

Product Datasheet

26-port Gigabit Managed Ethernet Switch

(NVT-SW-24G02SFP)



OVERVIEW

The NVT-SW-24G02SFP is a gigabit managed Ethernet fiber switch independently developed by NOVUM-TEC. It has 24*10/100/1000Base-T adaptive RJ45 ports and 2*100/1000Base-X uplink SFP fiber ports. Each port can support wire-speed forwarding.

The NVT-SW-24G02SFP has L2+ network management functions. It can support IPV4 management and static routing forwarding, complete security protection mechanisms, complete ACL/ QoS policies, and rich VLAN functions, making it easy to manage and maintain. Supports multiple network redundancy protocols RSTP (<50ms) to improve link backup and network reliability. When a one-way network fails, communication can be quickly restored to ensure uninterrupted communication of important transmissions. According to application needs, port flow control, VLAN division, QoS, and other application service configurations can be performed through network management methods such as Web, CLI, SNMP, and Telnet. It satisfies high-density network application environment and is suitable for medium, large-scale scenes such as hotel, campus, park, shopping mall, scenic spot, hospital, bank to form an economical, efficient and reliable communication network.

FEATURE

■ Gigabit access, uplink SFP fiber port

- ◇ Support non-blocking wire-speed forwarding.
- ◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.
- ◇ Support Gigabit RJ45 port and Gigabit SFP port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ Strong business processing capability

- ◇ Support IEEE 802.1Q VLAN.
- ◇ Ring network RSTP spanning tree protocol eliminates layer 2 loops and realizes link backup.
- ◇ Support IGMP Snooping V1/V2 to meet the needs of multi-terminal high-definition video surveillance and video conferencing access.
- ◇ Support QoS, three priority modes based on port, 802.1P-based and DSCP-based, and four queue scheduling algorithms: SP, WRR, and WFQ.
- ◇ Static aggregation and dynamic aggregation effectively increase link bandwidth, achieve load balancing, and link backup, and improve link reliability.
- ◇ Support ACL to filter data packets by configuring matching rules, processing operations, and time permissions to provide flexible security access control strategies.

■ Security

- ◇ Port isolation and storm control.
- ◇ 802.1X authentication provides authentication functions for LAN computers and controls the authorization status of controlled ports according to the authentication results.

■ Stable and reliable

- ◇ CCC, CE, FCC, RoHS.
- ◇ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, and Link.
- ◇ Self-developed power supply, high redundancy design, providing a long-term and stable power output.

- ◇ Low power consumption, galvanized steel metal housing, and excellent heat dissipation to ensure the stable operation of the switch.

■ Easy O&M management

- ◇ CPU monitoring, memory monitoring, and Ping detection.
- ◇ System logs and port traffic statistics facilitate network optimization and transformation.
- ◇ LLDP facilitates the network management system to query and determine the communication status of the link.
- ◇ Web network management, CLI (Console, Telnet), SNMP (V1/V2/V3), Telnet, and other diversified management and maintenance methods.

TECHNICAL SPECIFICATION

Model	NVT-SW-24G02SFP
Interface Characteristics	
Fixed Port	1*RS232 console port(115200,N,8,1) 24*10/100/1000Base-T RJ45 ports (Data) 2*100/1000Base-X uplink SFP fiber ports (Data)
Ethernet Port	Port 1-24 can support 10/100/1000Base-T(X) auto-sensing, full/ half duplex MDI/ MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP (≤100 meters) 100BASE-TX: Cat5 or later UTP (≤100 meters) 1000BASE-T: Cat5e or later UTP (≤100 meters)
Optical Fiber Port	Gigabit optical fiber interface, default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Cable/ Distance	Multi-mode: 850nm /0-550m, Single-mode: 1310nm /0-40km, 1550nm /0-120km.
Chip Parameter	
Network Management Type	L2+

Network Protocol	IEEE 802.3 10BASE-T, IEEE 802.3i 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X, IEEE 802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	52Gbps (non-blocking)
Forwarding Rate @64byte	38.69Mpps
CPU	500M
DRAM	1GB
FLASH	256M
MAC	8K
Buffer Memory	4.1M
LED Indicator	Power: PWR (Yellow), System: SYS(Yellow), Network: Link/Act (Yellow), Fiber port: L/A(Green)
Reset Switch	Yes, One-button factory reset
Power Supply	
Total PWR / Input Voltage	20W/ (AC100-240V)
Power Consumption	Standby<15W, Full load<20W
Power Supply	Built-in power supply, AC100~240V 50-60Hz, 1.0A
Physical Parameter	
Operation TEMP/ Humidity	-20~+55°C, 5%~90% RH Non condensing
Storage TEMP/ Humidity	-40~+75°C, 5%~95% RH Non condensing
Dimension (L*W*H)	440*225*44mm
Net /Gross Weight	2.1kg/ 2.8kg
Installation	Desktop, 1U/19" cabinet
Certification & Warranty	
Lightning protection	Lightning protection: 4KV 8/20us, Protection level: IP30

Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	3 years, lifelong maintenance.
Network Management Feature	
Interface	IEEE802.3x flow control (Full duplex)
	Broadcast storm suppression based on port rate
	Port real-time traffic management (Flow Interval)
	Limit the rate of packet traffic on incoming and outgoing ports, mini granularity is 16Kbps and max is 1Gbps
L3 Feature	IPV4 static route/ default route
VLAN	Port-based VLAN (4K), VLAN based on the protocol
	IEEE802.1q, Port configuration of Access, Trunk, Hybrid
Port Aggregation	LACP dynamic aggregation, Static aggregation
	Max 13 aggregation groups and 8 ports per group
Spanning Tree	RSTP (IEEE 802.1w)
ERPS	ERPSv2
Multicast	Multicast VLAN, User quick exit mechanism, IGMP Snooping v1/v2
Port Mirroring	Bidirectional data mirroring based on port
QoS	802.1p/ DSCP priority mapping, Diff-Serv QoS
	Queue scheduling algorithm (SP, WRR, WFQ)
	Flow-based rate limiting, Flow-based packet filtering
	Flow-based based redirection, 8*Output queues of each port
ACL	Port-based and VLAN-delivered ACL
	The L2-L4 packet filtering function can match the first 80 bytes of the packet and provide information based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range to define the ACL.
Security	Port isolation, Port broadcast message suppression
	Port-based and Mac-based IEEE802.1X certification
	User hierarchical management and password protection

	AAA&RADIUS certification, IP source address protection
DHCP	DHCP Client, DHCP Snooping
Management	<p>Web network management (https), Ping detection</p> <p>NVT-NMS platform cluster management (LLDP+SNMP)</p> <p>One click recovery, View CPU real-time utilization status</p> <p>Link Layer Discovery Protocol (LLDP), System work log</p> <p>Console/ Telnet and CLI configuration, SNMP V1/V2/V3</p> <p>NTP clock, HTTP file upload and download management</p>
System	<p>Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Cat5 and above Ethernet cable</p> <p>TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, Mac OS X) installed on each computer in the network Cat5 and above Ethernet cable</p>