# IFS® Enterprise-class Gigabit L3 Network Switches


## OVERVIEW

IFS Enterprise-class Network Switches from Interlogix deliver robust and reliable performance and are also incredibly easy to use. All switch management functions are programmable through a user-friendly web interface.

**Static Routing**

All three switch models support Layer 3 static routing tables, allowing for complex system architectures with traffic routed across different domains or between different VLANs. This enables flexible network design and greater control of network traffic – essential for modern IP large-scale video systems.

**10Gig SFP+ Switch Trunking**

All three switch models support 10Gig SFP+ slots (2 or 4 ports depending on model) that are independent and not shared with the other ports on the switch. These ports provide high-bandwidth trunking between switches for high performance data transmission for larger IP video streaming applications. In addition, these ports can also accept Gigabit fiber or RJ45 SFPs for even more versatility.

## NS4702 & NS4802 GigE L3 PoE+ Switches

These two network switches are engineered to meet a variety of high-performance applications and are ideally suited for large-scale IP video surveillance systems. Featuring Layer 3 static-routing, PoE, and optical trunking ports, these switches offer high performance features for larger IP video systems.

**LCD Touchscreen (NS-4702-24P-4X only)**

The NS4702-24P-4X touchscreen provides the ability to perform basic switch configuration and diagnostics without the need for a third-party computer. Basic settings such as IP configuration; diagnostics such as ping and PoE monitoring can all be viewed and controlled through the switch's built-in color touchscreen.

**Stacking Capability (NS4802-24P-4S-2X only)**

The NS4802-24P-4S-2X is managed via a single IP address and allows up to 16 units to be stacked creating a virtual 384 Port PoE+ switch. This switch also offers added flexibility with full redundancy options and up to 40Gbps interlink. Each switch can be "hot swapped," allowing quick replacement of the faulty switch in a stack with minimal network disruption.

**Powerful PoE+ Support**

These switches feature IEEE 802.3at Power over Ethernet (PoE+) and up to 440 Watts (depending on model) of total power budget. These features allow optimized deployment and power management of PoE edge devices such as IP surveillance cameras, access control panels and wireless access points.

**Built-in Monitoring, Diagnostics and Trouble-Shooting Tools**

These switches can be configured to monitor the status of a connected PD (Powered Device) in real-time via IP ping. If a PD (IP Camera, IP Access Reader, IP Intercom, VoIP phone or Wireless Access Point) no longer responds to a ping, the switch will cycle PoE power on the port, thus rebooting the PD to operational status. Other features for enhanced troubleshooting and management include PoE monitoring, management and scheduling for energy-savings, built-in cable diagnostics, and support for SNMP. These features are designed to help reduce IT time and costs while keeping network downtime to a minimum.

## NS4750 GigE L3 Fiber Switch (NS4750-24S-4T-4X only)

Engineered to meet the needs of a distributed fiber optic network system, this Enterprise-Class L3 Network Switch provides a flexible and economical way to distribute IP video when used with IFS SFP Media Converters.

# STANDARD FEATURES

## Physical Ports

**24-port Gigabit PoE+ Managed Switch (NS4702 & NS4802)**

- 24-ports 10/100/1000Base-T Gigabit Ethernet RJ-45 with IEEE 802.3at PoE+
- 4 SFP/mini-GBIC slots shared with ports 21 to 24 - compatible with 1000Base-SX/LX/BX and 100Base-FX SFP transceivers (NS4802 only)
- 4 10Gbps SFP+ ports (NS4702) or 2 10Gbps SFP+ ports (NS4802)
- RJ45 console interface for basic switch management and setup
- 2 40Gbps Stacking Ports (NS4802)

**24-port Gigabit Managed Fiber Switch (NS4750)**

- 24 SFP/mini-GBIC slots - compatible with 1000Base-SX/LX/BX and 100Base-FX SFP transceivers
- 4-ports 10/100/1000Base-T RJ-45 copper, shared with ports 1 to 8
- 4 10Gbps SFP+ Ports
- RJ45 console interface for basic switch management and setup

## High-performance Switch Architecture

- IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3ae standards compliance
- High performance Store and Forward architecture, broadcast storm control, runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Packet loss prevention with back pressure (half-duplex) and IEEE 802.3x PAUSE frame flow control (full-duplex)
- Up to 128Gbps non-blocking switch fabric
- 10K bytes Jumbo frame support
- 16K MAC address table, automatic source address learning and ageing

## Stacking Function

**(NS4802)**

- Ability to stack up to 16 units
- Up to 384 virtual port switch
- One single IP address to manage all devices in the stack
- Hot Swappable switches
- Redundancy

## Full Multicast Support for IP Video

- IGMP Snooping v1, v2 and v3 fast leave
- IGMP Query mode support
- Up to 256 multicast groups

## VLAN Support

- IEEE 802.1Q Tag-Based VLAN
- Up to 255 VLANs groups, out of 4096 VLAN IDs
- Port-Based VLAN
- Q-in-Q tunneling (Double Tag VLAN)

## Layer 3 IP Routing

- Maximum of 128 static routes and route summarization supported
- Hardware accelerated Layer 3 routing performance

## Spanning Tree Protocol

- STP, IEEE 802.1D (Spanning Tree Protocol)
- RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol)
- MSTP, IEEE 802.1s (Multiple Spanning Tree Protocol); Up to 8 MSTP instances

## Quality of Service (QoS)

- 4 priority queues on all switch ports
- Traffic classification:
  - IEEE 802.1p Class of Service
  - IP TOS/DSCP code priority
  - Port Base priority
- Strict priority and weighted round robin (WRR) CoS policies
- Ingress/Egress Bandwidth Control on each port

## Power over Ethernet

**(NS4702 & NS4802)**

- IEEE 802.3at Standard compliant
- 380W (NS4802) or 400W (NS4702) Total Power Budget
- Auto-detection of PoE Power Device (PD)
- Powers up to 24 ports @ 15.4W or up to 14 ports @ 30W per port.
- Circuit protection that isolates and prevents power interference between ports
- End-Span (PSE) configuration that supplies power up to 100m
- PoE Management Features
  - Total power budget control
  - Per port control (enable/disable, priority, power limit)
  - Per port scheduling
  - PD classification detection
  - Power Supply Over temperature Protection
  - PD Alive-checking

## Link Aggregation

- IEEE 802.3ad LACP (Link Aggregation Control Protocol)
- Up to 16 Trunk groups
- Up to 8 ports per trunk group with 1.6Gbps bandwidth (Full Duplex mode)
- Cisco ether-Channel (Static Trunk) support

## Advanced Security

- IEEE 802.1x Port-based authentication
- RADIUS and TACACS+ users access authentication
- Layer 3 and Layer 4 Access Control List (ACL)
- MAC Filtering and Source IP/MAC address port-binding
- Port Mirroring to monitor incoming or outgoing traffic on a particular port

## Switch Management

- Local console or remote switch management via Web browser, Telnet CLI, SNMP v1, v2c, v3
- SNMP Trap for alarm notification of events
- Four RMON groups 1, 2, 3, 9 (history, statistics, alarms, and events)
- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment
- Configuration upload/download via TFTP or HTTP
- Firmware upgrades via TFTP or HTTP
- SNTP (Simple Network Time Protocol)
- LLDP Protocol
- Supports IP ping
- Reset button for system management

## Warranty

- 3-year Limited Warranty

# Specifications

| | Part No. | NS4802-24P-4S-2X | NS4702-24P-4X | NS4750-24S-4T-4X |
|---|---|---|---|---|
| | Description |  |  |  |
| Physical Ports | 10/100/1000Base-T (X) Ports | RJ-45 (24) with IEEE 802.3at PoE+ | | RJ-45 (4) shared with SFP slots 1 to 4 |
| | SFP/Mini-GBIC Slots | SFP/Mini-GBIC Slots (4) - Shared with RJ-45 Ports-21 to 24; 1000Base-SX/LX/BX and 100Base-FX SFP transceiver compatible | | SFP/Mini-GBIC Slots (24); 1000Base-SX/LX/BX and 100Base-FX SFP transceiver compatible |
| | SFP+ Slots | (2)10GBase SR/LR or 1000Base-SX/LX/BX | (4) 10GBase SR/LR or 1000Base-SX/LX/BX | |
| | Dedicated Stacking Slots | (2)10GBase SR/LR or 1000Base-SX/LX/BX | | |
| | Port Configuration | Auto MDI/MDI-X | | |
| | Port Speed | Auto-negotiate | | |
| Switch Performance | Switch Architecture | Store-and-Forward | | |
| | Switch Fabric | 128Gbps non-blocking | | |
| | Switch Throughput | 95Mpps @ 64Bytes | | |
| | Mac Address Table | 16K entries | | |
| | Share Data Buffer | 4M bits | 32M bits | |
| | Jumbo Frame Size | 9Kbytes | 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; Many to 1 monitoring | | |
| | Bandwidth Control | Ingress: 500Kb ~ 80Mbps; Egress: 64Kb ~ 80Mbps | 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 | | |
| | Layer 3 IP Routing | Supports maximum 128 static routes and route summarization; Hardware accelerated | Max. 32 routing entries | Supports maximum 128 static routes and route summarization; Hardware accelerated |
| | Link Aggregation | IEEE 802.3ad LACP / Static Trunk; 3 groups of 6-Port trunks | IEEE 802.3ad LACP / Static Trunk;14 groups of 8-Port trunks | |
| | Quality of Service (QoS) | Traffic classification based, Strict priority and WRR, 8-Level priority for switching<br>- Port number<br>- 802.1p priority<br>- 802.1Q VLAN tag<br>- DSCP/TOS field in IP packet | | |
| | Multicasting/IGMP | IGMP (v1/v2/v3) 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, Power over Ethernet–MIB | | |
| Power over Ethernet | PoE Standard | IEEE 802.3af and IEEE 802.3at | | |
| | PoE Power Supply Type | End-Span (PSE) | | |
| | PoE Power Budget | 380 watts (max.) | 400 watts (max.) | |
| | Max. number of PD @ 30.8 Watts | 12 | 13 | |
| | Max. number of PD @ 15.4 Watts | 24 | | |
| | PoE Power Output Per Port | 56V DC, Max. 30.8 watts | | |
| | Power Pin Assignment | 1/2(+), 3/6(-) | | |
| LED Indicators & | Power | On/Green | | |
| | 10/100/1000Base-TX Ports | 10/100/1000Mbps LNK/ACT (Green), PoE In-Use (Orange) | | 10/100/1000 LNK/ACT (Green) |
| | 10/100/1000Base-T/SFP Ports | 1000Mbps (Green), LNK/ACT (Orange) | | |
| | Fan(s) | FAN1 (Green), FAN2 (Green), FAN3 (Green) | | Fanless Design |
| | Reset Button | System reboot: push and hold < 3 sec., Factory Default: push and hold > 10 sec. | | |
| | Stackable Interfaces | Stack (Green), LNK/ACT (Orange) | | |
| Electrical & Mechanical | AC Power Input Voltage | 100 ~ 240VAC, 50 / 60Hz, Auto-sensing | | 100 ~ 240VAC, 50 / 60Hz, 36V DC @ 1.6A, Range: 36V ~ 60V DC |
| | Power Consumption (System On) | 445 watts | 488 watts | 58 watts |
| | Dimensions (WxDxH); in/cm | 17.32 x 7.87 x 1.75 in. (42.99 x 19.99 x 4.45 cm) | 17.32 x 11.81 x 2.2 in. (44.0 x 30.0 x 5.6 cm) | 17.32 x 11.81 x 1.75 in. (42.99 x 29.99 x 4.45 cm) |
| | Weight; lbs/kgs | 10.78 lbs, 4.89 kgs | 10.3 lbs, 4.67 kgs | 5.93 lbs, 2.69 kgs |

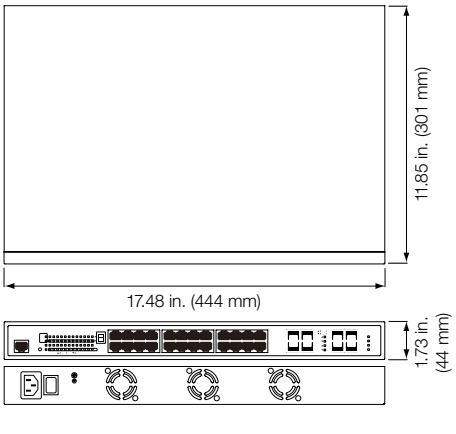
# IFS® Enterprise-class Gigabit L3 Network Switches

## Specifications (continued)

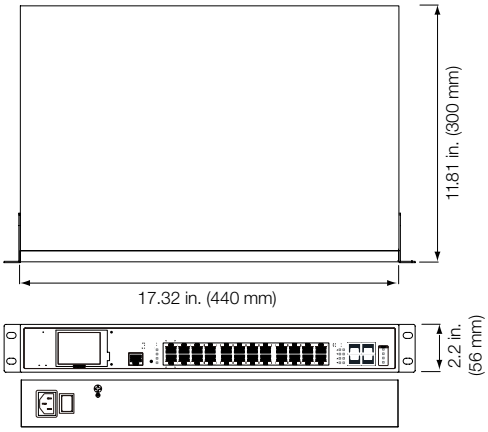
| | Part No. | NS4802-24P-4S-2X | NS4702-24P-4X | NS4750-24S-4T-4X |
|---|---|---|---|---|
| | Description |  |  |  |
| Environmental | Operating Temperature | 0ºC ~ 50ºC | | -10ºC ~ 60ºC (DC power input)<br>0ºC ~ 50ºC (AC power input) |
| | Storage Temperature | -10ºC ~ 70ºC | | |
| | Relative Humidity | 0% ~ 95% (non-condensing) | | |
| Standards Compliance | Regulatory Standards | FCC Part 15 Class A, CE, UL, cUL | | |
| | IEEE Standards | IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX/100Base-FX, IEEE 802.3z Gigabit SX/LX, IEEE 802.3ab Gigabit 1000Base-T, IEEE 802.3ae 10 Gigabit Ethernet, IEEE 802.3x Flow Control and Back Pressure, IEEE 802.3ad Port trunk with LACP, IEEE 802.1D Spanning Tree Protocol, 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, IEEE 802.3af Power over Ethernet (NS4702-24P-4S-4X and NS4802-24P-4S-2X), IEEE 802.3at Power over Ethernet PLUS (NS4702-24P-4S-4X and NS4802-24P-4S-2X) | | |

## Dimensional Diagrams

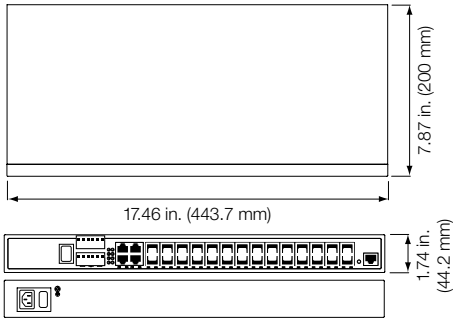
### NS4802-24P-4S-2X




### NS4702-24P-4X




### NS4750-24S-4T-4X




## Ordering Information

| | |
|---|---|
| NS4802-24P-4S-2X | 24-Port Gigabit Stacking Switch w/2 10G SFP+ |
| NS4702-24P-4X | 24-Port PoE+ Gigabit Switch w/4 10G SFP+ |
| NS4750-24S-4T-4X | 24-Port Gigabit Fiber Switch w/4 10G SFP+ |
| Included Accessories | User's Manual CD, Quick Installation Guide, Power Cord, Console Port Cable, Rubber Feet, Rack Ears w/Screws, 0.5m Stacking Cable (NS4802 only) |

## Accessories

| | |
|---|---|
| S20 Series | 100Mbps SFP |
| S30 Series | 1000Mbps SFP |
| S40 Series | 10G SFP (for stacking ports only) |

interlogix
United Technologies

interlogix.com

Specifications subject to change without notice.



2018/03 (GSP-2619)