

GigaSwitch V3

- 4x 10/100/1000 Mbps User Ports
- up to two Uplinks (SFP or Twisted Pair)



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

Application

The new Nexans "GigaSwitch V3" is our next generation pure Gigabit installation switch system for FTTO applications.

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!

Rotatable Twisted Pair Module

The Twisted Pair module of the switch can be installed in a vertical as well as in a horizontal way, i.e. one switch system can be used for both horizontal and vertical installations. There is no need to

order two separate installation switch systems.

10/100/1000 Mbps user ports and additional TP uplink port

Besides four RJ45 user ports with 10/100/1000 Mbps capabilities the 6-Port version also offers an additional 10/100/1000 Mbps RJ45 Uplink Interface on both short sides of the switch. Depending on the incoming direction, the Twisted Pair Cable can be connected to the more suitable RJ45 port. This simplifies installation and allows keeping the minimum bending radii of the installed Twisted Pair cables in case installation space is very limited!

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!

Features

General

- 5/6 port switch (depending on version) with up to 2 uplinks
- 10/100/1000 Mbps Ethernet/Fast Ethernet/Gigabit Ethernet according IEEE802.3/-u/-z/-ab
- Store and Forward Switch, self learning (Layer-2 switch)
- Support of Jumboframes (10240 bytes)

Memory Card (optional)

- Memory Card with MAC-Address

Power Supply

- Wide Range Power Supply 46 ... 57 VDC (typ. 48 VDC)
- External device powering via Twisted Pair Uplink Port - PoE(PD)

- 3 pin Terminal Block up to 2,5 mm² (+) (-) (PE)

Uplink Interfaces

(depending on version)

- up to 2 uplinks (Twisted Pair or SFP design)
- 10/100/1000 Mbps Twisted Pair
- Vario-Interface for Fiber Optic SFP-modules (100 Mbps or 1000 Mbps) with threshold alarm function (Syslog, SNMP-Trap etc.)

Twisted Pair User Interfaces

- TP module rotatable for horizontal or vertical assembly
- 4 female RJ45 user / terminal interfaces
- Interfaces according to:
 - IEEE802.3 10BASE-T or

- IEEE802.3u 100BASE-TX or
- IEEE802.3ab 1000BASE-T

- MDI/MDI-X Auto-Crossover and Auto-Polarity
- 10/100/1000 Mbps
- Good an easy accessible unlocking of the twisted pair patch cables

Power over Ethernet (PSE)

- 4x Power over Ethernet (PSE) according to IEEE802.3af (Mode A)
- Full galvanic isolation between PoE voltage and switch electronics

Mechanics

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

Technical Data

General and mechanical specifications	
Model	Pre-assembled module for installation in twin boxes
Mounting dimensions [W x H x D]	90 mm x 45 mm x 33 mm
Ambient temperature	Operation: 0 ... 40 °C, Storage: -20 ... 85 °C
Relative humidity	20 - 90 % (non-condensing)
Weight (without Options)	290 g
Electrical safety IT equipment	EN 60950
Electrical conditions EMC	EN 55022
Further standards	CE

Functional parameters	
Switching procedure	Store and forward, self-learning
Data throughput	> 1.400.000 Packets/Sec. per Port (FDX, bidirectional)
Aging Timer	1-68 Minutes (per Mgmt. adjustable)
Flow control in FDX mode	Pause Frames according to IEEE 802.3x (per Mgmt. switchable)
Frames	Support of Jumboframes (10240 bytes)
Storage capacity	8192 MAC-Addresses

48 VDC and PoE Power Supply	min.	typ.	max.
Supply voltage	46 VDC	48 VDC (typ.)	57 VDC
Power consumption (without PoE) by supplying switch system via 48 VDC	< 4 W	5 W	6,8 W
Interface connector power supply	3-pin connector with plug-in screw terminal (up to 2,5 mm ²) / (+) (-) (PE)		
Protective Earth (PE)	2 x 6.3 mm flat plug		
Power over Ethernet (PD - Powered Device)*			
PoE Classification	Class 0 and Class 3 respectively		
Supply voltage	44 VDC	48 VDC (typ.)	57 VDC

* available only at systems with twisted pair uplink

SFP (Small Form Factor Pluggable) Interfaces	
Input / output signals (1000 Mbps)	According to IEEE802.3z 1000BASE-X
Input / output signals (100 Mbps)	According to IEEE802.3u 100BASE-FX

Electrical interfaces (Twisted Pair)	min.	typ.	max.
Input / output signals	According to IEEE802.3ab 1000BASE-T (Full Duplex) respectively IEEE802.3u 100BASE-TX, (Full-, Half Duplex) respectively IEEE802.3 10BASE-T (Full-, Half Duplex)		
Automatic adjustment	Autosensing, Autonegotiation, Auto MDI/MDI-X (default MDI-X)		
Interface connector	RJ-45, shielded		
Nominal impedance	100 Ohm		
Line length, max.	max. 100 m		
Power over Ethernet (PSE - Power Source Equipment)*			
Output power, per user port			15.4 W
Supply power			12.95 W
Power at input of powered device	0.44 W		
Output current, per port		0,35 A	0,5 A (100 ms)
Interface connector PoE	RJ45 Connector Pin 1-2 negative / Pin 3-6 positive		
PoE Setup	Auto 802.3af / Off		
PoE Reset	Disables output power voltage for a period of 6 seconds		

* only user interfaces (4x)

Management Features (Extract)

Access Control / Authentication Management
Admin account with Read/Write access for WEB, Telnet, SSH console and NexManV3
User account with Read/Only access for WEB, Telnet, SSH console and NexManV3
Local Admin and User passwords can optionally be saved as an MD5 hash.
Gratuitous ARP function guarantees that the switch can be reached after change of IP address.
Periodic transmission of life packets can be enabled
WEB / HTTP Access
WEB interface (no proxy server required)
Telnet/SSH Console
SSHv2 console
Telnet console (no proxy server required)
Cisco-like command line interface
SNMP Access, SNMP Traps and Syslog Messages
SNMP interface (no proxy server required)
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
LLDP MIB (IEEE 802.1AB)
Private MIB (NEX-BM.MIB) bmSwitchInfo, bmSwitchAdmin, bmSwitchPort, bmSwitchVlan, bmSfp
Eight IP addresses can be set as event receivers for SNMP traps and Syslog messages
Up to 18 different event types can be enabled per receiver:
Portsecurity
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
Port authentication according to IEEE802.1x or MAC address on same port
Unauthenticated ports are switched into a freely selectable Unsecure-Default-VLAN
Rapid Spanning Tree
VLAN Support / Trunking
Static or dynamic setting of VLAN table
Prioritization of the VLAN tags selectable according to IEEE802.1p
Prioritization
Prioritization selectable according to IEEE802.1p/IPv4 and IPv6
Four output queues selectable for prioritization weighting per port
Prioritization scheme {strict queuing} and {8,4,2,1 weighted fair queuing} selectable
IGMP (Internet Group Management Protocol)
SNTP (Simple Network Time Protocol)
LLDP (Link Layer Discovery Protocol)
CDP (Cisco Discovery Protocol)
Mirroring / Port Monitor
Switch can be set to VLAN mirroring
Port monitor for individual ports
SFP Information and Diagnostics
Display of SFP Diagnostics: TX and RX power in uW and dBm, temperature, voltage, bias current
Alarm limits for TX- and RX-power as well as laser-bias-current can be programmed
SNMP-Trap/Syslog-message in case of alarm limit violation

Order Numbers



GigaSwitch V3

- 5/6 Port 10/100/1000 Mbps Switch (depending on version)
- 4x Twisted Pair User Port (10/100/1000 Mbps)
- 4x Power over Ethernet (PSE)
- up to 2x Uplink Ports
- integrated Management
- 48 VDC Power Supply

Order Numbers:

GigaSwitch V3 TP SFP-I 48V ES3 (Twisted Pair and SFP Uplink) 88303851
 GigaSwitch V3 SFP-I 48V ES3 (SFP Uplink) 88303852

Memory Card for GigaSwitch V3 88300691

All Systems can be used for vertical and horizontal installation.



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

SFP 1000 Pluggable Transceiver (1000 Mbps)

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

Order Numbers:

SFP 1000 Pluggable Transceiver GI(LC) E 88645879
 SFP 1000 Pluggable Transceiver SM(LC) E L10 88645870
 SFP 1000 Pluggable Transceiver SM(LC) E L40 88645876
 SFP 1000 Pluggable Transceiver SM(LC) E L80 88645877

SFP 100 Pluggable Transceiver (100 Mbps)

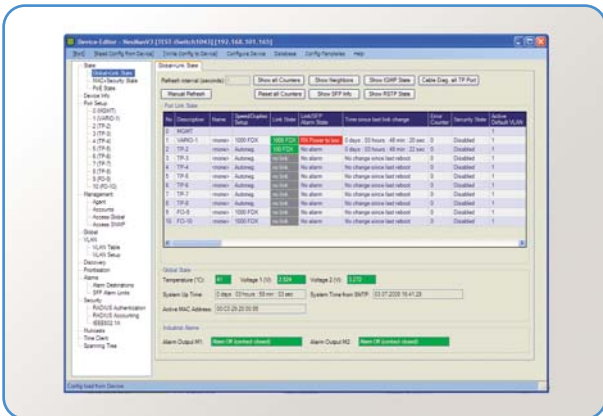
- Fast Ethernet
- LC Fiber Optic Connector
- Digital Diagnostic Monitoring Interface

Order Numbers:

SFP 100 Pluggable Transceiver GI(LC) E 88645896
 SFP 100 Pluggable Transceiver SM(LC) E L10 88645897
 SFP 100 Pluggable Transceiver SM(LC) E L40 88645907
 SFP 100 Pluggable Transceiver SM(LC) E L80 88645908
 SFP 100 Pluggable Transceiver SF3(SC) E L10 88645902
 SFP 100 Pluggable Transceiver SF5(SC) E L10 88645903

Note:

- GI - Graded Index
- SM - Singlemode
- SF3 - Singlemode Single Fiber (TX 1310 nm / RX 1550 nm)
- SF5 - Singlemode Single Fiber (TX 1550 nm / RX 1310 nm)



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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