

NT4008

Red Lion Networking Series



▲ Gigabit Managed Layer 2 Industrial Ethernet Switch

RED LION'S NT4008 GIGABIT MANAGED INDUSTRIAL ETHERNET SWITCHES ARE CERTIFIED TO MEET PROFINET PNIO V2.34 CONFORMANCE CLASS B (CC-B), RT CLASS 1 STANDARDS TO ENSURE SEAMLESS INTEGRATION INTO PROFINET NETWORKS USING STANDARD PLC CONFIGURATION AND MANAGEMENT TOOLS. A GSDML FILE IS PROVIDED.

- ▲ PROFINET PNIO V2.34, conformance Class B (CC-B), RT Class 1
- ▲ MRP (Media Redundancy Protocol): client or client/manager configurations
- ▲ 10/100/1000 RJ45 ports
- ▲ Dual mode SFP ports support 100Base and 1000Base SFP transceivers



▲ Ordering Guide

MAIN UNIT

PART NUMBER	DESCRIPTION
NT-4008-000-PN-C	8-port Gigabit Managed Industrial Ethernet Switch (8 10/100/1000BaseT RJ45 ports), PNIO CC-B, MRC
NT-4008-000-PN-M	8-port Gigabit Managed Industrial Ethernet Switch (8 10/100/1000BaseT RJ45 ports), PNIO CC-B, MRM
NT-4008-DM2-PN-C	8-port Gigabit Managed Industrial Ethernet Switch (6 10/100/1000BaseT RJ45 ports, 2 Dual Mode 100/1000Base SFP expansion slots), PNIO CC-B, MRC
NT-4008-DM2-PN-M	8-port Gigabit Managed Industrial Ethernet Switch (6 10/100/1000BaseT RJ45 ports, 2 Dual Mode 100/1000Base SFP expansion slots), PNIO CC-B, MRM

DIN rail clip, panel mount, and console cable are included. SFP Transceivers are sold separately.

ACCESSORIES

PART NUMBER	DESCRIPTION
NTSFP-FX	100BaseFX Multimode Fiber SFP Transceiver (LC Style Connector, 2 km)
NTSFP-FXE-15	100BaseFX Singlemode Fiber SFP Transceiver (LC Style Connector, 15 km)
NTSFP-FXE-40	100BaseFX Singlemode Fiber SFP Transceiver (LC Style Connector, 40 km)
NTSFP-FXE-80	100BaseFX Singlemode Fiber SFP Transceiver (LC Style Connector, 80km)
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-SX	1000BaseSX Multimode Fiber SFP Transceiver (LC Style Connector, 550 m)
NTSFP-TX	1000BaseT Copper SFP Transceiver (RJ45 Connectors)
NTPS-24-1-3	DIN-Rail Power Supply, 1.3 Amp @ 24 VDC

▲ NT4008 Specifications

▲ Specifications

SWITCH PROPERTIES

Compact, space saving package
Full IEEE 802.3 compliance
Managed operation
PROFINET PNIO v2.34, conformance Class B (CC-B), RT Class 1
PROFINET redundancy: Media Redundancy Protocol (MRM & MRC - model dependent)
Extended environmental specifications
Supports full/half duplex operation
Up to 16.0 Gb/s maximum throughput
MDIX auto sensing cable
Auto sensing speed and flow control
Full wire speed communications
Store-and-forward technology
Redundant power inputs (12-58 VDC)
Reverse polarity protection
LED link/activity status indication
Hardened metal IP30 DIN rail enclosure
Supports up to 4k MAC addresses
Latency (typical): < 2.1 µs
Configurable alarm contact
9k byte jumbo frame support
Ethernet isolation: 1500 Vrms 1 minute
MTBF: 300K hours; Telcordia SR-332

MANAGEMENT

Web-based management
CLI: Console, Telnet
RMON (monitors L1 to L2 traffic)
sFlow
Configuration backup/restore
PROFINET GSDML file, PROFINET I/O parameters, I/O cyclic data
MRP: Media redundancy (MRM & MRC - model dependent)
DHCP Client
DHCP Server
DHCP Relay Agent
DHCP Snooping
IGMP v1/v2/v3
SNMP v1/v2c/v3

DIAGNOSTIC

Port mirroring
Syslog
IEEE 802.1ab Link Layer Discovery Protocol (LLDP)

NETWORK REDUNDANCY

PROFINET MRP, MRC, MRM
Ring Protocol: Proprietary Ring & Chain < 20 ms recovery
IEEE 802.1D STP, IEEE 802.1w RSTP, IEEE 802.1s, 802.1Q MSTP
Loop protection
LAG/LACP: Static and Dynamic Link Aggregation
Up to 4 groups per switch
Up to 8 ports per group

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
TIA 1057 LLDP-MED
IEEE 802.1 MSTP MIB
IEEE 802.3ad

TRAFFIC MANAGEMENT & QoS

Priority: IEEE 802.1p QoS
Number of Queues Per Port: 8
Policing, scheduling, and shaping
QoS classification, remarking, and translation
QoS assignment via Control Lists
WRED congestion management

VLANS

Max VLANs: 1024
VLAN Types: Port-based VLANs
IEEE 802.1Q tag-based VLANs
IEEE 802.1ad double tagging (Q in Q)

SECURITY

SSH, SSL, HTTPS
Port Security: IP and MAC-based access control
Storm Control: Multicast/Broadcast/Flooding
Policy-based Access Control Engine: 128 ACL rules per system
SNMP v3

COMMUNICATION

Supports full/half duplex operation

CERTIFICATION & COMPLIANCE

Safety:
UL 61010 Ordinary Locations
C22.2 No. 61010 Ordinary Locations
UL 121201 and CSA C22.2 No. 213 Class I, Division 2 Hazardous Locations
ATEX:
Ⓜ II 3 G Ex nA nC IIC T4 Gc
UL 20 ATEX 2433X
EN 60079-0:2012+A11:2013, EN 60079-15:2010, IEC 60079-0 6th Edition, IEC 60079-15 4th Edition

▲ NT4008 Specifications Cont.

EMI/EMC:

- CFR 47, Part 15, Subpart B
Innovation, Science and Economic Development Canada ICES-003 Issue 6
- ANSI C63.4:2014
- IEC 61000-6-2 Generic standards - Immunity Standard for Industrial Environments
- EN 61000-6-4 Generic standards - Emission Standard for Industrial Environments
- IEC 61000-4-2 (ESD)
- IEC 61000-4-3 (Radio-Frequency Electromagnetic Field)
- IEC 61000-4-4 (Fast Transient)
- IEC 61000-4-5 (Surge)
- IEC 61000-4-6 (Radio-Frequency Continuous Conducted)
- IEC 61000-4-8 (Power Frequency Magnetic Field)

Rail:

- EN 50155, EN 50121 and EN 61373

Marine:

- ABS Marine Type Approval

Designed To Comply With:

- IEEE 1613 for Electric Utility Substations
- NEMA TS1/TS2 for Traffic Control
- IEC 61850-3

Other:

- RoHS compliant

ENVIRONMENTAL

Shock and Vibration:

- IEC 60068-2-6: 2 g @ 5-500 Hz 2 g Tri-Axle
- IEC 60068-2-27: 50 g @ 11 ms Tri-Axle
- IEC 60068-2-32: Test Ed: Free Fall

Operating Temperature Range: -40 to 75 °C

Storage Temperature Range: -40 to 85 °C

Operating Humidity: 5% to 95% RH (non-condensing)

Operating Altitude: Up to 6561 ft (2000 m)

Operating Condition: OVC II and PD 2

MOUNTING

DIN Rail: Attaches to standard "T" profile DIN rail according to

- EN50022 - 35 x 7.5 and 35 x 15

Panel Mount: Hardware included

WARRANTY

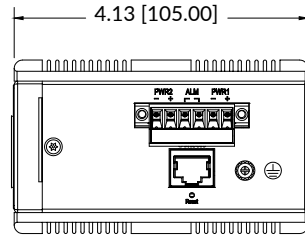
3 years on design and manufacturing defects.

Specifications are subject to change.

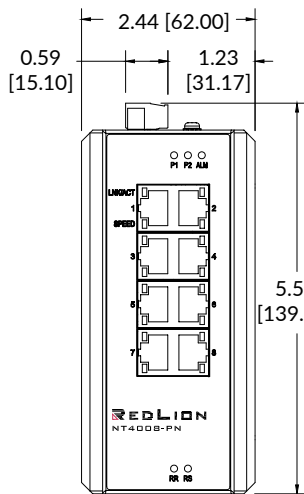
Visit www.redlion.net for more information.

NT4008-PN Dimensions and Specifications

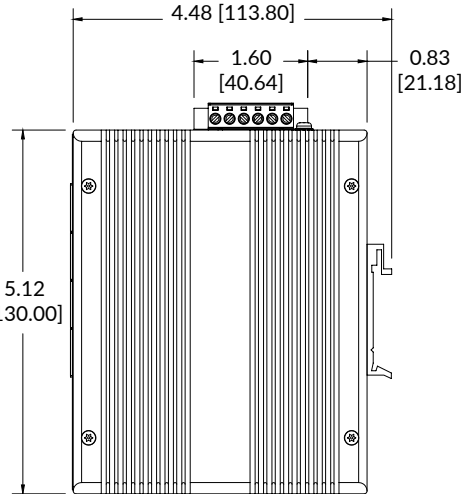
Dimensions In inches (mm)



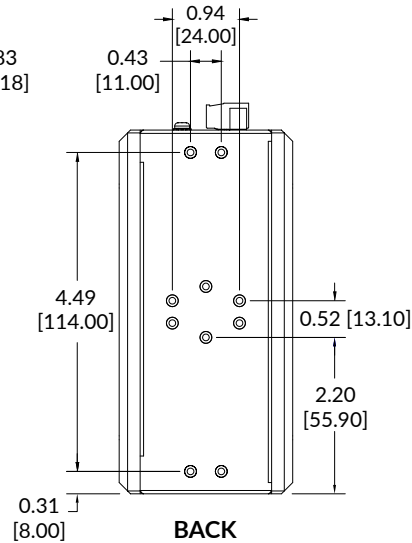
TOP



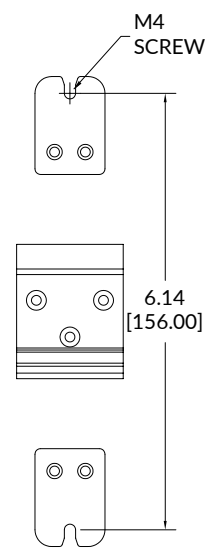
FRONT



SIDE



BACK



DIN RAIL/PANEL MOUNTING KIT

NT4008-PN SPECIFICATIONS

Weight	1.55 lbs (0.70 kg)
Input Voltage	12-58 VDC, 0.95 A
Steady Input Current	280 mA @ 24 VDC
BTU/hr	22.93 @ 24 VDC

NETWORK MEDIA SPECIFICATIONS

10BaseT	≥Cat3 Cable
100BaseTX	≥Cat5 Cable
1000BaseT	≥Cat5e Cable

CONNECTOR SPECIFICATIONS

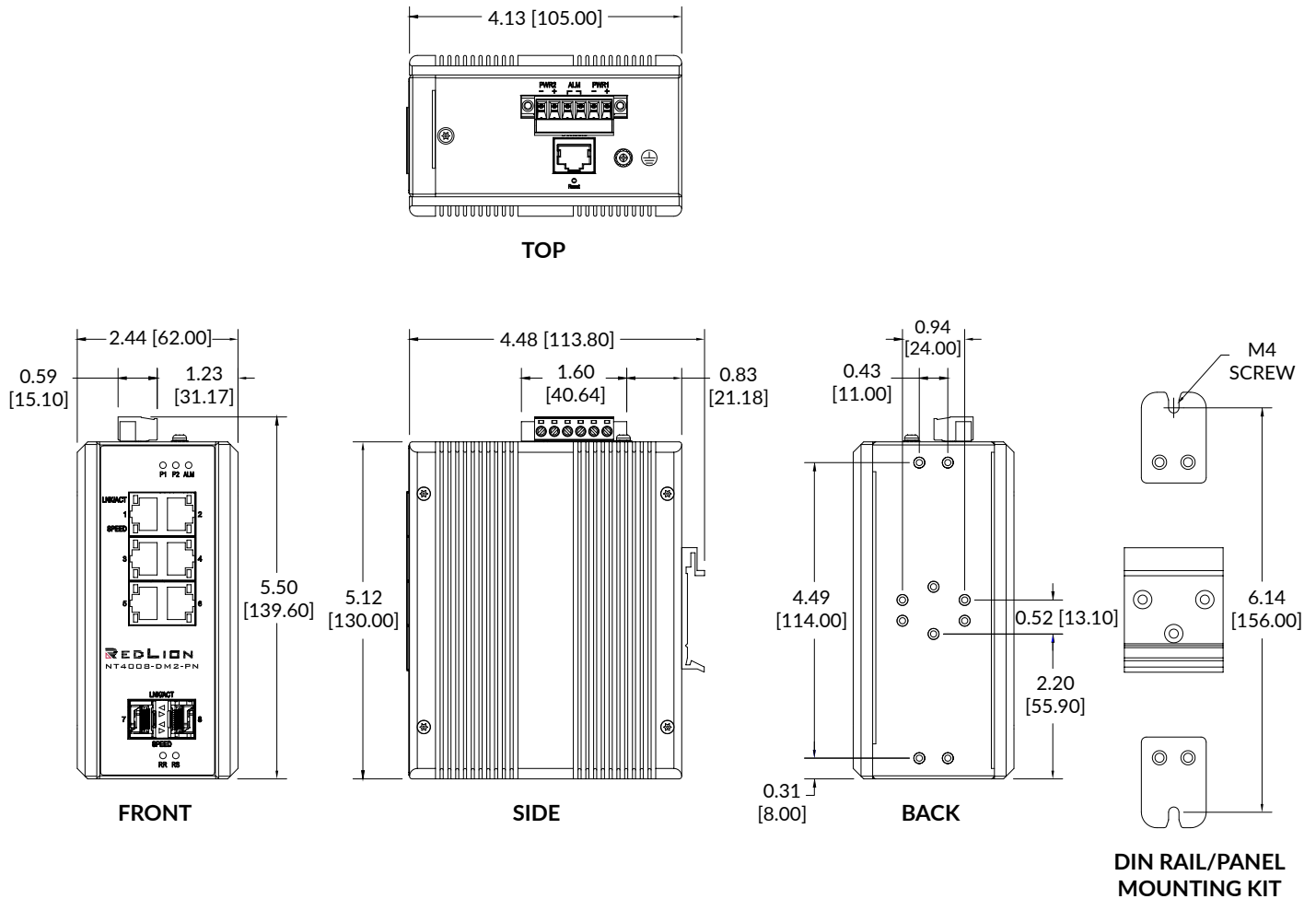
10/100/1000BaseT(X)	Eight (8) RJ45 TX copper ports
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RECOMMENDED WIRING CLEARANCE

Front	2" (50.8 mm)
Top	2" (50.8 mm)

NT4008-DM2-PN Dimensions and Specifications

Dimensions In inches (mm)



NT4008-DM2-PN SPECIFICATIONS	
Weight	1.58 lbs (0.72 kg)
Input Voltage	12-58 VDC, 0.8 A
Steady Input Current	290 mA @ 24 VDC
BTU/hr	23.75 @ 24 VDC

CONNECTOR SPECIFICATIONS	
10/100/1000BaseT(X)	Six (6) RJ45 TX copper ports
100BaseFX SFP Port	Up to two (2) LC SFP fiber transceiver ports
1000BaseT SFP Port	Up to two (2) RJ45 SFP copper transceiver ports
1000BaseSX/LX SFP Port	Up to two (2) LC SFP fiber transceiver ports

NETWORK MEDIA SPECIFICATIONS	
10BaseT	≥Cat3 Cable
100BaseTX	≥Cat5 Cable
1000BaseT	≥Cat5e Cable
100BaseFX, 1000BaseSX Multimode	50-62.5/125µm
100BaseFXE, 1000BaseLX Singlemode	7-10/125µm

RECOMMENDED WIRING CLEARANCE	
Front	4" (101.6 mm)
Top	2" (50.8 mm)

▲ NT4008-DM2-PN Specifications Cont.

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 GIGABIT FIBER TRANSCEIVER CHARACTERISTICS				
Fiber Mode	MM	SM	SM	SM
Fiber Length*	550 m @ 50/125 μ m 275 m @ 62.5/125 μ 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.

