iGigaSwitch 1202 HSR SFP-2VI AC

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LANactive Industry 12 Port Managed Full Gigabit Ethernet Switch

- 12 ports in total, 10x TP and 2x SFP ports for HSR
- Optionally with integrated I/O module
- IEC 61850 compliancy is tested and certified by KEMA/DNV-GL
- Wide operating temperature range: -40 ... +85°C
- Wide input power range 90 … 264V AC or 127 … 370V DC

IEC 61850

KEMA

Made in Germany

LANactive Industry

NEXMAN
Client/Server Licence

Description

Nexans managed Industrial Ethernet iGigaSwitch 1202 HSR is part of the *LANactive Industry* product portfolio and is designed for installing robust and reliable networks in harsh environment.
LANactive Industry iGigaSwitch 1202 HSR is designed to provide maximum network availability, security, longest lifetime in harsh environments and making a network maintenance easier.

iGigaSwitch 1202 HSR provides great flexibility in network design - it has 12x Gigabit Ethernet ports (10x TP and 2x SFP). The iGigaSwitch allows to adapt the interfaces to the application by using the corresponding pluggable modules (Fast Ethernet or Gigabit SFP).

I/O interfaces
Optional I/O interfaces of iGigaSwitch 1202 HSR allows a fast, simple and low-cost integration of non-IP based devices directly e.g. different sensors, controllers, buttons etc. The switch is offering extensive management functionalities with interactions, sending of messages as well as the activation of alarms.

Zero-Loss Redundancy
High Availability and Seamless Redundancy (HSR) and Parallel Redundancy Protocol are a zero-loss redundancy protocols for ring network topologies. That means the iGigaSwitch sends packets in both directions of the ring that at least one packet will arrive the destination.

IEC 61850
Nexans iGigaSwitch family comply to IEC 61850 requirements (parts 6, 7-1, 7-2, 7-3, 7-4, 8-1, 9-1 and 9-2 Communication networks and systems for power utility automation). This functionality is critical for Smart grid and allows to use standardized equipment to ensure correct and reliable communication of all networked devices of Smart grid infrastructure (including switches, PLCs, different controllers, sensors etc.) with each other and with central SCADA.

The compliance is tested and confirmed by KEMA/DNV-GL.

Standards (extract)

IEEE 802.3
IEEE 802.3u
IEEE 802.3ab
IEEE 802.3af
IEEE 802.3at
IEEE 802.3z
IEEE 802.3x
IEEE 802.1AB
IEEE 802.1D
IEEE 802.1Q
IEEE 802.1X
IEEE 802.1AX
IEEE 802.3ad

IEC 61850-6, 7-1, 7-2, 7-3, 7-4, 8-1, 9-1, 9-2
IEC 61850-3

Designed for harsh environments
PoE/PoE+
Compact design
Interoperability
Easy maintenance
Redundancy
Security and reliability
High availability

Nexans

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Hardware Features

Ordering Information	iGigaSwitch 1202 HSR SFP-2VI AC HW5
Article Number	88306432
LAN Interfaces	
User Ports (Twisted Pair)	10x 10/100/1000Mbps
Uplink Ports (SFP)	-
HSR/PRP Interfaces (SFP)	2x 100/1000Mbps
Diagnostic Functions (Interfaces)	
Digital Diagnostics Monitoring Interface	Yes
Twisted Pair Cable Diagnostic	Yes
General	
Dimensions [WxHxD]	95mm x 184mm x 125mm
IP Protection Class	IP30 (EN 60529)
Mounting	35mm DIN-Rail Mounting according to EN 60715, (EN 50022) Different mounting positions of DIN-Rail clip - vertical and horizontal switch mounting. Optional: wall mounting.
Material	Anodised/Varnished Aluminium
Colour	Black
Ambient Temperature	Operation: -40 ... 85°C, Storage: -40 ... 85°C
Relative Humidity	20 - 90% (non-condensing)
Weight	1800g
MTBF	> 500,000h
Power Supply	
Input voltage for switch	90 … 264V AC / 127 … 370V DC
Input voltage for PoE+	-
Power consumption (without PoE)	13W (standby) … 15W (typ.) ... 28W (fully connected)
Heat output	52 BTU(IT)/h (typ.)
Connector	1x 3-pin terminal blocks, screw-on type (up to 2.5 mm²) / (+) (-) (FPE)

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Software Features

Switching Parameters	
Switching Type	Store-and-Forward, self-learning
Max. Frame Size	9,600 Bytes (Support of Jumbo frames)
Packet Buffer	512 kBytes
Latency (RFC1242)	100 Mbps / 64 Byte (FIFO/LIFO) 9µs / 3.9µs 100 Mpbs / 1518 Byte (FIFO/LIFO) 125µs / 4µs 1000 Mbps / 64 Byte (FIFO/LIFO) 2.7µs / 2.2µs 1000 Mpbs / 1518 Byte (FIFO/LIFO) 15µs / 2.5µs
MAC-Address Table	8,192 MAC-Addresses
VLANs	IEEE802.1q with up to 256 Groups
Quality of Service Layer 2	IEEE802.1p Class of Service (4 Queues per Port)
Quality of Service Layer 3	RFC2474/3168 DSCP (4 Queues per Port)
Bandwidth Limitation	Bitrate and Number of Packets
Fabric Attach	Basic Fabric Attach Client Support
Management	On-Board High-Performance Management
LEDs	Management, Port Status and Activity, Memory Card
Zero-Touch Configuration	Via NEXMAN Controller
IP-Address	IPv4, IPv6
DHCP-Client	DHCP, DHCPv6
DHCP Relay Agent	Yes
File Transfer	TFTP, SCP
Console Port	V.24 with Nexans Console Cable
Web-Interface	HTTP, HTTPS
Command Line Interface	SSH, Telnet
SNMP	SNMPv1, v2c, v3
Further Management Protocols	Syslog, LLDP, LLDP-MED, CDP
Time Synchronisation	SNTP
Port Statistics	Detailed per Port
Redundancy	
Redundancy Protocols	STP, RSTP, MSTP, MRP, HSR, PRP
Link Aggregation	LACP
Security	
Password Protection	Two Access Levels (R/W or R/O)
Authentication via Radius	CLI and NEXMAN
Authentication via TACACS+	CLI and NEXMAN
ACL for Management Interface	Up to 16 Access Control Lists
Portsecurity via MAC-Address	Up to 3 predefined MAC-Addresses
Portsecurity via Radius	IEEE802.1x
DHCP Snooping	Yes
Loop and Broadcast Limiter	Yes
Firmware Update	Dual Firmware Image
Configuration Button	Yes (configuration button deactivatable)
Reset Button	Yes (configuration button deactivatable)
Memory Card	SD-Card, optionally with fixed MAC-Address

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Standards

Standards	
Safety requirements (IT equipment)	EN 62368-1
Electromagnetic compatibility (EMC) - Limits for harmonic current emissions	EN 61000-3-2
Electromagnetic compatibility (EMC) Limitation of voltage changes	EN 61000-3-3
Electromagnetic compatibility (EMC) - Generic standards - Immunity standard for industrial environments	EN 61000-6-2
Communication networks and systems for power utility automation	IEC 61850-6, 7-1, 7-2, 7-3, 7-4, 8-1, 9-1 and 9-2 IEC 61850 Certificate Level A IEC 61850 SERVER functionality - MMS and GOOSE KEMA/DNV-GL certified
General environmental requirements for hardware design	IEC 61850-3

Dimensions