

iGigaSwitch 10xx E+ HW5 Series

Contact

Nexans LAN Systems

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www.nexans.com/LANactiveIndustry

LANactive Industry 10 port managed Full Gigabit Ethernet Switch

- 10 ports in total, variable number of SFP ports (2, 4 or 8)
- Up to 8 PoE+ ports with max. 240W power budget
- Up to 6 PoE++ ports with max. 540W power budget
- Built-in I/O module with 2 input and 2 output ports
- Wide operating temperature range, -40 ... +85°C
- Wide input power range, 18 ... 60V DC

Description

Nexans managed Industrial Ethernet iGigaSwitch 10xx E+ HW5 series is part of the LANactive Industry product portfolio and designed for installing a robust and reliable networks in harsh environments.

The LANactive Industry iGigaSwitch 10xx series is designed to provide a maximum of network availability, security and longest lifetime in harsh environments.

The iGigaSwitch 10xx series provides great flexibility in network design - it has 10x Gigabit ports including 2, 4 or 8 SFP ports. The iGigaSwitch is designed for DIN-Rail mounting and comes with redundant input for powering.

I/O interfaces

The integrated I/O interface of the iGigaSwitch 10xx series allow a fast, simple and low-cost integration of non-IP based devices directly e.g. different sensors, controllers, buttons etc. The switches are offering extensive management functionalities with interactions, sending of messages as well as the activation of alarms.

Power over Ethernet (PoE/PoE+/PoE++)

Up to 8x connected Ethernet devices can be supplied with Power over Ethernet. According to the latest IEEE 802.3at (PoE+) standard, up to 30 watts per port are available for each connected device, with total budget of 240 watts.

The latest generation of the iGigaSwitch 1004 E+ SFP-4VI HW5 provides PoE++ according to IEEE 802.3bt, with 90W per port and a total budget of 540W per switch.

IEC 61850

Nexans iGigaSwitch family complies 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.



Made in Germany

LANactive Industry

NEXMAN
Client/Controller

Standards

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

IEEE 1613
IEC 61000-6-2
IEC 61800-3
IEC 60068-2-6
IEC 60068-2-27
IEC 60068-2-32
EN 60950
EN 55022

IEEE 802.3x
IEEE 802.1AB
IEEE 802.1D (MAC Bridges, Rapid Spanning Tree Protocol, Class of Service)
IEEE 802.1X
ANSI/TIA-1057
ISO/IEC 15802-3
IEC 62439-2



Designed for harsh environments



PoE/PoE+(PoE++)



Compact design



Interoperability



Easy maintenance



Redundancy



Security and reliability



High availability

Nexans

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Hardware Features

Ordering Information	iGigaSwitch 1002 E+ SFP-2VI HW5	iGigaSwitch 1004 E+ SFP-4VI HW5	iGigaSwitch 1008 E+ SFP-8VI HW5
Article Number	88306422	88306424	88306428
LAN Interfaces			
User Port (Twisted Pair)	8x 10/100/1000 Mbps	6x 10/100/1000 Mbps	2x 10/100/1000 Mbps
Uplink Port (SFP)	2x 100/1000 Mbps	4x 100/1000 Mbps	8x 100/1000 Mbps
Power over Ethernet			
Max. Number of PoE+ ports	8	6	2
Max. PoE power budget	240W	180W	60W
Max. Number of PoE++ ports	-	6	-
Max. PoE++ power budget	-	540W	-
Diagnostic functions (interfaces)			
Digital Diagnostics Monitoring Interface		Yes	
Twisted Pair cable diagnostic		Yes	
General			
Dimensions [W x H x D]		83 x 133 x 125 mm	
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	1300g		
MTBF	> 500,000h		
Power Supply			
Input Voltage for Switch	18 ... 60V DC		
Power Fail Hold Up Time	> 10ms @ > 18V input voltage		
Input Voltage for PoE+	46 ... 57 V DC (typ. 54V DC)		
Power Consumption (without PoE)	13W (standby) ... 15W (typ.) ... 22W (fully connected)		
Heat Output	52 BTU(IT)/h (typ.)		
Connector	5-pin terminal blocks, screw-on type (up to 2.5 mm ²) / (+) (-) (+) (-) (FPE)		
Connector PoE	3-pin terminal blocks, screw-on type (up to 2.5 mm ²) / (+) (-) (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 Mbps / 1518 Byte (FIFO/LIFO) 125µs / 4µs 1000 Mbps / 64 Byte (FIFO/LIFO) 2.7µs / 2.2µs 1000 Mbps / 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
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	Micro SD-Card, optionally with fixed MAC-Address

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Standards

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Audio/video, information and communication technology equipment - Part 1: Safety requirements

IEC 62368-1

Electromagnetic compatibility (EMC) - Part 6 -2: Generic standards - Immunity standard for industrial environments

IEC 61000-6-2:2005

Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

IEC 50581:2012

Communication networks and systems for power utility automation

IEC 61850

Dimensions

