



Motion-Ready Managed Ethernet  
Switches for OT/IT Convergence



N-Tron® NT7000 Series  
Advanced Managed Gigabit  
Industrial Ethernet Switches



Hardware  
Meets  
Software™

# High-Performance

## Gigabit Performance

An all-Gigabit copper portfolio of managed switches with fixed port FX fiber or dual mode SFP options available. The NT7000 Series provides a higher bandwidth to support modern industrial traffic such as data collection, vision systems, and segmented networks, while still offering flexible fiber connectivity where required. Simplify standardization and future-proof network designs.

## Precision Timing

The NT7000 switches highlight hardware-based IEEE-1588 PTP, enabling precise time synchronization for motion-sensitive industrial applications. The motion-ready EtherNet/IP infrastructure provides the deterministic time synchronization without locking customers into proprietary switch platforms. These advanced managed switches support smoother coordinated motion, faster system readiness after startup, and improved repeatability in distributed motion cells.

## Segmented Architectures

Support complex, modern layouts without sacrificing speed. Using the N-Ring multi-manager/member redundancy with ~20 ms healing, the NT7000 Series delivers extremely fast network recovery from faults, reducing downtime and maintaining production continuity in ring-based industrial architectures.

# Scalability & Precision

The screenshot displays the N-Tron web management interface. The top navigation bar includes tabs for IP Interfaces, DHCP Server, System Info, Product Info, Time, PTP, Config, Firmware, and Diagnostics. The main content area is titled 'Port Config' and features a table with columns for Port, Enabled, Override, Interval, Announce, Timeout, Sync Interval, Request Interval, Delay, and Mechanism. The table lists ports P1 through GX2, all with 'Enabled' status and 'End-to-End (E2E)' mechanism.

Port	Enabled	Override	Announce		Sync Interval	Request Interval	Delay	Mechanism
			Interval	Timeout				
*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)
P1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)
P2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)
P3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)
P4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)
P5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)
P6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)
P7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)
P8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)
GX1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)
GX2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Seconds	3 Intervals	1/16 Second	1/16 Second		End-to-End (E2E)

Below the screenshot, a row of six N-Tron switches is shown, including models NT7018-DM4, NT7016, NT7012-FX4, NT7010-BXP, NT7008, and NT7006-DM4.

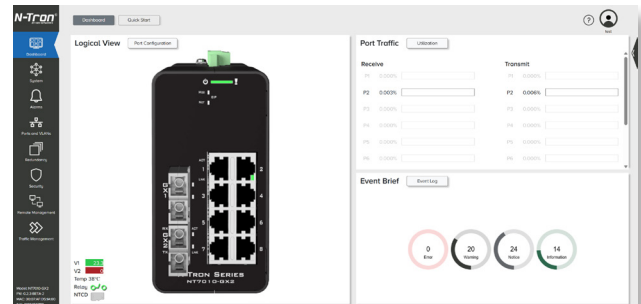
## The speed of modern industry

The N-Tron® NT7000 Series Gigabit Managed Switches are designed for fast performance, high-speed motion control, and complex architectures.

# Operational Resilience

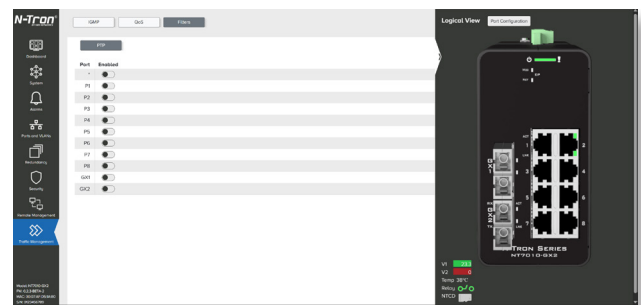
## Quick Start Wizard

The graphical dashboard with logical view features a quick start wizard that walks administrators through switch configuration for fast deployment. NT7000 supports text-based configuration files, making it easy to retrieve the configuration from one device for redistribution to other managed switches on the network.



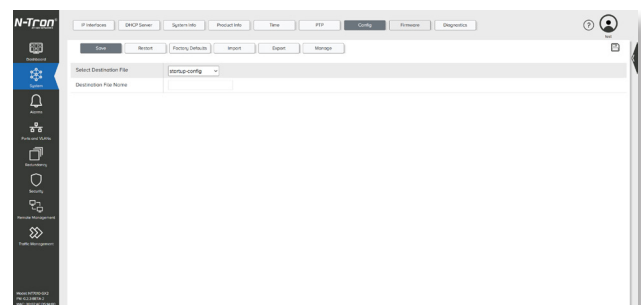
## Rapid Recovery

Leverage fast boot and quick recovery protocols to minimize the duration of any disruption. Prioritize uptime with the fast boot feature that passes traffic in less than 7 seconds. Allow your network to recover quickly without long startup delays following power cycles or switch replacement.



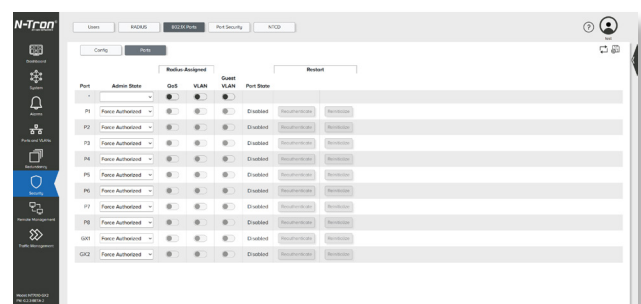
## Reliable Configuration

Utilize the backup/restore features so that if a switch is swapped, the network is back online in minutes, not hours. A micro-SD card enables fast replacement and recovery by allowing configurations to be backed up and restored without reconfiguration—reducing downtime and risk of errors.



## Network Security

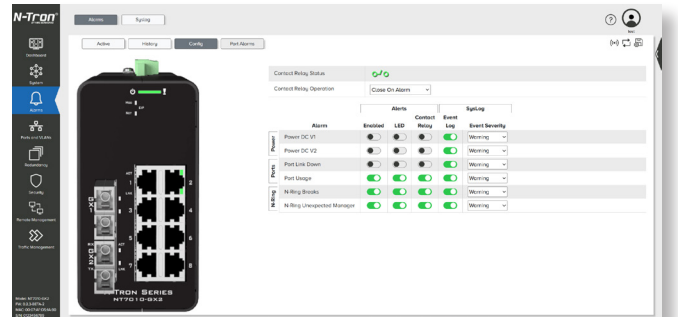
Design your future-ready network with trusted N-Tron security and management features like password encryption, configurable password length and multi-level user access, MAC security, SSH/SSL/HTTPS, SNMPv3, disable unused protocols, automatically disable user or port credentials after failed authentication attempts, IEEE 802.1X with RADIUS remote server authentication.



# & Fast Recovery

## Industrial-Grade Reliability & Diagnostics

- Rugged, compact metal enclosure
- Wide operating temperature range from -40° C to 85° C
- Redundant power inputs (10-49 VDC)
- Vibration: 5 Hz to 200 Hz, 15 g, Triaxial; IEC 68-2-6: operational; panel mounted
- Shock: 200 g, 10 ms, Triaxial; IEC 68-2-27: non-operational; panel mounted
- DIN mountable
- Event log/Syslog
- Configurable alarm contact
- Configurable bi-color CIP/fault status LED



- LED port status indicators
- Reverse polarity protection
- ESD and surge protection
- Full wire speed communication
- MDIX auto-sensing cable & auto-sensing speed and flow control

N-Tron NT7000 Series provides the following benefits!



Built to handle the toughest environments



Designed to help customers deploy, monitor, and maintain industrial networks more efficiently



Avoid downtime with simplified setup, fast boot, quick recovery, and configuration backup/restore

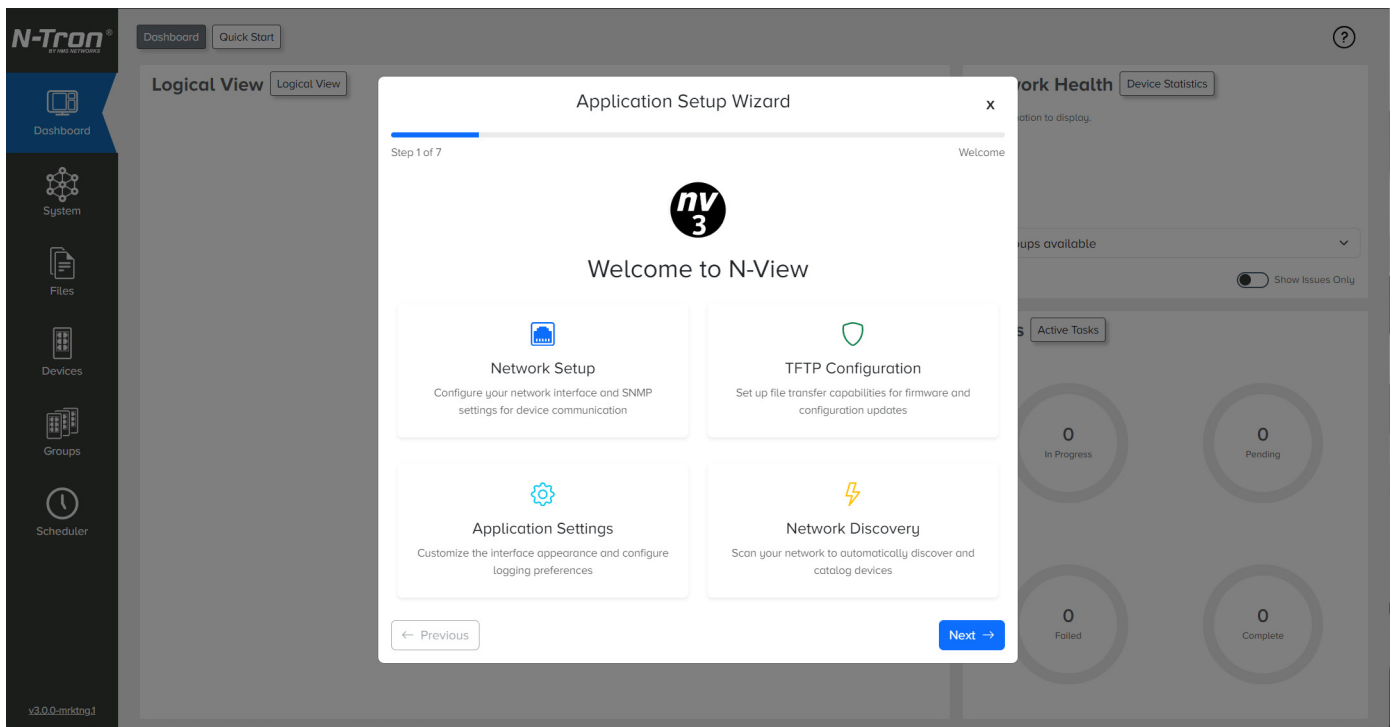


Bridge the OT/IT gap with security features, improved network visibility, and predictable performance

# Automation Ready

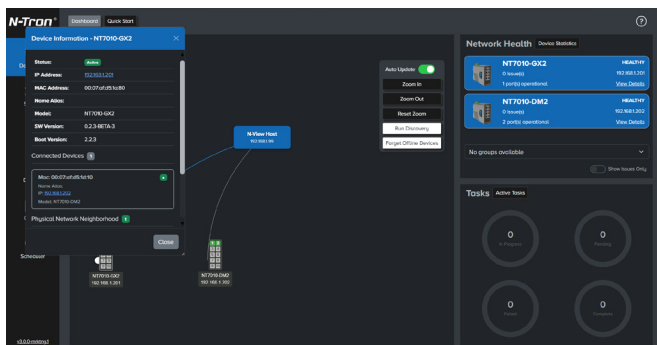
## Simplified Setup

Drastically reduces setup time for OEMs and system integrators to optimize efficiency.



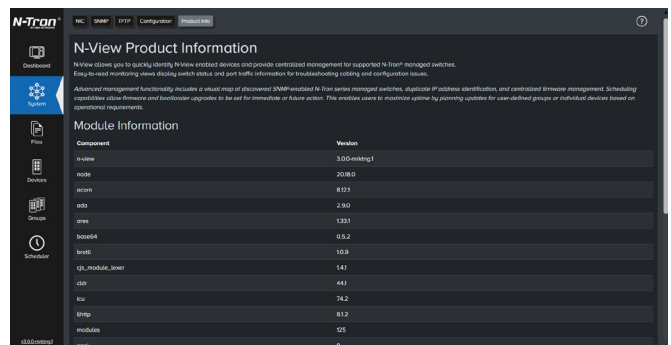
## Superior Visibility

Gives OT teams the diagnostic tools they need to identify and fix issues before they cause a shutdown.



## User Centric Design

Maintains the familiar NT5000 UX to ensure a flat learning curve and immediate productivity.



# with N-View 3

## N-View 3 Improved Features

### Device and topology discovery

Automatically identifies connected N-View enabled switches and network structure, reducing commissioning time and making troubleshooting faster and more intuitive.

### CIP messaging with AOI and Faceplate

Simplifies integration into Logix-based control systems, giving controls engineers familiar diagnostics and status visibility directly within their automation environment.

### Firmware management

Simplifies firmware updates across multiple switches, improving consistency, reducing maintenance effort, and supporting lifecycle management at scale.

### Network health monitoring

Provides clear visibility into network status and potential issues, helping teams proactively identify problems before they impact operations.

### Duplicate IP address discovery & centralized IP address management

Automatically detects duplicate IP addresses across the N-Tron switched network and enables IP address changes from a centralized interface. Reduces troubleshooting time, prevents network conflicts, and simplifies device management without requiring direct access to individual switches.



# Models

The NT7000 is available in 6, 8, 10, 12, 16 and 18 port configurations in a variety of copper and fiber options to meet specific installation requirements.

Model	10/100/1000BaseT RJ45 Ports	Dual Mode (100/1000Base) SFP Ports*	100Base Fiber Ports	1000Base Fiber Ports
NT7006-DM2	4	2		
NT7008	8			
NT7008-DM2	6	2		
NT7008-FX2	6		2	
NT7008-GX2	6			2
NT7010-DM2	8	2		
NT7010-FX2	8		2	
NT7010-GX2	8			2
NT7012-DM4	8	4		
NT7012-FX4	8		4	
NT7012-GX4	8			4
NT7016	16			
NT7018-DM2	16	2		
NT7018-DM4	14	4		

\*SFP expansion modules sold separately

# Certifications

## Industry Compliance

The NT7000 carries extensive compliance certifications, making it ideal for use in most industrial applications, including factory automation, motion control and robotics, food and beverage, oil and gas, alternative energy, water/wastewater, machine builders/OEM, marine, rail, and many more.



**EtherNet/IP®**





## Trusted N-Tron features for enhanced visibility & performance

### Ease of Use

- Modern graphical web interface
  - Configuration wizard
  - Graphical dashboard with switch logical view
- Full command line interface

### Hardware Resiliency

- Compact, space saving, hardened industrial design
- Wide operating temperature
- High shock and vibration tolerance
- ESD and surge protection
- Fast boot (traffic passes < 7 seconds)
- Configurable alarm contact
- Configurable bi-color fault status LED
- Redundant power inputs (10-49 VDC)
- IEEE 802.3 compliance
- Latency (typical): < 1.8  $\mu$ s
- VLAN Address Support: Up to 4k
- Hardware Precision Time Protocol (PTP) support

### Diagnostic Features

- Port mirroring
- Event log/Syslog
- LLDP
- Advanced cable diagnostics

### Switch Management

- IGMP v1, v2, v3 auto configuration
- SNMP v1, v2, v3
- Port control
- Network time protocol (NTP)
- CIP™ messaging
- 802.1Q tag VLAN and port VLAN
- IEEE 801.2p QoS and port QoS
- File transfer: HTTP/HTTPS, TFTP, SNMP
- DHCP Server, Option 82 relay, Option 61, IP fallback
- Text-based configuration file
- N-View 3 monitoring & firmware management software

### Network Redundancy

- RSTP/MSTP
- N-Ring Technology with ~20ms healing
- Port trunking/LACP

### Security

- HTTPS, SSH, SSL
- IEEE 802.1X port and user authentication (RADIUS)
- MAC port security
- SNMPv3
- Port/user lockout after failed authentication attempts
- Password encryption

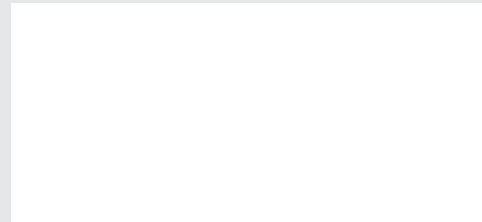


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