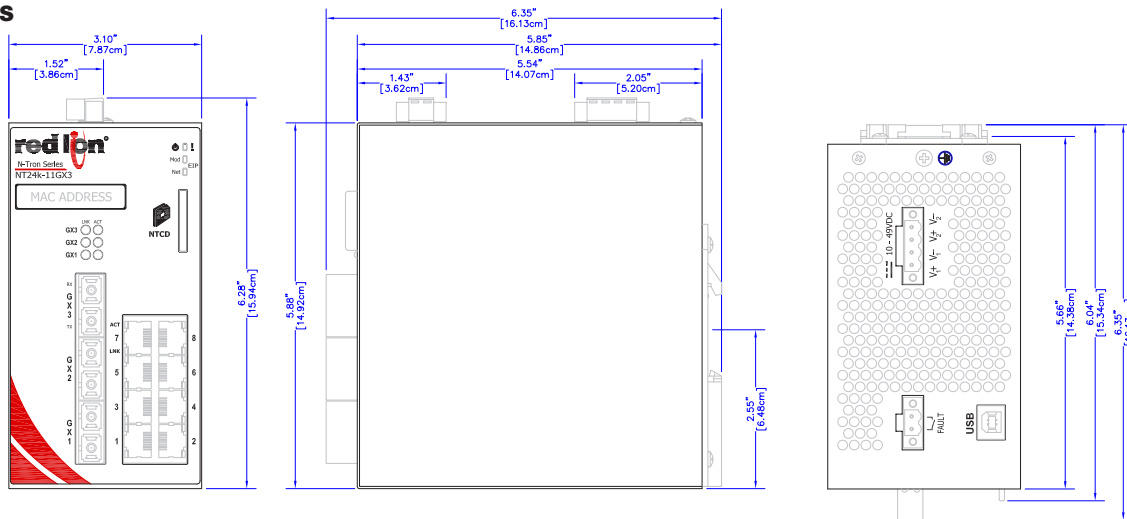
\* Fiber Length distances represent typical performance.  
Link budgets should be evaluated based on specific application conditions.

## ORDERING GUIDE

| PART NUMBER       | DESCRIPTION   |
|-------------------|---|
| NT24K-11GX3-SC    | 11-Port Gigabit Managed Industrial Ethernet Switch (8 10/100/1000BaseT, 3 1000BaseSX, multimode 550m ports) |
| NT24K-11GX3-SC-ZZ | 11-Port Gigabit Managed Industrial Ethernet Switch (8 10/100/1000BaseT, 3 1000BaseLX, singlemode ports)     |
| 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   |

Where ZZ=10, 40, or 80

## DIMENSIONS



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



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