

Product Datasheet

28-port 10G Uplink Managed PoE Fiber Switch

(NVT-POE56028PFM)



OVERVIEW

The NVT-POE56028PFM is a 10G uplink managed PoE fiber switch independently developed by NVT. It has 24*10/100/1000M adaptive RJ45 ports and 4*1/10G SFP+ fiber ports. Port 1-24 can support IEEE 802.3 af/at PoE standard. Single-port PoE power is 30W. As a PoE power supply device, it can automatically detect and recognize the power-receiving equipment that meets the standard and supply power through the network cable. It can supply power to POE terminal equipment such as wireless AP, IP camera, VoIP phone, building visual access control intercom, etc. through the network cable, to meet the network environment that needs high-density PoE power supply. It is suitable for hotels, campuses, factory dormitories, and small and medium-sized enterprises.

The POE56028PFM has L2+ full network management function, supports IPV4/ IPV6 management, static route full wire-speed forwarding, complete security protection mechanism, complete ACL/QoS policy, and rich VLAN functions, and is easy to manage and maintain. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS to improve link backup and network reliability. When a one-way network fails, communication can be quickly restored to ensure important Uninterrupted communication for applications. According to the actual application requirements, you can configure multiple application services such as PoE power management, port traffic control, VLAN division, and SNMP through the Web network management mode.

FEATURE

■ Gigabit access, 10G SFP+ uplink

- ◇ Support non-blocking wire-speed forwarding.
- ◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.
- ◇ Support Gigabit Ethernet port and 10G SFP+ uplink port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ Intelligent PoE power supply

- ◇ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.
- ◇ Comply with IEEE 802.3 af/at PoE standard, automatically identify PoE devices for power supply, and not damage non-PoE devices.
- ◇ 24*10/100/1000Base-T RJ45 ports can support PoE power to meet the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.

■ Security

- ◇ Port isolation.
- ◇ Port broadcast storm suppression.
- ◇ IP+MAC+port+VLAN quadruple flexible combination binding function.
- ◇ 802.1X authentication to provide authentication functions for LAN computers, and control the authorization status of controlled ports according to the authentication results.

■ Strong business processing capability

- ◇ STP/ RSTP/ MSTP spanning tree to eliminate layer 2 loops and realize link backup.
- ◇ Support IEEE 802.1Q VLAN, users can flexibly divide VLAN according to needs, support Voice VLAN, QinQ configuration.
- ◇ Static and dynamic aggregation to effectively increase link bandwidth, realize load balancing, link backup, and improve link reliability.

- ◇ QoS, port-based, 802.1P-based and DSCP-based three priority modes and four queue scheduling algorithms: Equ, SP, WRR, and SP+WRR.
- ◇ ACL to filter data packets by configuring matching rule processing operations and time permissions, and provide flexible security access control policies.
- ◇ Support IGMP V1/V2/V3 multicast protocol and IGMP Snooping to meet the needs of multi-terminal high-definition video surveillance and video conferencing access.

■ **Stable and reliable**

- ◇ CCC, CE, FCC, RoHS.
- ◇ The user-friendly panel can show the device status through the LED indicator of PWR, Link, PoE.
- ◇ Self-developed power supply, high redundancy design, providing a long term and stable PoE power output.
- ◇ Low power consumption, with fan, galvanized steel casing, and excellent heat dissipation ensure the stable operation of the switch.

■ **Easy O&M management**

- ◇ CPU monitoring, memory monitoring, Ping detection, cable length detection.
- ◇ HTTPS, SSLV3, SSHV1/V2 and other encryption methods, making management more secure.
- ◇ RMON, system log, and port traffic statistics to facilitate network optimization and transformation.
- ◇ LLDP to facilitate the network management system to query and judge 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-POE56028PFM	NVT-POE56028PFM-at
Interface Characteristics		
Fixed Port	1*Console RS232 port (115200,N,8,1)	
	4*1/10G uplink SFP+ fiber ports (Data)	
Ethernet Port	24*10/100/1000Base-T PoE ports (Data/ Power)	
	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 SFP optical fiber port and 10G SFP+ optical fiber port, default no include optical modules (optional single-mode / multi-mode, single fiber / dual fiber optical module. LC)	
Optical Fiber Port Expansion	Turbo overclocking 2.5G optical module expansion and ring network	
Optical Cable/ Distance	Multi-mode: 850nm/ 0-500m(1G) , 850nm/ 0-300m (10G), Single-mode:1310nm/ 0-40km, 1550nm/ 0-120km.	
Chip Parameter		
Network Management Type	L2+	
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX	
	IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X	
	IEEE802.3ae 10GBase-LR/SR, IEEE802.3x	
Forwarding Mode	Store and Forward(Full Wire Speed)	
Switching Capacity	128Gbps (non-blocking)	
Forwarding Rate@64byte	95.23Mpps	

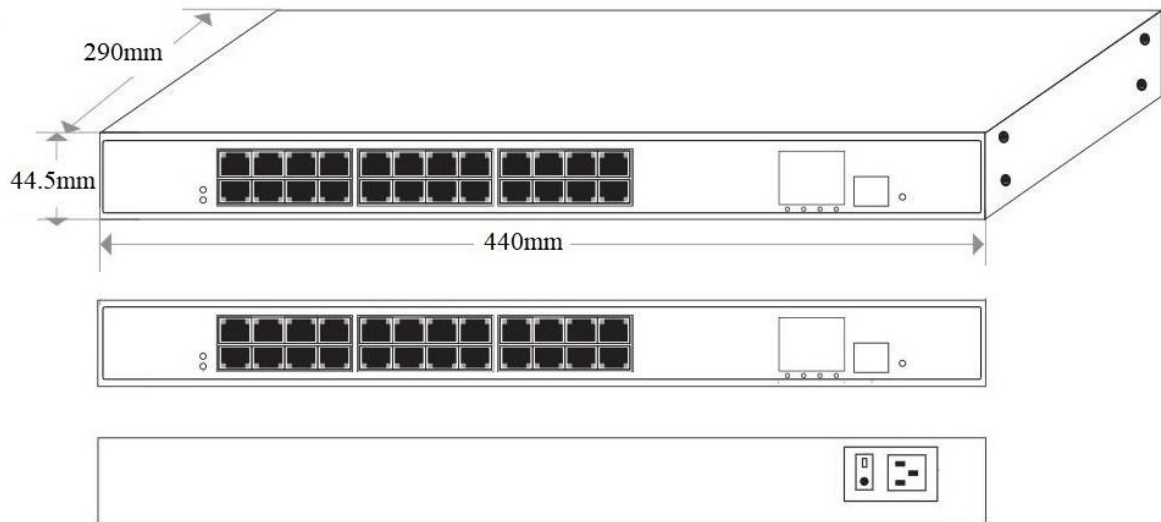
CPU	800MHz	
DRAM	1Gbit	
FLASH	128Mbit	
MAC	16K	
Buffer Memory	12Mbit	
Jumbo Frame	12000byte	
LED Indicator	Power: PWR (Yellow), System: SYS (Yellow) Network: Link/ Act (Yellow), Fiber port: L/A (Green), POE: PoE (Green)	
Reset Switch	Yes, press and hold the switch for 10 seconds and release it to restore the factory settings	
PoE & Power Supply		
PoE Port	Port 1 to 24, IEEE 802.3 af/at	
PoE Management	PoE working status display, Port PoE on/off, af/at power distribution	
Power Supply Pin	1/2 (+) 3/6(-)	
Max Power Per Port	30W, IEEE 802.3 af/at	
Total PWR / Input Voltage	400W (AC100-240V)	600W (AC100-240V)
Power Consumption	Standby<20W, Full Load<380W	Standby<22W, Full Load<600W
Power Supply	Built-in power adapter, AC100~240V 50-60Hz 5.0A	Built-in power adapter, AC100~240V 50-60Hz 6.6A
Physical Parameter		
Operation TEMP/ Humidity	-20°C~+55°C, 5%~90% RH Non condensing	
Storage TEMP/ Humidity	-40°C~+75°C, 5%~95% RH Non condensing	
Dimension (L*W*H)	440*290*44.5mm	
Net /Gross Weight	< 5.0kg / < 5.5kg	< 5.3kg / < 5.8kg
Installation	Desktop, 19 inch 1U 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 A, RoHS
Warranty	3 years, lifelong maintenance.
Network Management Features	
Interface	IEEE802.3x flow control (Full duplex)
	Port exception protection mechanism
	Port real-time flow management (Flow Interval)
	Broadcast storm suppression based on port rate
	Optical port SFP module DDMI real-time digital diagnosis
	Limit the rate of incoming and outgoing packet traffic, with a minimum granularity of 16Kbps and a maximum of 1Gbps
	Port EEE Green Ethernet Energy-Saving configuration and status view
Layer 3 Function	Jumbo frame configuration, the largest 12000byte
	Support dual-stack management
	Support L2+ network management
	ARP protocol, 1024 entries at most
VLAN	RIPv1/v2, RIPng , OSPFv1/v2, OSPFv3
	Support IPv4/IPv6 static routing, each supporting 128 entries
	VLAN based on MAC, VLAN based on the protocol
Port Aggregation	Port configuration of Access, Trunk, Hybrid. GVRP VLAN protocol (4K) VLAN based on port, IEEE802.1q, Voice VLAN, QinQ configuration
	LACP dynamic aggregation, Static aggregation
Spanning Tree	Max 14 aggregation groups and maximum 8 ports per group.
	STP BPDU Guard, BPDU filtering and BPDU forwarding
ERPS Ring Network	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
	Support ERPS ring network, ring network self-healing time is less than 20ms, ITU-T G.8032

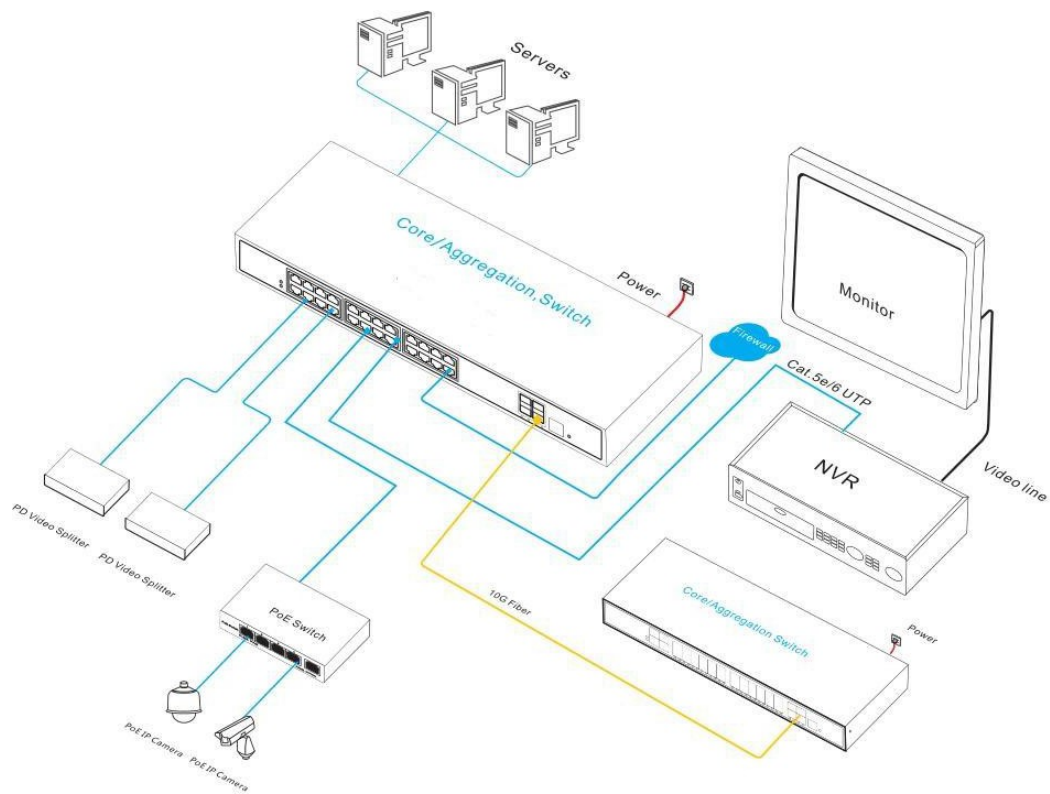
Multicast	<p>MLD Snooping, IGMP Snooping, Multicast VLAN</p> <p>User quick log out, MVR (Multicast VLAN Registration)</p> <p>IGMP Snooping v1/v2/v3 and 1024 multicast groups at most</p>
Mirroring	<p>Bidirectional traffic mirroring for basic ports</p> <p>Supports 1-to-multiple mirroring, supports up to 4 port sessions</p>
QoS	<p>Queue Scheduling Algorithm (SP, WRR, SP+WRR)</p> <p>Flow-based Rate Limiting, Stream based redirection</p> <p>Flow-based Packet Filtering, 8*Output queues of each port</p> <p>802.1p/DSCP priority mapping, Diff-Serv QoS, Priority Mark/Remark</p>
ACL	<p>ACL distribution based on port and VLAN</p> <p>L2-L4 packet filtering function, matching the first 80 bytes message, and provides ACL definitions based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN, etc.</p>
Security	<p>Port based IEEE802.1X authentication</p> <p>SSL guarantees data transmission security</p> <p>Quad binding function of IP+MAC+VLAN+ports</p> <p>MAC address learning limit, MAC address black hole</p> <p>Anti DoS attack, Port broadcast message suppression</p> <p>IP Source Guard function, AAA& RADIUS certification</p> <p>Hierarchical user management and password protection</p> <p>SSH 2.0 provides a secure encrypted channel for user login</p> <p>Host data backup mechanism, ARP intrusion detection function</p> <p>Port isolation, IP Source Guard, ARP message speed limit function</p>
DHCP	<p>DHCP Client, DHCP Snooping, DHCP Server</p>
Management	<p>Web network management (https)</p> <p>Link Layer Discovery Protocol(LLDP)</p> <p>Viewing CPU Instant Utilization Status</p> <p>NTP clock, One click restore, SNMP V1/V2/V3</p>

	<p>Cable status check, Ping detection, System work log</p> <p>NVT NMS platform cluster management (LLDP+SNMP)</p> <p>Console/ AUX Modem/ Telnet/ CLI command line configuration</p> <p>FTP, TFTP, Xmodem, SFTP file upload and download management</p>
System	<p>Category 5 Ethernet network cable</p> <p>Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later</p> <p>TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network</p>

DIMENSION



APPLICATION



ORDERING INFORMATION

Model	Description	Built-in Power Supply
NVT-POE56028PFM	L2+ managed PoE switch with 24*10/100/1000M RJ45 ports and 4*1/10G SFP+ ports. Port 1-24 support IEEE 802.3 af/at PoE standard. Support 1U/19 inch rack installation.	400W
NVT-POE56028PFM-at		600W

Note: The SFP optical module is not included by default and needs to be purchased separately.

PACKING LIST

	Content	Qty	Unit
Packing List	28-port 10G uplink managed PoE Fiber Switch	1	SET
	AC Power Cable	1	PC
	Mounting Kits (Hanging Ear)	1	SET
	User Guide	1	PC
	Warranty Card	1	PC