

GigaSwitch V3

- 4x 10/100/1000 Mbps User Ports
- 2x SFP or SFP/TP Uplink




Made in Germany



Snap In Mounting
No Tools needed for
Installation
(45mm Form Factor)

54 VDC

SFP
TP

Energy
Efficient
Ethernet

PoE+
IEEE802.3at

Application

The GigaSwitch V3 provides the ideal basis for the architecture of secure, switched Gigabit Ethernet networks in Fiber to the Office (FtO) environment.

Snap-In Installation

The very compact design of this switch allows a snap-in installation (no tools needed) in standard 45 mm cable duct systems or floor boxes without special mounting frames!

Power Source Equipment (PSE+)

Thanks to the implemented Power-over-Ethernet (PoE+) functionalities

e.g. VoIP-Phones, Wireless-Access-Points and IP-Cameras can be supplied with power according to IEEE802.3at from the switch directly.

Memory Card

The optional Memory Card always stores the complete and most actual configuration of the switch automatically. In case of a system exchange you just need to take out the Memory Card of the old switch and insert it into the new switch. During the boot process the new switch will then take over the old configuration from the Memory Card. Furthermore each Memory Card has got its own MAC

Address. As soon as a Memory Card is inserted into a system, the active MAC address is the MAC Address of the Memory Card, i.e. there is no need to change routing tables in case of a system exchange!

Management

The management provides a simple and secure configuration from a central location. Rapid Spanning Tree, Radius, prioritization, LLDP, IGMP, CDP, diagnostic functions and SNMP traps are some of the implemented features.

Features

General

- 6 Port Switch with 2x SFP or SFP/TP Uplinks
- 10/100/1000 Mbps
- Store and Forward Switch, self learning (Layer-2 switch)
- Support of Jumboframes (10240 bytes)

Memory Card (optional)

- Memory Card with MAC-Address
- System Configuration Backup on Memory Card and boot up with Memory Card MAC address and Configuration

Power Supply

- Wide Range Power Supply 46 ... 57 VDC (typ. 54 VDC)

Function input

- Free programmable function input with alarm functionality

Power over Ethernet (PSE+)

- 4x or 5x Power over Ethernet (PSE+) according to IEEE802.3at (depending on model)

Power over Ethernet (PD)

- The switch can be supplied with power via TP-Interface on the rear site (depending on model).

Twisted Pair User Interfaces

- TP module rotatable for horizontal or vertical assembly
- 4 female RJ45 interfaces (10/100/1000 Mbps)
- MDI/MDI-X Auto-Crossover and Auto-Polarity
- Cable Diagnostic for exact localization of errors on the twisted pair cable links

Energy Management

- EEE - Energy Efficient Ethernet
- ECO Mode
- manageable Power over Ethernet


Management

- WEB/SNMP/SSH/V.24 Management
- LLDP and CDP
- Compatibility to "Cisco Secure Access Control Server ACS"
- Extensive security functions SCP, SSHv2, HTTPS, RADIUS, SNMPv3, IEEE802.1X etc.
- Integrated in ARP Guard Secure Management
- Configuration via NexManV3
- IPv6 according to IPv6 Forum phase 2 core specification

Mechanics

- Smallest Size (90 mm x 45 mm)
- International 45 mm Form Factor

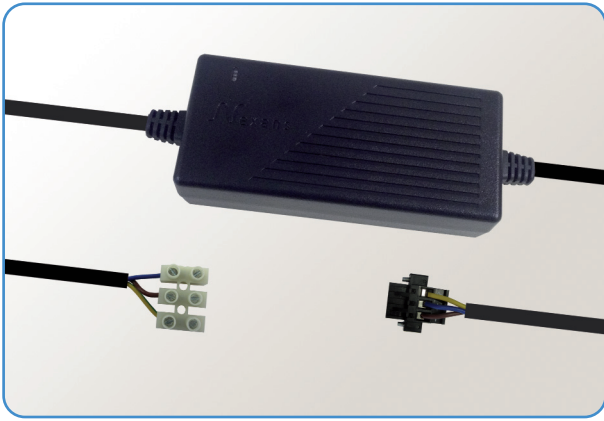
Technical Data

GigaSwitch V3	SFP-2VI	TP SFP-I	TP(PD) SFP-I	TP(PSE+) SFP-I	
	 Memory card optional	 Memory card optional	 Memory card optional	 Memory card optional	
	Order Numbers	88303853	88303855	88303884	88303885
	Memory Card with MAC Address	88300691	88300691	88300691	88300691
	LAN Interfaces				
User interfaces (Twisted Pair)	4x 10/100/1000 Mbps				
Uplink interfaces (SFP)	2x 100/1000 Mbps	1x 100/1000 Mbps	1x 100/1000 Mbps	1x 100/1000 Mbps	
Uplink interfaces (Twisted Pair)	-	1x 10/100/1000 Mbps	1x 10/100/1000 Mbps	1x 10/100/1000 Mbps	
Diagnostic functions (Interfaces)					
Digital Diagnostics Monitoring Interface	yes				
Twisted Pair Cable Diagnostic	yes				
General					
Dimensions [WxHxD]	90 mm x 45 mm x 35 mm				
Mounting	Snap In				
Haousing	zinc diecasting / stainless steel				
Color	RAL 9010 (pure white)				
Ambient temperature	Operation: 0 ... 40 °C, Storage: -20 ... 85 °C				
Relative humidity	20 - 90 % (non-condensing)				
Weight	290 g				
Power Supply					
Input voltage	46 ... 57 VDC (typ. 54 VDC)				
Power consumption (without PoE)	2.8 W (Standby) ... 5.1 W (fully connected)				
Interface connector	3-pin connector with plug-in screw terminal (up to 2.5 mm ²) / (+) (-) (FPE)				
Power over Ethernet					
Number of PoE interfaces (front site)	4x PSE (PoE+) according to IEEE 802.3at				
Number of PoE interfaces (rear site)	-	-	1x PD according to IEEE 802.3af/at	1x PSE(PoE+) according to IEEE 802.3at	
PoE Mode	Mode A, Pin 1-2/3-6				
Functional Parameter					
Switching Capacity (Backplane)	20 Gbps				
Data throughput	> 1 400 000 Packets/Sek. per Port (FDX, bidirektional)				
Switching procedure	Store and forward, self-learning				
Max. Framesize	10 240 bytes (Support of Jumboframes)				
Storage capacity	8 192 MAC-Addresses				
Management					
	On-Board High-Performance Management				
Memory	32 Mb RAM, 16 Mb FLASH				
Ethernet connection processor	100 Mbps				
Firmware update	Update in separate FLASH area, Corruption impossible				
FLASH configuration	Dual Configuration, Corruption impossible				
SCP, SSH, HTTPS and SNMPv3 capable	yes				
Configuration- Reset button	yes (Configuration button deactivatable)				
Memory Card	Memory Card with fixed MAC-Address for redundant storage of the complete switch configuration (optional)				
Console Interface (V.24)	yes				
Function input	Free programmable function input with alarm functionality				
Standards					
Electrical safety (IT equipment)	EN 60950				
Electrical conditions (EMC)	EN 55022				
Others (abstract)	CE, IEEE 802.3x (Flow Control), IEEE 802.1AB (LLDP), IEEE 802.1D (MAC Bridges), IEEE 802.1D (Rapid Spanning Tree Protocol), IEEE 802.1D (Class of Service), IEEE 802.1X (Port-Based Network Access Control), ANSI/TIA-1057 (Link Layer Discovery Protocol for Media Endpoint Devices), ISO/IEC 15802-3 (Media Access Control Bridges), IEC 62439-2 (Media Redundancy Protocol-MRP)				
Fiber Optic Parameter 1000BASE-SX					
Wavelength	depending on SFP version				
Dynamic (MM G50/125 μm)	depending on SFP version				
Range	depending on SFP version				
Fiber Optic Parameter 1000BASE-LX					
Wavelength	depending on SFP version				
Dynamic (SM E9/125 μm)	depending on SFP version				
Range	depending on SFP version				

Management Features (abstract)

	GigaSwitch V3 Firmware
Access Control / Authentication Management	
Admin account with Read/Write access for HTTP/HTTPS, Telnet/SSH/V.24 console and NexManV3	•
Access Policy Mode with disabling function for unsecure protocols, activation of SSHv2, HTTPS, SNMPv3 and "Password Checker"	•
Gratuitous ARP function guarantees that the switch can be reached after change of IP address	•
Securely encrypted transfer of configuration and firmware via SCP- Secure Copy	•
IPv6 according to IPv6 Forum phase 2 core specification	•
WEB / HTTP / HTTPS Access	
WEB interface (no proxy server required), can be disabled or set to Read/Only access	•
TCP port number can be set for WEB access	•
Telnet / SSH and V.24 Console	
Telnet console (no proxy server required) and Cisco-like command line interface	•
Telnet or V.24 console can be disabled respectively Telnet and V.24 console authentication via RADIUS server	•
Secure 256-bit encrypted SSH / SSL transfer and use of 1024-bit RSA keys.	•
SNMP Access, SNMP Traps and Syslog Messages	
Configuration of switch possible via 'SNMP Set Request'	•
MIB-II (RFC1213) system, interface, at, ip	•
ETHERLIKE MIB (RFC2665) dot3StatsTable	•
IF MIB (RFC2863) ifXTable	•
BRIDGE MIB (RFC4188) dot1dBase, dot1dStp, dot1dTp	•
RSTP MIB (RFC4318)	•
RMON MIB (RFC2819) statistics	•
Eight IP addresses can be set as event receivers for SNMP traps, Alarm and Syslog messages	•
Up to 27 different event types can be enabled per receiver	•
Portsecurity	
Loop/broadcast limiter for protection against accidental or malicious packet storms	•
Active loop protection with automatic disablement of short-circuited ports	•
Manual definition of three authorized MAC addresses per port	•
Automatic learning of up to three authorized MAC addresses per port	•
Port switches off, when an unauthorized MAC address is detected	•
SNMP trap/syslog message for newly detected or for unauthorized MAC address	•
Transparent transmission of IEEE802.1x packets can be enabled/disabled	•
RADIUS authentication of up to three MAC addresses per port	•
Port authentication according to IEEE802.1x in connection with the RADIUS server	•
Unauthenticated ports are switched into a freely selectable Unsecure-Default-VLAN	•
VLAN Support / Trunking	
VLAN table selectable with up to 64 VLAN IDs,	•
Default-VLAN ID can be set for each port	•
Default-VLAN can be disabled for trunking ports	•
Trunking with tagging in accordance with IEEE802.1q can be enabled/disabled for each port	•
Prioritization of the VLAN tags selectable according to IEEE802.1p	•
Prioritization	
Prioritization selectable per each port according to IEEE802.1p / IPv4 and IPv6	•
Four output queues selectable for prioritization weighting per port	•
4 Prioritization scheme {strict queuing}, {8,4,2,1 weighted fair queuing}, {3 strict/2,1,0 weighted}, {2,3 strict/1,0 weighted}	•
Discovery Protocols	
LLDP (Link Layer Discovery Protocol)	•
CDP (Cisco Discovery Protocol)	•
Switch Information / Configuration	
Configuration of IP parameters via DHCP and manual configuration of IP parameters possible	•
Configuration of IP parameters possible without pressing configuration switches (NexConV3)	•
Loading of a Switch Configuration or firmware via Telnet/SSH/V.24/DHCP/BOOTP console possible	•
Output of the running configuration in Telnet as CLI script and optional saving on an external TFTP server.	•
Prevention of corruption through firmware update in separate FLASH segment	•
Avoid corruption of configuration changes with dual configuration management	•
Firmware and Configuration Management via Nexans Switch Manager V3	
NexManV3 authentication via RADIUS server	•
Download / upload of the configuration and archiving in a database on the PC	•
Upload of a new configuration into the switch is made On-The-Fly (no reboot required)	•
Archiving of the configuration in an offline database (using NexManV3)	•
Securely encrypted configuration via SNMPv3	•
Redundancy	
RSTP - Rapid Spanning Tree Protocol	•
MSTP - Multiple Spanning Tree Protocol	•
Power over Ethernet	
Detection, monitoring and display of PoE related values, voltage and consumption	•
Power Setup, Off / On / Auto - 802.3af / Auto 802.3af High-Power /Auto 802.3at High-Power	•
Environmental Monitoring/Diagnostic/Mirroring	
Display of internal operating voltages and housing temperature	•
SNMP trap/alarm and syslog messages, if temperature is exceeded	•
Logbook for permanent internal saving of syslog messages	•
35 counters for packets, bytes, Unicasts, Broadcasts, etc. per port	•
Port monitor for individual ports	•
Switch can be set to VLAN mirroring	•
Display of SFP Information: Vendorname, Part Number, Serial Number, Datecode, etc.	•
Display of SFP Diagnostics: TX and RX power in uW and dBm, temperature, voltage, bias current	•
Configurable Alarm limits for TX- and RX-Power as well as for Laser-Bias-Current	•
SNMP-Trap/Syslog-message activation for preset alarm limits	•
Other Network Protocols	
IGMP Snooping (Internet Group Management Protocol) can be activated globally, IGMP protocol versions 1 or 2 can be selected	•
SNTP (Simple Network Time Protocol) can be activated globally	•

Order Numbers



Installation Power Supply 54VDC/65W

- Power Supply for Installation Switch Systems with DC Input
- Dimensions: 120mm x 54mm x 32mm
- Output Power: 65 Watts
- Fanless System
- Control-LED, green
- Input voltage: 100-240 VAC
- Output voltage: 54 VDC
- mutual connection of function earth
- Low Voltage Directive "Protection Class II"

Order Number:
 Installation Power Supply 54VDC/65W 88646066



With "Digital Diagnostic Monitoring Interface" to readout specific parameters (e.g. temperature, optical input/output power).

SFP 100 Pluggable Transceiver (100 Mbps)

- Fast Ethernet
- Fiber Optic LC Connector
- Digital Diagnostic Monitoring Interface

Order Numbers:
 Nexans SFP 100 Transceiver GI(LC)E 88646010
 Nexans SFP 100 Transceiver SM(LC)E L10 88646011
 Nexans SFP 100 Transceiver SM(LC)E L40 88646012
 Nexans SFP 100 Transceiver SM(LC)E L80 88646013



With "Digital Diagnostic Monitoring Interface" to readout specific parameters (e.g. temperature, optical input/output power).

SFP 1000 Pluggable Transceiver (1.000 Mbps)

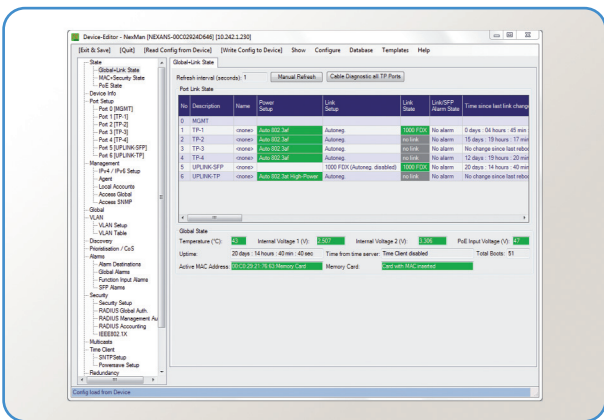
- Gigabit Ethernet / Fiber Optic LC Connector
- Digital Diagnostic Monitoring Interface

Order Numbers:
 Nexans SFP 1000 Transceiver GI(LC)E 88646015
 Nexans SFP 1000 Transceiver SM(LC)E L10 88646016
 Nexans SFP 1000 Transceiver SM(LC)E L40 88646017
 Nexans SFP 1000 Transceiver SM(LC)E L80 88646018

SFP 1000 TP Pluggable Transceiver (1.000 Mbps)

- Gigabit Ethernet / Twisted Pair / RJ45 Connector

Order Number:
 SFP 1000 Plugg. Transceiver 1000 Base T 88645917



Nexans Switch Manager (NexManV3)

- Individual generation of master configurations (also single parameters selectable)
- Storage of configurations in a database (up to 100 history-entries)
- Layer 2 + 3 autodiscovery
- Time for the software update can be preset

Order Numbers:
 NexMan V3 (Single license) 88301908
 NexMan V3 (Company license) 88301909



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