

# N-Tron® Series NT5010-DM2



## Gigabit Managed Ethernet Switch

The NT5010-DM2 Gigabit Industrial Switch sets a new standard for performance, reliability, and ease of use. The switch features a modern, graphical user interface with a quick start wizard to guide users through switch configuration. A logical view of the switch shows active ports, temperature, alarm and LED status, along with port traffic and event gauges in a single easy to read dashboard.

Features include:



- Eight 10/100/1000 RJ45 ports
- Two dual mode 100/1000Base SFP expansion slots; supports 100Base or 1000Base SFP transceivers
- Redundant 10–49 VDC power inputs
- High shock and vibration tolerance
- N-Ring™ technology with ~30ms healing and RSTP/ MSTP network redundancy
- Password encryption, IEEE 802.1X, RADIUS, MAC filtering, syslog
- Advanced management and diagnostics features



## Ordering Guide

### Main Unit

Part Number	Description
NT-5010-DM2-0000	10-Port Gigabit Managed Industrial Ethernet Switch (8 10/100/1000BaseT RJ45 Ports, 2 Dual Mode 100/1000Base SFP Expansion Slots)

Model number may be followed by -CC indicating conformal coating.

### Accessories

Part Number	Description
NT-CPMA-04-00000	NT5000 Panel Mount Kit, Type B (Narrow)
NTPS-24-1-3	DIN Rail Power Supply, 1.3 Amp @ 24 VDC
NTSFP-FX	100BaseFX Multimode Fiber SFP Transceiver (LC Style Connector, 2 km)
NTSFP-FXE-15	100BaseFX Singlemode Fiber SFP Transceiver (LC Style Connector, 15km)
NTSFP-FXE-40	100BaseFX Singlemode Fiber SFP Transceiver (LC Style Connector, 40 km)
NTSFP-FXE-80	100BaseFX Singlemode Fiber SFP Transceiver (LC Style Connector, 80 km)

# NT5010-DM2 Ordering Guide and Specifications

Part Number	Description
NTSFP-SX	1000BaseSX Multimode Fiber SFP Transceiver (LC Style Connector, 550 m)
NTSFP-LX-10	1000BaseLX Singlemode Fiber SFP Transceiver (LC Style Connector, 10 km)
NTSFP-LX-40	1000BaseLX Singlemode Fiber SFP Transceiver (LC Style Connector, 40 km)
NTSFP-LX-80	1000BaseLX Singlemode Fiber SFP Transceiver (LC Style Connector, 80 km)
NTSFP-TX	1000BaseT Copper SFP Transceiver (RJ45 Connector)

## Specifications

### Hardware

Compact, space saving, hardened industrial design  
Wide operating temperature  
High shock and vibration tolerance  
Shock: IEC 68-2-27: 200 g @ 10 ms Triaxial; non-operational; panel mounted  
Vibration: IEC 68-2-6: 15 g @ 5-200 Hz Triaxial; operational; panel mounted  
Reverse polarity protection  
ESD and surge protection  
Fast boot (traffic passes <20 seconds)  
Configurable alarm contact  
Configurable bi-color fault status LED  
LED port status indicators  
Jumbo frame support  
Redundant power inputs (10-49 VDC)  
Hardened industrial design  
IEEE 802.3 compliance  
Full wire speed communication  
MDIX auto-sensing cable  
Auto-sensing speed and flow control  
Up to 20.0 Gb/s maximum throughput  
Store-and-forward technology  
Number of MAC addresses: up to 4k  
Latency (typical): < 1.8  $\mu$ s  
MTBF: 1.5M Hours

### Management

Modern, intuitive Web Interface  
Configuration wizard  
Graphical dashboard and logical view of the switch  
Command Line Interface  
Port control  
IGMP v1/v2/v3 auto-configuration  
SNMP v1/v2/v3  
NTP  
802.1Q tag VLAN and port VLAN  
IEEE 802.1p QoS and port QoS  
Text-based configuration file  
File transfer: HTTP/HTTPS, TFTP, SNMP  
DHCP Server, Option 82 relay, Option 61, IP fallback

### Security

SSH, SSL, HTTPS  
MAC Filtering

IEEE 802.1X with RADIUS remote server authentication  
Port/User lockout after failed authentication attempts  
SNMPv3  
Password encryption

### Diagnostic

Port mirroring  
Event log/Syslog  
LLDP  
Advanced cable diagnostics

### Network Redundancy

RSTP/MSTP  
Port trunking/LACP  
N-Ring™ technology with ~30ms healing

### MIBs

RFC 2674 VLAN MIB  
RFC 2819 RMON (Group 1, 2, 3 & 9)  
RFC 1213 MIB II  
RFC 1215 TRAPS MIB  
RFC 4188 Bridge MIB  
RFC 4292 IP Forwarding Table MIB  
RFC 4293 Management Information Base for the Internet Protocol (IP)  
RFC 5519 Multicast Group Membership Discovery MIB  
RFC 2863 Interface Group MIB using SMI v2  
RFC 4133 Entity MIB version 3  
RFC 3411 SNMP Management Frameworks  
RFC 3414 User-based Security Model for SNMPv3  
RFC 3415 View-based access Control Model for SNMP  
IEEE 802.1AB LLDP-MIB  
IEEE 802.1 MSTP MIB

### Software Tool To Manage/Schedule Firmware

Updates  
N-View™ 2

### Certification & Compliance

Product Safety: UL 61010 and C22.2 No. 61010 OrdLoc, UL 121201 and CSA C22.2 No. 213 Class I, Division 2 HazLoc, ATEX, IECEx and UKEx II 3 G Ex ec nC IIC T4 Gc, UL 20 ATEX 2645X, UL 22.0038X IECEx and UL22UKEX2346X  
EMI/EMC: CFR 47, Part 15, Subpart B, Canada ICES-003, ANSI

# NT5010-DM2 Dimensions and Specifications

C63.4, EN 61000-6-2 and 4, IEC 61000-4-2, 3, 4, 5, 6 and 8  
 Shock & Vibration (panel mounted) - IEC 68-2-27: 200 g @ 10 ms  
 Triaxial; non-operational, IEC 68-2-6: 15 g @ 5-200 Hz Triaxial;  
 operational  
 Railway/Rolling Stock - EN 50155, EN 50121 and EN 61373  
 Marine: ABS Type Approval for Shipboard Applications  
 Designed to Comply With - IEEE 1613 for Electric Utility  
 Substations and NEMA TS1/TS2 for Traffic Control  
 Other - RoHS compliant

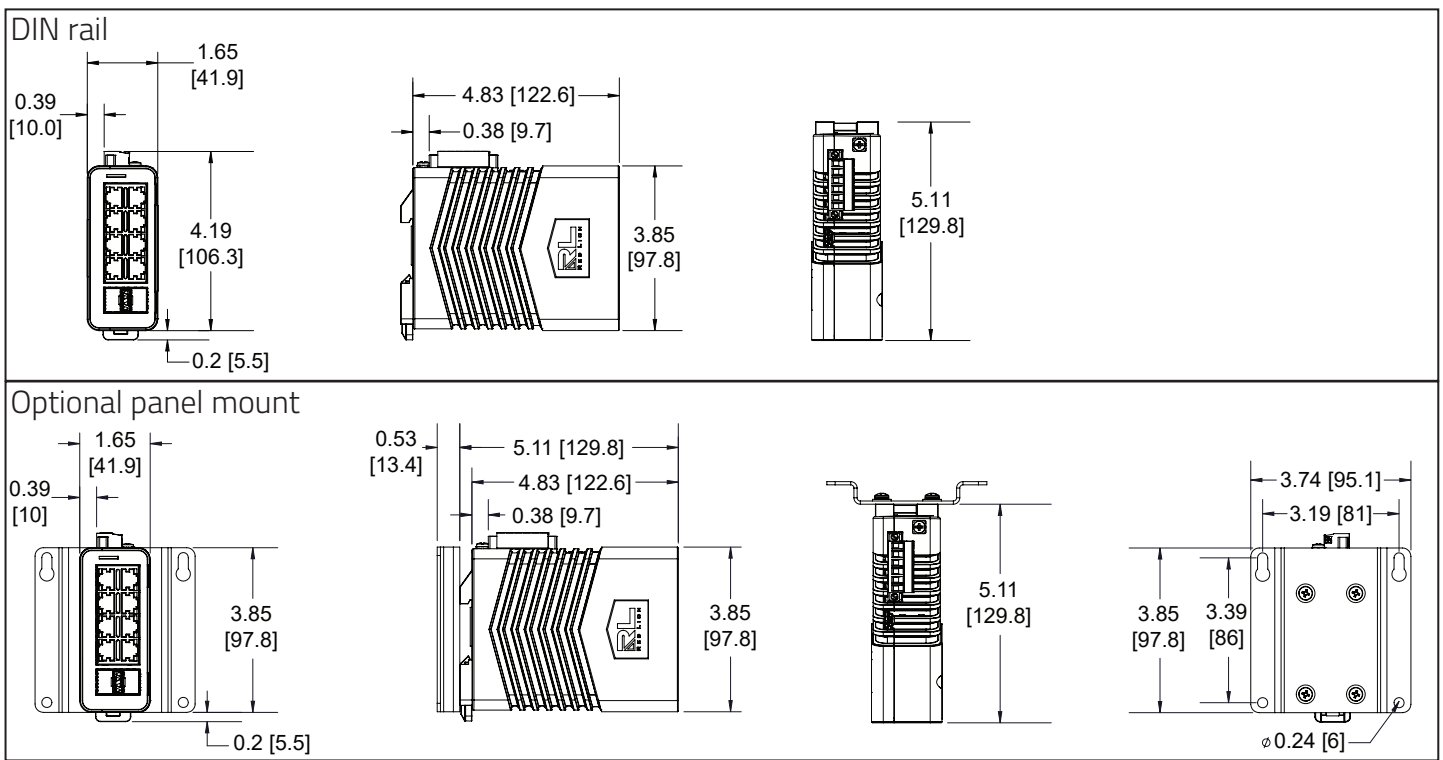
## Warranty

3 years on design and manufacturing defects.

Specifications are subject to change.

Visit [www.redlion.net](http://www.redlion.net) for more information.

## Dimensions In inches [mm]



NT5010-DM2 SPECIFICATIONS	
Weight	1.16 lbs. (0.52 kg)
Input Voltage Range	10-49 VDC
Steady Input Range	0.39 A @ 24 VDC
BTU/hr	31.94
Operating Temperature Range	-40 to 85 °C
Storage Temperature Range	-40 to 85 °C
Humidity (non-condensing)	10 to 95% RH
Operating Altitude	0 to 10,000 ft.

Network Media Specifications	
10BaseT	≥Cat3 Cable
100BaseTX	≥Cat5 Cable
1000BaseT	≥Cat5e Cable
100BaseFX, 1000BaseSX Multimode	50-62.5/125µm
100BaseFX, 1000BaseLX Singlemode	7-10/125µm

Connectors	
10/100/1000BaseT	Eight (8) RJ45 copper ports
Dual Mode 100/1000Base SFP Port	Up to two (2) SFP port transceivers (SFP transceivers sold separately)

Recommended Minimum Wiring Clearance	
Front	4" (101.6 mm)
Top	4" (101.6 mm)

# NT5010-DM2 Transceiver Characteristics

## 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

## SFP 1000Base Fiber Transceiver Characteristics

Fiber Mode	MM	SM	SM	SM
Fiber Length*	550 m @ 50/125 $\mu$ m 275 m @ 62.5/125 $\mu$ m	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

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



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