

## Managed Industrial Ethernet Switch

### PRODUCT FEATURES

- Four 10/100/1000BaseT(X) RJ-45 Ports
- Two SFP (Mini-GBIC) Gigabit Transceivers (Optional)
- 1000BaseSX/LX Fiber with LC style connectors or
- 1000BaseT Copper with RJ-45 connectors
- -40° to 80°C Operating temperature
- ESD and Surge Protection Diodes on all Ports
- Auto Sensing 10/100/1000BaseT(X), Duplex, and MDIX
- Store-and-forward Technology
- Jumbo Frame Support
- Rugged DIN-Rail Enclosure
- Onboard Temperature Sensor
- Redundant Power Inputs (10-49VDC)
- Configurable Bi-Color Fault Status LED

### Fully Managed Features:

- SNMP v1, v2, v3 and Web Browser Management
- Configuration backup via Optional SD card
- EtherNet/IP™ CIP Messaging
- Detailed Ring Map and Fault Location Charting
- N-Ring™ Technology with ~30ms Healing
- N-View™ OPC Monitoring
- N-Link™ Redundant N-Ring Coupling
- IGMP Auto Configuration
- 802.1Q tag VLAN and Port VLAN
- 802.1p QoS and Port QoS, and DSCP
- LLDP (Link Layer Discovery Protocol)
- Port Trunking
- Port Mirroring
- 802.1d, 802.1w, 802.1D RSTP
- DHCP Server, Option 82 relay, Option 61, IP Fallback
- Local Port IP Addressing
- Port Security—MAC Address Based



**Remote Monitoring Options** - For ease of configuration and monitoring, the 7506GX2 offers web browser management and N-View OLE for process control (OPC) server software. The N-TRON N-View software can be combined with popular HMI software packages to add network traffic monitoring, trending, and alarming to any application using N-TRON switches. In addition, SNMP is available for switch link and status monitoring. The status LED can be configured to respond to power failure on power input 1 or input 2, N-Link fault, port usage fault, N-Ring broken, partial break high, partial break low, or if multiple ring managers are detected.

**N-Ring Technology** - N-TRON's 7506GX2 ring manager using N-TRON's N-Ring technology offers expanded ring size capacity, detailed fault diagnostics, and a standard healing time of ~30ms. The 7506GX2 ring manager periodically checks the health of the ring via heart beat packets. If the ring manager stops receiving these health check packets, it converts the ring to a linear topology within ~30ms. When all switches in the ring are N-TRON fully managed switches, a detailed ring map and fault location chart will also be provided on the ring manager's web browser and OPC server to identify the health status of the ring. N-Link™ allows the linking of two N-Rings. Up to 250 fully managed N-TRON switches can participate in N-Ring topologies.

**Industrial Packaging and Specifications** - The 7506GX2 is designed to operate in industrial environments. It is housed in a rugged extruded aluminum DIN-Rail enclosure. It has extended industrial specifications and features to meet or exceed the operating parameters of connected equipment. These include extended temperature ratings, extended shock and vibration specs, redundant power inputs, and high MTBF (greater than 2M hours).

**Ease of Use** - The 10/100/1000BaseT(X) ports are auto sensing and auto configuring. Each copper port is automatically negotiated for maximum speed and performance by default, but can also be hard coded through the user interface. A high speed processor allows wire speed capability on all 10/100/1000BaseT(X) ports simultaneously.

## 7506GX2 Specifications

### Switch Properties

Number of MAC Addresses: 4000  
 Aging Time: Programmable  
 Latency Typical: 1.6  $\mu$ s  
 Switching Method: Store-and-Forward

### Case Dimensions

Height: 3.8" (9.6cm)  
 Width: 2.0" (5.1cm)  
 Depth: 3.9" (9.9cm)  
 Weight (max): 1.1lbs (0.48kg)  
 DIN-Rail Mount: 35mm

### Electrical

Redundant Input Voltage: 10-49 VDC (Regulated)  
 Input Current (max): 440mA max.@24VDC  
 BTU/hr: 36@24VDC  
 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

### Recommended Wiring Clearance

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

### SFP Gigabit Fiber Transceiver Characteristics

Fiber Length	550m for 50/125 $\mu$ m 275m for 62.5/125 $\mu$ m*	10km**	40km**	80km**
TX Power Min	-9.5dBm	-9.5dBm	-2dBm	0dBm
RX Sensitivity Max	-17dBm	-20dBm	-22dBm	-24dBm
Wavelength	850nm	1310nm	1310nm	1550nm
Assumed Fiber Loss	3.5 to 3.75 dB/km	0.45 dB/km	0.35 dB/km	0.25 dB/km
Laser Type	VCSEL	FP	DFB	DFB

\* SX Fiber Optic Cable  
 \*\* LX Fiber Optic Cable

### Network Media

10BaseT: >Cat3 Cable  
 100BaseTX: >Cat5 Cable  
 1000BaseT: >Cat5e Cable

### Connectors

10/100/1000BaseT(X): Four (4) RJ-45 Copper Ports  
 1000BaseT: Up to Two (2) RJ-45 Gigabit Copper Ports (optional)  
 1000BaseSX/LX: Up to Two (2) LC Duplex Gigabit Fiber Ports (optional)

### Regulatory Approvals

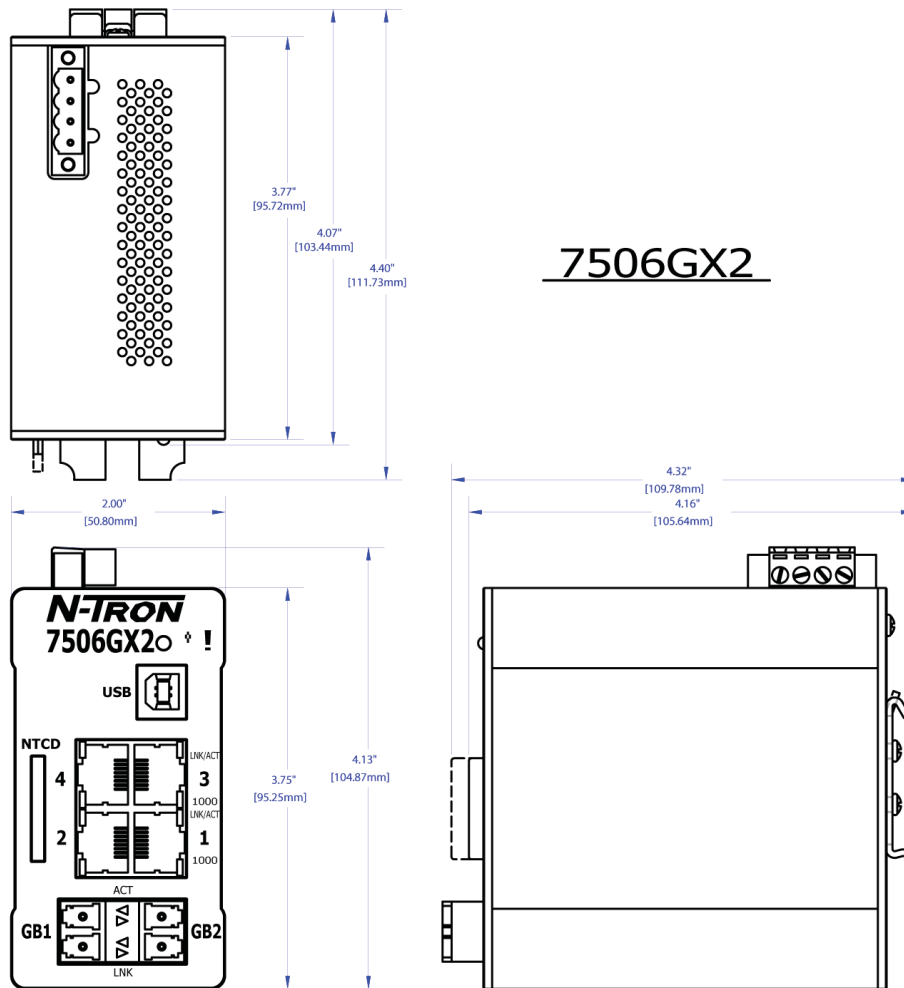
FCC Title 47, Part 15, Subpart B - Class A;  
 ICES-003 - Class A  
 UL /cUL: Class I, Div 2, Groups A, B, C, D and T4  
 ANSI/ISA 12.12.01-2007  
 CE: EN61000-6-2:2001; EN61000-6-4:2007  
 EN61000-4-2, 3, 4, 5, 6  
 GOST-R Certified, RoHS Compliant  
**Designed to comply with:**  
 IEEE 1613 for Electric Utility Substations  
 NEMA TS1/ TS2 for Traffic control

### EtherNet/IP®

## 7506GX2 Industrial Ethernet Switch Ordering Information

7506GX2	Four 10/100/1000BaseT(X) Ports and two SFP ports without (optional) modules
7506GX2-SX	Four 10/100/1000BaseT(X) Ports and two SFP ports with 2 NTSFP-SX Multimode modules installed
7506GX2-LX-10	Four 10/100/1000BaseT(X) Ports and two SFP ports with 2 NTSFP-LX-10 Singlemode modules installed
NTSFP-TX	Optional SFP (Mini-GBIC) Transceiver with One 1000BaseT GB Copper Port
NTSFP-SX	Optional SFP (Mini-GBIC) Transceiver with One 1000BaseSX Multimode GB Fiber Optic Port
NTSFP-LX-ZZ	Optional SFP (Mini-GBIC) Transceiver with One 1000BaseLX Singlemode GB Fiber Optic Port
NTCD-128	Optional SD Card, Configuration Device
NTPS-24-1.3	N-TRON Power Supply - (1.3 Amp @ 24VDC)
1000-PM	Panel Mount kit
URMK	Universal Rack Mount Kit

Where: ZZ = 10, 40, or 80 for GB Singlemode



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