

# 7506GX2

#### 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/IPTM CIP Messaging
- Detailed Ring Map and Fault Location Charting
- N-Ring<sup>™</sup> Technology with ~30ms Healing
- N-View<sup>™</sup> OPC Monitoring
- N-Link<sup>™</sup> 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<sup>TM</sup> 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.



## QUALITY MANAGEMENT SYSTEM CERTIFIED BY DNV

=== ISO 9001:2008 ====

#### 7506GX2 Specifications

**Switch Properties** 

Number of MAC Addresses: 4000

Aging Time: Programmable

Latency Typical: 1.6 µs

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: 200a @ 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** 

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Fiber Length	550m for 50/125µm 275m for 62.5/125µm*	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 Cable100BaseTX:>Cat5 Cable1000BaseT:>Cat5e Cable

**Connectors** 

NTPS-24-1.3 (1.3A@24V) 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

#### **Contact Information**

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REV 100408



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### 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

