

PRODUCT FEATURES

- Compact, Space Saving Package
- Full IEEE 802.3 Compliance
- Eight 10/100BaseTX RJ-45 Ports
- Four 100BaseFX Ports, ST or SC Style
- Unmanaged Operation
- Extended Environmental Specifications
- -40°C to 80°C Operating Temperature
- >2 Million Hours MTBF
- Supports Full/Half Duplex Operation
- Auto Sensing 10/100BaseTX, Duplex, MDIX
- Full Wire Speed Communication
- Store-and-Forward Technology
- Redundant Power Inputs (10-49 VDC)
- ESD Protection Diodes on all RJ-45 Ports
- Surge Protection Diodes on Power Inputs
- LED Link/Activity Status Indication
- Hardened Metal DIN-Rail Enclosure



PRODUCT OVERVIEW

The N-TRON® 112FX4 unmanaged industrial network switch is designed to meet the most demanding communications requirements while providing high throughput and minimum downtime. The 12-port Ethernet switch is the perfect low-cost solution for mission critical data acquisition, control, and Ethernet I/O applications.

Exceptional Quality

The ultra-compact 112FX4 provides exceptional performance and reliability under harsh conditions. Enclosed in a high-grade metal case, the switch offers a robust feature set that includes an extended temperature range, superior shock and vibration resistance, redundant power inputs, surge and ESD protection, and an exceptional MTBF—greater than two million hours. The space-saving design includes an attached DIN-rail bracket for quick installation.

Versatile Connectivity

The 112FX4 includes eight RJ-45 auto-sensing 10/100BaseTX ports. All ports support full/half duplex transmission and use N-Tron's proven Ethernet switching technology. Setup is easy. The unit automatically configures itself on the network and auto-negotiates both speed and flow control for all copper ports.

For fiber optic networks, the 112FX4 supplies four 100BaseFX ports. These connections provide vital support for applications where EMI immunity or communication over long distances (up to 80 km) is required. N-Tron offers singlemode or multimode options, as well as SC- or ST-style connectivity.

Excellent Network Support

The 112FX4 is a brilliant plug-and-play solution for unmanaged operations, eliminating virtually all network collisions. Designed with advanced communication processing, store-and-forward programming and memory for up to 8,000 MAC-addresses, this powerful unit handles the demands of even the most complex networks. Intelligent auto-sensing ports instantly recognize and resolve 10/100BaseTX, MDIX and duplex conflicts. For added convenience, LEDs are provided to display link status and activity for each port.

112FX4

Specifications

Switch Properties

Number of MAC Addresses: 8000
Latency Typical: 2.6 μ s
Switching Method: Store-and-Forward

Case Dimensions

Height: 4.3" (10.8 cm)
Width: 3.1" (7.9 cm)
Depth: 4.6" (11.5 cm)
Weight (max): 1.6 lbs (0.73 kg)
DIN-Rail Mount: 35mm

Electrical

Redundant Input Voltage: 10-49 VDC (Regulated)
Input Current (max): 455mA max.@24 VDC
BTU/hr: 37.3 @ 24 VDC
N-Tron Power Supply: NTPS-24-1.3 (1.3A@24V)

Environmental

Operating Temperature: -40°C to 80°C
Storage Temperature: -40°C to 85°C
Operating Humidity: 5% to 95% (Non Condensing)
Operating Altitude: 0 to 10,000 ft.

Shock and Vibration (bulkhead mounted)

Shock: 200g @ 10ms
Vibration/Seismic: 50g, 5-200Hz, Triaxial

Reliability

MTBF: >2 Million Hours

Network Media

10BaseT: \geq Cat3 Cable
100BaseTX: \geq Cat5 Cable

Connectors

10/100BaseTX: Eight (8) RJ-45 Copper Ports
100BaseFX: Four (4) SC or ST Fiber Duplex Ports

Recommended Wiring Clearance

Front: 4" (10.16 cm)
Side: 1" (2.54 cm)

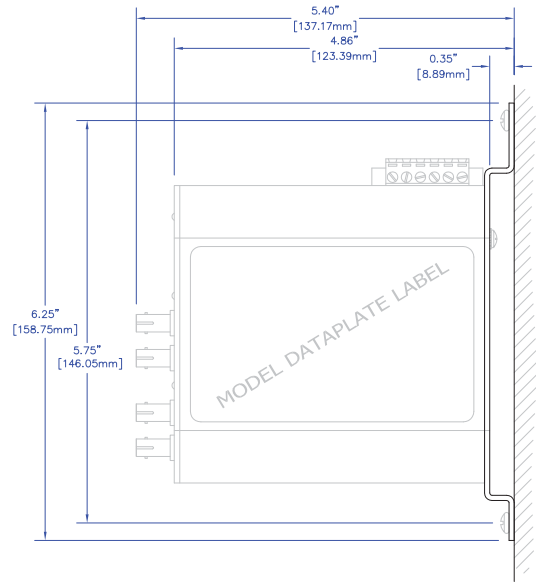
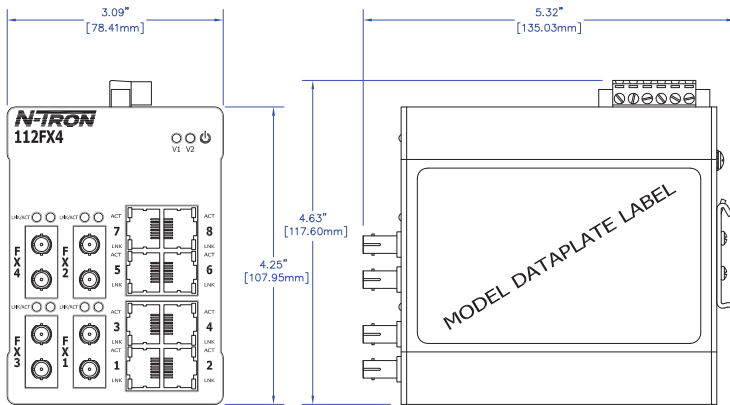
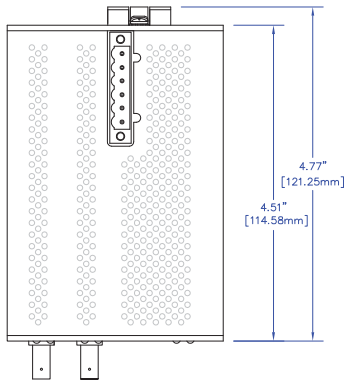
Fiber Transceiver Characteristics

Fiber Length	2km*	15km**	40km**	80km**
TX Power Min	-19dBm	-15dBm	-5dBm	-5dBm
RX Sensitivity Max	-31dBm	-31dBm	-34dBm	-34dBm
Wavelength	1310nm	1310nm	1310nm	1550nm

* Multimode Fiber Optic Cable
** Singlemode Fiber Optic Cable

Regulatory Approvals

- FCC: Title 47, Part 15, Subpart B, Class A; ANSI C63.4; ICES-003
- UL /cUL: Class I, Div 2, Groups A, B, C, D and T4
- CE: IEC 61000-4-2/3/4/5/6/8/11, EN 61000-6-2/4
- GOST-R Certified, RoHS Compliant



OPTIONAL COMPACT PANEL MOUNT ASSY.
(P/N: CPMA-2)

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
112FX4-XX	12-Port (8 10/100BaseTX, 4 100BaseFX Fiber Ports, multimode) Industrial Ethernet Switch, DIN-Rail
112FXE4-XX-YY	12-Port (8 10/100BaseTX, 4 100BaseFX Fiber Ports, singlemode) Industrial Ethernet Switch, DIN-Rail
NTPS-24-1.3.....	N-Tron Power Supply (1.3 amp @ 24VDC)
CPMA-2.....	Compact Panel Mount (factory installed option)
URMK.....	Universal Rack Mount Kit

Where: E = Singlemode
XX = ST for ST style fiber connector, SC for SC style fiber connector
YY = Segment length:
15 for 15km max. fiber segment length
40 for 40km max. fiber segment length
80 for 80km max. fiber segment length
Mixed fiber configurations available.

N-TRON USA & Corporate Headquarters
820 S. University Blvd • Suite 4E
Mobile, AL 36609 • USA
Phone +1-251-342-2164
Fax +1-251-342-6353

www.n-tron.com

N-TRON ASIA PACIFIC
CHINA
Phone +86 (0) 21-6113-3688
Fax +86 (0) 21-6113-3683

INDIA
Phone +91-9844-876540

SINGAPORE
Phone +65-8118-6821

N-TRON EMEA
Phone +41-41-740-6636
Fax +41-41-740-6637

N-TRON UK/IRELAND/NORDIC/BENELUX
Phone +44 (0) 1928-577257

please visit us worldwide at www.n-tron.com

© 2011 N-TRON Corporation. N-Tron and the N-Tron logo are trademarks of N-TRON, Corporation. Product names mentioned herein are for identification purposes only and may be trademarks and/or registered trademarks of their respective company. The responsibility for the use and application of N-Tron products rests with the end user. N-Tron makes no warranties as to the fitness or suitability of any N-Tron product for any specific application. N-Tron Corporation shall not be liable for any damage resulting from the installation, use, or misuse of this product. Specifications subject to change without notice. REV 2011.03.25

QUALITY MANAGEMENT SYSTEM

CERTIFIED BY DNV

ISO 9001:2008