## PRODUCT FEATURES

- Compact, Space Saving Package
- Full IEEE 802.3 Compliance
- Eight 10/100BaseTX RJ-45 Ports
- Two 100BaseFX Ports, ST or SC Style
- Unmanaged Operation
- Extended Environmental Specifications
- $-40^{\circ} \mathrm{C}$ to $80^{\circ} \mathrm{C}$ 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 110FX2 unmanaged industrial network switch is designed to meet the most demanding communications requirements while providing high throughput and minimum downtime. The 10 -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 110FX2 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 110FX2 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 110FX2 supplies two 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 and multimode options, as well as SC- or ST-style connectivity.

## Excellent Network Support

The 110FX2 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.

## 110FX2 Specifications

## Switch Properties

| Number of MAC Addresses: | 8000 |
| :--- | :--- |
| Latency Typical: | $2.6 \mu \mathrm{~s}$ |
| Switching Method: | Store-and-Forward |

## Case Dimensions

Height:
$4.3^{\prime \prime} \quad(10.8 \mathrm{~cm})$
Width:
2.4" ( 6.1 cm )

Depth:
4.6 " $\quad(11.5 \mathrm{~cm})$

Weight (max):
DIN-Rail Mount:
$1.4 \mathrm{lbs} \quad(0.64 \mathrm{~kg})$

## Electrical

Redundant Input Voltage:
Input Current (max):
BTU/hr:
N-TRON Power Supply:

## Environmental

Operating Temperature:
Storage Temperature:
Operating Humidity:
Operating Altitude:

Fiber Transceiver Characteristics

| Fiber Length | $2 \mathrm{~km}^{*}$ | $15 \mathrm{~km}^{\star *}$ | $40 \mathrm{~km}^{\star *}$ | $80 \mathrm{~km}{ }^{\star *}$ |
| :--- | :---: | :---: | :---: | :---: |
| TX Power Min | -19 dBm | -15 dBm | -5 dBm | -5 dBm |
| RX Sensitivity Max | -31 dBm | -31 dBm | -34 dBm | -34 dBm |
| Wavelength | 1310 nm | 1310 nm | 1310 nm | 1550 nm |
| $* *$ <br> Multimode Fiber Optic Cable |  |  |  |  |
| Singlemode Fiber Optic Cable |  |  |  |  |

## Connectors

10/100BaseTX:
100BaseFX:
Eight (8) RJ-45 Copper Ports Two 100BaseFX Ports, ST or SC

| Recommended Wiring Clearance |  |  |
| :--- | :---: | ---: |
| Front: | $4 "$ | $(10.2 \mathrm{~cm})$ |
| Side: | $1^{\prime \prime}$ | $(2.6 \mathrm{~cm})$ |

## 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

Shock and Vibration (bulkhead mounted)

Shock:
Vibration/Seismic:
200g@10ms
$50 \mathrm{~g}, 5-200 \mathrm{~Hz}$, Triaxial
Reliability
MTBF:
>2 Million Hours
Network Media
10BaseT:
$\geq$ Cat3 Cable
100BaseTX:

$\geq$ Cat5 Cable

Contact Information

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## 110FX2 Industrial Ethernet Switch Ordering Information

110FX2-XX
110FXE2-XX-YY
NTPS-24-1.3
CPMA-1
URMK

Where:
XX = ST or SC
$Y Y=15,40$, or 80 for Singlemode, Blank for Multimode
E = Singlemode



OPTIONAL COMPACT PANEL MOUNT ASSY. ( P/N: CPMA-1)

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