

N-Tron[®] Series NT111-FX3

Unmanaged Ethernet Switch

The compact N-Tron[®] NT111-FX3 unmanaged Industrial Ethernet switch is ideal for industrial applications that demand dependable performance under harsh conditions. The compact 11-port device offers exceptional reliability and performance for a range of mission-critical applications including data acquisition, Ethernet I/O, and process control. Delivered in a rugged industrial metal enclosure, the NT111-FX3 provides 8 high performance 10/100BaseTX copper ports and 3 100BaseFX fiber ports with full wire speed communications—up to 2.2 Gb/s throughput—for robust network support. The unit boasts exceptional MTBF and extended tolerances to shock, vibration, temperature fluctuations and noise—common elements in factory floor control networks, utilities, wastewater treatment, wind turbines, rail car, intelligent traffic control and transportation applications.

Features include:



- Eight 10/100BaseTX RJ45 ports
- Three 100BaseFX fiber ports with SC/ST connectors
- Redundant 10–49 VDC power inputs
- High shock and vibration tolerance
- Slim, space-saving design
- -40°C to 85°C operating temperature
- IEEE 802.3 compliance
- ESD and surge protection diodes on all copper ports
- Store-and-forward technology
- Supports full/half duplex operation
- Full wire speed communications
- Up to 2.2 Gb/s maximum throughput



Ordering Guide

Main Unit

Part Number	Description
NT-111-FX3-SC00	11-port Unmanaged Industrial Ethernet Switch (8 10/100BaseTX RJ45 Ports, 3 100BaseFX, multimode, 2km, SC Style Connector)
NT-111-FX3-SC15	11-port Unmanaged Industrial Ethernet Switch (8 10/100BaseTX RJ45 Ports, 3 100BaseFX, singlemode, 15km, SC Style Connector)
NT-111-FX3-SC40	11-port Unmanaged Industrial Ethernet Switch (8 10/100BaseTX RJ45 Ports, 3 100BaseFX, singlemode, 40km, SC Style Connector)

NT111-FX3 Ordering Guide and Specifications

Part Number	Description
NT-111-FX3-SC80	11-port Unmanaged Industrial Ethernet Switch (8 10/100BaseTX RJ45 Ports, 3 100BaseFX, singlemode, 80km, SC Style Connector)
NT-111-FX3-ST00	11-port Unmanaged Industrial Ethernet Switch (8 10/100BaseTX RJ45 Ports, 3 100BaseFX, multimode, 2km, ST Style Connector)
NT-111-FX3-ST15	11-port Unmanaged Industrial Ethernet Switch (8 10/100BaseTX RJ45 Ports, 3 100BaseFX, singlemode, 15km, ST Style Connector)
NT-111-FX3-ST40	11-port Unmanaged Industrial Ethernet Switch (8 10/100BaseTX RJ45 Ports, 3 100BaseFX, singlemode, 40km, ST Style Connector)
NT-111-FX3-ST80	11-port Unmanaged Industrial Ethernet Switch (8 10/100BaseTX RJ45 Ports, 3 100BaseFX, singlemode, 80km, ST Style Connector)

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

Accessories

Part Number	Description
NT-CPMA-03-00000	NT5000 Panel Mount Kit, Type A (Wide) Models: NT5008-FX2, NT5008-GX2, NT5010-FX2, NT5010-GX2, NT5016, NT5018-DM2, NT5018-FX2, NT5018-GX2, NT100
NTPS-24-1-3	DIN Rail Power Supply, 1.3 Amp @ 24 VDC

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
 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 2.2 Gb/s maximum throughput
 Store-and-forward technology
 MTBF: 1.2M Hours

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 Ex ec IIC T4 Gc, IECEx UL 25.0013X and UL 25 ATEX 3341X
 EMI/EMC: CFR 47, Part 15, Subpart B, Canada ICES-003, ANSI 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.hms-networks.com for more information.

NT111-FX3 Specifications	
Weight	1.8 lbs. (0.82 kg)
Input Voltage Range	10-49 VDC
Steady Input Range	0.27 A @ 24 VDC
BTU/hr	21.1
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.

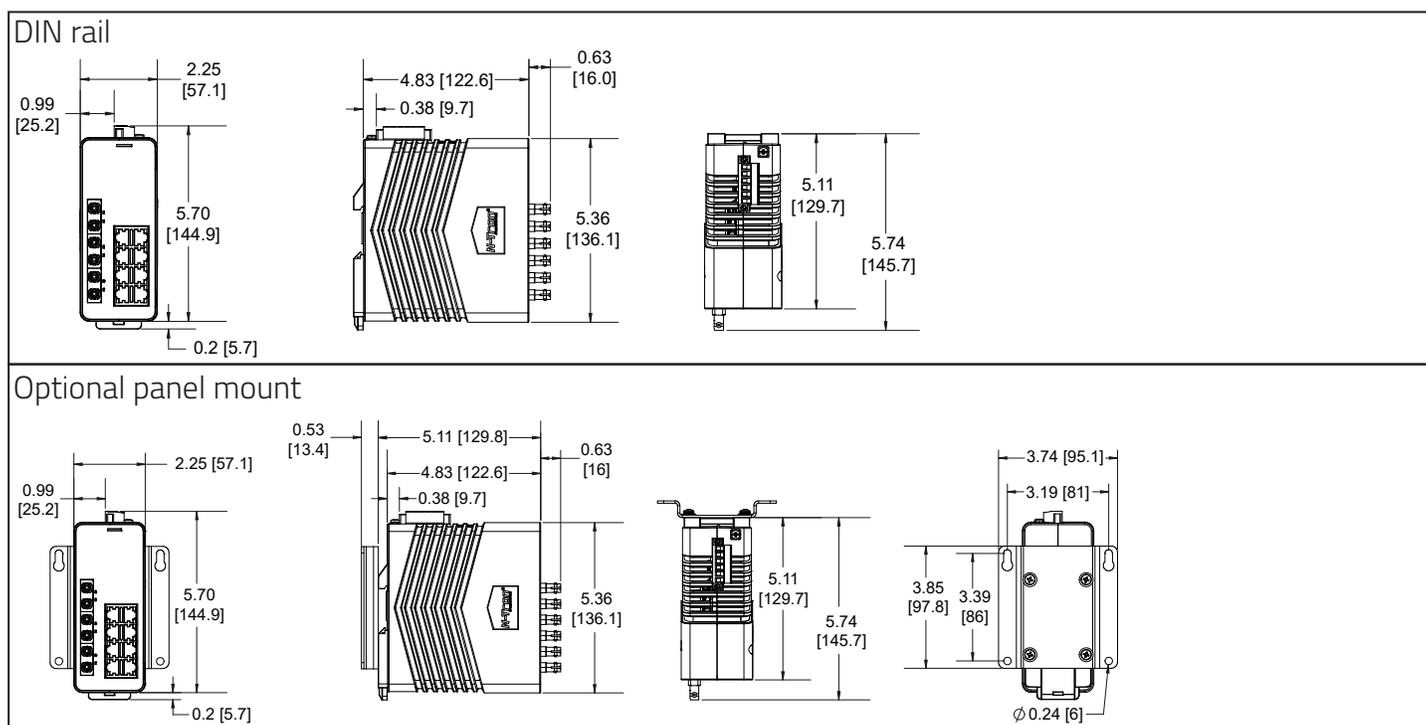
Network Media Specifications	
10BaseT	≥Cat3 Cable
100BaseTX	≥Cat5 Cable
100BaseFX Multimode	50-62.5/125 um
100BaseFX Singlemode	7-10/125 um

Connectors	
10/100BaseTX	Eight (8) RJ45 copper ports
100BaseFX	Three (3) SC or ST duplex fiber ports

NT111-FX3 Specifications and Dimensions

Recommended Minimum Wiring Clearance	
Front	4" (101.6 mm)
Top	2" (50.8 mm)

Dimensions In inches [mm]



NT111-FX3 Transceiver Characteristics

100 MB 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

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



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