



## Product Data Sheet

# NS3550-24T/4S

## 24-port Gigabit Layer 2 Industrial Managed Switch

### Overview

The IFS 24-port Gigabit Managed Industrial Switch is an environmentally hardened Layer 2 switch with high port density and Gigabit Fiber uplink capability in a rugged IP30 rated 19" rack-mountable design. This Industrial Switch provides full management capabilities and is perfect for applications such as factory automation, distribution centers, utilities and intelligent transportation systems (ITS).



### Environmentally Hardened Design for Industrial Networking

This switch is engineered for stable operation in electrically harsh and demanding environments under a wide operating temperature range. This switch is equipped with advanced management features and provides 24 10/100/1000Base-T copper ports and 4 shared 1000Base-SXBX/LX/LHX/ZX SFP slots. It is designed with a non-blocking switch fabric and is capable of providing wire-speed throughput as high as 48Gbps for reliable operation from -40 to 75°C without any packet loss and CRC errors.

### Robust Layer 2 Features

This Industrial Managed Switch provides advanced Layer 2 to Layer 4 data switching and redundancy, such as support for STP, RSTP and MSTP to greatly improve redundant data backup and guarantee network resilience. Other features include Quality of Service traffic control, network access control and authentication, and Secure Management features to protect a facilities industrial network connectivity with a reliable switching recovery capability that is suitable for implementing highly fault-tolerant and mesh network architectures. This switch also supports standard Simple Network Management Protocol (SNMP) and includes an advance SNMP feature set to monitor the status of the switch and traffic per port. The switch can also be monitored via any standards-based SNMP management software.

### Powerful Security

This switch offers comprehensive Access Control List (ACL) for enforcing security to the edge. Its protection mechanisms also comprise of port-based 802.1x, RADIUS and TACACS+ users access authentication, and MAC-based user and device authentication allowing network administrators to managed highly secured industrial networks.

### Standard Features

- 24-ports RJ-45 10/100/1000Base-T
- 4 SFP/mini-GBIC slots shared with Ports 21 to 24 – compatible with 1000Base-SXBX/LX/LHX/ZX and 100Base-FX/BX/LX SFP transceivers
- RS-232 DB9 console interface for basic switch management and setup
- High-performance Switch Architecture
- Up to 48Gbps non-blocking switch fabric
- 10K bytes Jumbo frame support
- 8K MAC address table, automatic source address learning and ageing
- Full Multicast Support for IP Video - up to 256 multicast groups
- VLAN Support - up to 255 VLANs groups
- Quality of Service (QoS)
- Supports Cisco ether-Channel (Static Trunk)
- Advanced Security
- MAC Filtering and Source IP/MAC address port-binding
- Robust Hardened Design
- IP30 metal enclosure
- Wide operating temperature range of -40°C ~ +75°C

# NS3550-24T/4S

## 24-port Gigabit Layer 2 Industrial Managed Switch

### Specifications

#### Physical Ports

- 10/100/1000Base-T (X) Ports: RJ-45 (24)
- SFP/Mini-GBIC Slots: SFP/Mini-GBIC Slots (4) - Shared with RJ-45 Ports-21 to 24; 1000Base-SXB/LX/LHX/ZX and 1000Base-FX/BX/LX SFP transceiver compatible
- Port Configuration: Auto MDI/MDI-X
- Port Speed: Auto-negotiate

#### Switch Performance

- Switch Architecture: Store-and-Forward
- Switch Fabric: 48Gbps non-blocking
- Switch Throughput: 35.7Mbps@64Bytes
- Mac Address Table: 8K entries
- Share Data Buffer: 1392 kilobytes
- Jumbo Frame Size: 10Kbytes
- Flow Control: IEEE 802.3x Pause Frame for Full-Duplex Back pressure for Half-Duplex

#### Layer 2 Functions

- Management Interface: Console, Telnet, Web Browser, SNMPv1, v2c and v3
- Port Configuration: Port enable/disable; Auto-negotiation; 10/100/1000Mbps full and half duplex mode selection; Flow Control enable/disable; Bandwidth control on each port
- Port Status: Display each port's: speed duplex mode, link status, flow control status, Auto negotiation status, trunk status
- Port Mirroring: TX/RX/Both; 1 to 1 monitoring
- Bandwidth Control: Ingress/Egress rate control: configure per 128Kbps
- VLAN: IEEE 802.1q tagged-based VLAN; Port-based VLAN; Q-in-Q tunneling; Up to 255 VLANs groups; Private VLAN
- Link Aggregation: IEEE 802.3ad LACP / Static Trunk; Supports 12 groups of 16-Port trunks
- Quality of Service (QoS): Traffic classification based, Strict priority and WRR; 4-level priority for switching - Port Number - 802.1p priority - DS/TOS field in IP Packet
- Multicasting/IGMP: IGMP (v1/v2) Snooping, up to 255 multicast Groups; IGMP Querier mode support
- Access Control List: IP-Based ACL/MAC-Based ACL 256 entries
- SNMP MIBs: RFC-1213 MIB-II; IF-MIB; RFC-1493 Bridge MIB; RFC-1643 Ethernet MIB; RFC-2863 Interface MIB; RFC-2665 Ether-Like MIB; RFC-2737 Entity MIB; RFC-2618 RADIUS Client MIB; RFC-2933 IGMP-STD-MIB; RFC3411 SNMP-Frameworks-MIB; IEEE802.1X PAE; LLDP; MAU-MIB

#### LED Indicators & Switch

- Power: On/Green
- 10/100/1000Base-TX/PoE Ports: 10/100 LNK/ACT - Green
- 10/100/1000Base-T/SFP Ports: 100 LNK/ACT - Green; 1000 LNK/ACT - Green
- FAN(s): Alarm/Green
- Reset Button: System reboot: push and hold < 5 sec.; Factory Default: push and hold > 5 sec.

#### Electrical & Mechanical

- Power: 36~72VDC dual redundant external power with reverse polarity protection

- Power Consumption (@ 48VDC): System On: 22.08 Watts / 75.75 BTU; Full Load: 32.28 Watts / 110.75 BTU
- Dimensions (WxDxH); in/cm: 17.32 x 7.87 x 1.75 in. (44 x 20 x 44.5 cm)
- Weight; lbs/kgs: 6.13lbs / 2.78kg

#### Environmental

- Operating Temperature: -40°C ~ 75°C
- Storage Temperature: -40°C ~ 85°C
- Relative Humidity: 0% to 95% (non-condensing)

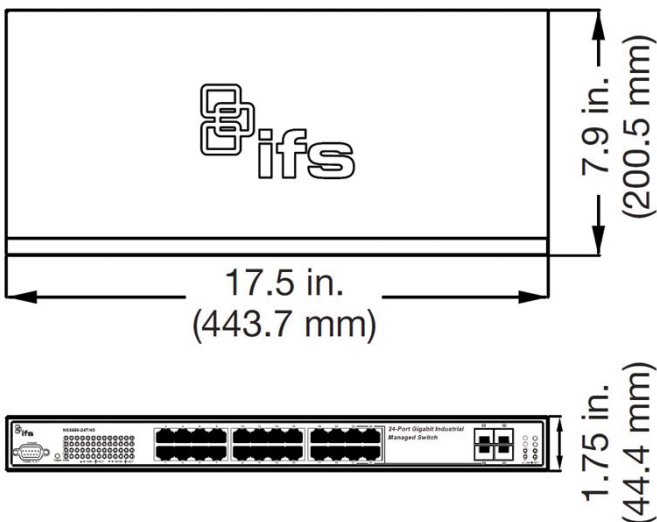
#### Standards Compliance

- Regulatory Standards: FCC Part 15 Class A, CE
- IEEE Standards (1): IEEE 802.3 10Base-T; IEEE 802.3u 100Base-TX/100Base-FX; IEEE 802.3z Gigabit SXBX/LX/LHX/ZX; IEEE 802.3ab Gigabit 1000T; IEEE 802.3x Flow Control and Back pressure; IEEE 802.3ad Port trunk with LACP; IEEE 802.1d Spanning tree protocol
- IEEE Standards (2): IEEE 802.1w Rapid spanning tree protocol; IEEE 802.1s Multiple spanning tree protocol; IEEE 802.1p Class of service; IEEE 802.1Q VLAN Tagging; IEEE 802.1x Port Authentication Network Control; IEEE 802.1ab LLDP

#### Accessories

- SFP (100Mbps): S25 Series (wide-temp)
- SFP (1000Mbps): S35 Series (wide-temp)
- PS48VDC240W-EU: 48VDC (240W) Hardened Industrial Power Supply
- PS48VDC240W-UK: 48VDC @ 2A (100W) Hardened DIN-Rail Mount Power Supply (100~240VAC)

### Diagram



### Ordering Information

NS3550-24T/4S

24-port Gigabit Layer 2 Industrial Managed Switch

