Product data sheet

NS3552-8P-2S

8+2 Industrial Gigabit Managed PoE+ Switch

Overview

The IFS® NS3552-8P-2S is an Industrial Gigabit PoE+Managed Switch equipped with eight 10/100/1000Mbps RJ45 ports with PoE+ (30w) capabilities and two 100/1000Mbps SFP (fiber) uplink ports. These are fully managed Layer 2+ switches providing a robust industrial hardened design that provides for rapid operational recovery in the event of a network or power system failure.

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 Industrial Fail-Safe (IFS) technology accommodating multiple redundant ring topologies and improved network recovery time of less than 20ms. 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 well suited for harsh 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

- 8-port 10/100/1000Base-T with PoE+
- 2-ports SFP (fiber) 100/1000Base-X
- RS-232 DB9 console interface for basic switch management and setup
- High-performance Switch Architecture
- Up to 20Gbps non-blocking switch fabric
- 9K bytes Jumbo frame support
- 8K MAC address table, automatic source address learning and ageing
- 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 / End-Span PSE and up to 8 IEEE 802.3af / 802.3at devices powered
- Circuit protection prevent power interference between ports
- Robust Hardened Design
- IP30 metal enclosure, DIN Rail and Wall Mount Design
- Wide operating temperature range of -40ºC ~ +75ºC

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Technical specifications

General

Fast ring	Yes (ERPS)
Storm control	Broadcast, Multicast, Unicast
Security	802.1x, ACL, RADIUS, Source MAC / IP address binding, TACACS+
DHCP snooping	Yes
Fault relay output	Yes, with 2x digital inputs and 2x digital outputs

Category

Category	Industrial
Management	Managed
Managed	Yes
PoE	Yes

Physical ports

No. of ports	8
Port type	Gig
Speed	Gigabit
PoE/PoE+	8 port PoE/8 port PoE+
Fiber port	2
Supported SFPs	S20/S25 series, S30/S35 series
SFP speed	100/1000
10/100/1000Base-T Ports	8 RJ-45 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

Switch Performance

Switch fabric	20 Gbps
Throughput (Mpps)	14.88
Mac table	8 K
Jumbo frame support	9 K
Switch Architecture	Store-and-Forward
Switch Fabric	20Gbps non-blocking
Switch Throughput	14.8Mpps @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
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
IEEE PoE Standard	IEEE 802.3af/IEEE 802.3at Power over Ethernet/PSE
Maximum Devices	8
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)

Electrical

PoE power budget	260 W
Redundant power	Yes
Power supply type	48 VDC
Power consumption	320 W

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Physical

Physical dimensions	152 x 107 x 72 mm 6 x 4.21 x 2.83 in.
Net weight	1.684 kg
Colour	Black
Material	Metal
Mounting type	DIN-rail, Wall mount
Stackable	No

Environmental

Operating temperature	-40 to +75°C
Storage temperature	-40 to -85°C
Relative humidity	0 to 95% noncondensing
Environment	Indoor
IP rating	IP30

Standards & regulation

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

LED Indicators & Switch

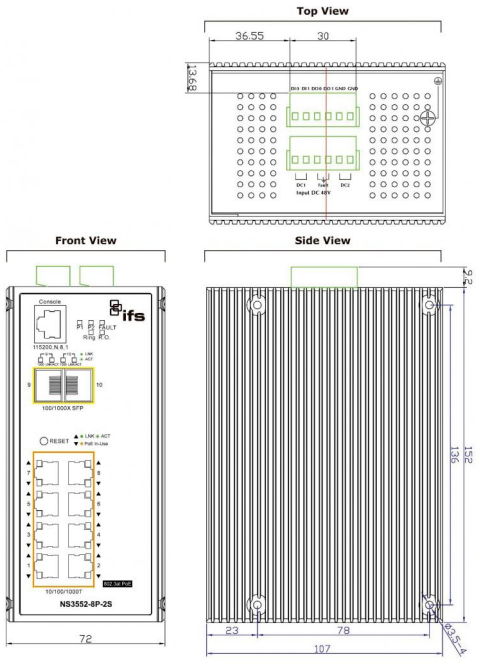
Power	On/Green
10/100/1000Base-T Ports	10/100/1000 LNK/ACT - Green
100/1000Base-X/SFP Ports	100 LNK/ACT - Green; 1000 LNK/ACT - Green
FAN(s)	Alarm/Green
Reset Button	System reboot: push and hold < 5 sec.; Factory Default: push and hold > 5 sec.

Electrical & Mechanical

Power Input 1	48VDC
Power Input 2	48VDC
Electrical Fast Transient (EFT)Protection	6KV DC
Alarm Fault Relay	1A @ 24VDC
Power and Alarm FaultConnector	6-pin removable screw terminal

Accessories

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



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