

NS3552-16P-2T-2S-V2

16-Port Industrial Gigabit Managed PoE+ Switch

Overview

The IFS® Industrial Gigabit PoE+ Managed Switch by Interlogix is a fully managed Layer 2 switch providing an industrial hardened design. This design provides for operational recovery in the event of a network or power system failure.

The IFS NS3552-16P-2T-2S-V2 is an Industrial Gigabit PoE+ Managed Switch equipped with sixteen 10/100/1000Mbps RJ45 ports with PoE+ (30w) capabilities, two Gigabit RJ45 and two SFP (fiber) uplink ports.

Layer 2+ Managed Switch

The IFS Industrial Gigabit Managed Switch Series supports advanced features including IEEE 802.1Q VLAN, GVRP, port link aggregation, QoS, broadcast storm control and MAC address filtering. The series also includes IGMP snooping and querying multicasting for media operations and bandwidth utilization to fit a variety of applications. Via aggregation of supporting ports, the series allows the operation of high-speed trunk operation combining multiple ports. A maximum of four ports can be assigned for four trunk groups and support fail-over as well. Additionally, its standards-compliant implementation ensures interoperability with equipment from other vendors.

Industrial-grade Network Redundancy and Recovery

These switches not only incorporate the industry standard Rapid Spanning Tree Protocol (IEEE 802.1w RSTP), but also an advanced rapid ring recovery protocol allowing improved network recovery times that are on average less than 20ms for redundant ring topologies. The switches incorporate a redundant power supply system to further enhance network reliability and uptime. Ideal for use in implementing highly fault-tolerant ring and mesh network architectures, these switches are suited for environments such as industrial security, factory automation and intelligent transportation systems (ITS).

Robust Hardened Design

With an IP-30 rated enclosure, IFS Industrial Gigabit Managed Switches provide a high level of immunity against electromagnetic (EMI) and radio-frequency (RFI) interference typically found in industrial environments. This series of switches comply with IEC60068-2-xx standards for free-fall, shock, and vibration and operate in -40° C to 75° C temperatures found in difficult environments such as plant floors or in curbside traffic control cabinets.



Details

- 16-Port 10/100/1000Base-T with PoE+
- 2-Ports 100/1000 RJ45 and 2-ports SFP (fiber) 100/1000Base-X
- High-performance Switch Architecture
- Up to 40Gbps non-blocking switch fabric
- 9K bytes Jumbo frame support
- 8K MAC address table, automatic source address learning and aging
- IGMP (v1/v2/V3) Snooping, up to 255 multicast Groups with IGMP Querier mode support, and MLD (v1/v2) Snooping, up to 255 multicast Groups with MLD Querier mode support
- VLAN Support - up to 255 VLANs groups out of 4094 VLAN IDs, MVR (Multicast VLAN Registration), Voice VLAN, MAC-Based VLAN, Protocol-Based VLAN
- Quality of Service (QoS), 802.1p priority, 802.1Q VLAN tag, DSCP/TOS field in IP Packet
- IEEE 802.3ad LACP / Static Trunk, Supports 5 groups of 8-Port trunk support
- Advanced Security
- MAC Filtering and Source IP/MAC address port-binding
- Complies with IEEE 802.3af / IEEE 802.3at Power over Ethernet
- Circuit protection prevent power interference between ports
- Robust Hardened Design
- IP30 metal enclosure, DIN Rail and Wall Mount Design
- Wide operating temperature range of -40°C ~ +75°C
- Layer-3 Static routing (max 32 routes) and route summarisation
- Supports ERPS (Ethernet Ring Protection Switching)

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Technical specifications

General

Storm control	Broadcast, Multicast, Unicast
Security	802.1x, ACL, RADIUS, Source MAC / IP address binding
DHCP snooping	Yes
Fault relay output	Yes

Category

Category	Industrial
Management	Managed
Managed	Yes
PoE	Yes

Physical ports

No. of ports	16
Port type	Gig
Speed	Gigabit
PoE/PoE+	16 port PoE/8 port PoE+
Fiber port	2
Supported SFPs	S20/S25 series, S30/S35 series
SFP speed	100/1000

Switch Performance

Switch fabric	40 Gbps
Throughput (Mpps)	29.7
Mac table	8 K
Jumbo frame support	9 K
Switch Architecture:	Store-and-Forward
Switch Fabric:	40Gbps non-blocking
Switch Throughput:	29.7Mpps @64Bytes
Mac Address Table:	8K entries
Share Data Buffer:	4Mbit
Jumbo Frame Size:	9Kbytes
Flow Control:	Back pressure for Half-Duplex, IEEE 802.3x Pause Frame for Full-Duplex

Layer 2 Functions

Management interface	Console, Web, Telnet, SNMP 1,2,3, SSH/SSL secure access
IGMP snooping	255 Group, Snooping v1, v2, v3
IGMP query	Yes
VLAN, QoS	256, yes
Access control list	123 entries
Management Interface:	Console, Telnet, SSH, SSL, 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:	Bandwidth control per port: Ingress: 500Kb~1000Mbps, Egress: 500Kb~1000Mbps
VLAN:	IEEE 802.1q tagged-based VLAN; Port-based VLAN; Q-in-Q tunneling; Up to 255 VLANs groups; Private VLAN, MAC-Based VLAN, Protocol-Based VLAN, Voice VLAN, MVR (Multicast VLAN Registration)
Link Aggregation:	IEEE 802.3ad LACP / Static Trunk, Supports 5 groups of 8-Port trunk support
Quality of Service (QoS):	Traffic classification based, Strict priority and WRR; 8-level priority for switching - Port Number - 802.1p priority - 802.1Q VLAN tag - DS/TOS field in IP Packet
Multicasting/IGMP:	IGMP (v1/v2/V3) Snooping, up to 255 multicast Groups with IGMP Querier mode support, MLD (v1/v2) Snooping, up to 255 multicast Groups with MLD Querier mode support
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

Electrical

PoE power budget	260 W
Redundant power	Yes
Power supply type	52 to 56 VDC
Power consumption	283 W

Physical

Physical dimensions	152 x 107 x 84 mm
Net weight	1.533 kg
Colour	Black
Material	Metal
Mounting type	DIN-rail, Wall mount
Stackable	No

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Environmental

Operating temperature	-40 to +75°C
Storage temperature	-40 to -85 °C
Relative humidity	0 to 95% (non-condensing)
Environment	Indoor
IP rating	IP30
Operating Temperature:	-40°C to 75°C
Storage Temperature:	-40°C to 85°C
Relative Humidity:	0% to 95% (non-condensing)

Standards & regulation

IEC standard	IEC60068-2-27 (shock), IEC60068-2-32 (free fall), IEC60068-2-6 (vibration)
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Physical Ports

10/100/1000Base-T Ports:	16 RJ-45 POE ports and 2 RJ45 Non-POE Uplink ports
SFP/Mini-GBIC Slots:	2 SFP/Mini-GBIC Slots - 100Base-FX/BX/LX and 1000Base-SX/BX/LX/LHX/ZX SFP transceiver compatible
Port Configuration:	Auto MDI/MDI-X
Port Speed:	Auto-negotiate

Power Over Ethernet

IEEE PoE Standard:	IEEE 802.3af/IEEE 802.3at Power over Ethernet/PSE
Maximum Devices:	16
Output Power (per-port):	Per Port 56VDC, 350mA. Max. 15.4 watts (IEEE 802.3af), Per Port 56VDC, 590mA. Max. 30 watts (IEEE 802.3at)

LED Indicators & Switch

Power:	On/Green
10/100/1000Base-T Ports:	10/100/1000 LNK/ACT - Green
100/1000Base-X/SFP Ports:	100 LNK/ACT - Green; 1000 LNK/ACT - Green
Reset Button:	System reboot: push and hold < 5 sec.; Factory Default: push and hold > 5 sec.

Electrical & Mechanical

Power Input 1:	48 to 56 VDC
Power Input 2:	48 to 56 VDC
Electrical Fast Transient (EFT)Protection:	6KV DC
Power and Alarm FaultConnector:	6-pin removable screw terminal
Alarm Fault Relay:	1A @ 24VDC
Enclosure:	IP-30 Metal Case
Mounting:	DIN-rail or wall-mount
Dimensions (WxDxH): in/cm:	152 x 107x 84 mm
Weight; lbs/kgs:	1.7 kg

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 TaggingIEEE 802.1x Port Authentication Network Control; IEEE 802.1ab LLDP
RFC Standards:	RFC 768 UDP, RFC 793 TFTP, RFC 791 IP, RFC 792 ICMP, RFC 2068 HTTP, RFC 1112 IGMP Version 1, RFC 2236 IGMP Version 2
IEC Standards:	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)

Accessories

SFP (100Mbps):	S25 Series (wide-temp)
SFP (1000Mbps):	S35 Series (wide-temp)
PS48VDC480W-DIN:	48VDC (480W) DIN rail Power Supply

