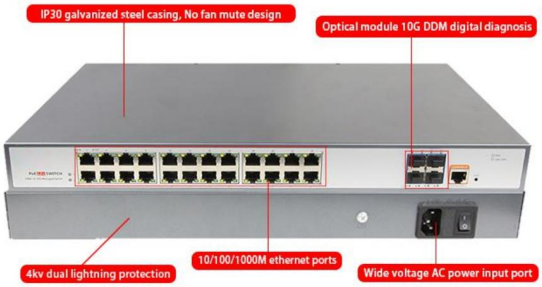
SHOGUN
Technology Solution

SG-38028FM

28-Port 10G Uplink L3 Managed Ethernet Fiber Switch



Overview

The SG-38028FM series is a 10G uplink layer 3 managed Ethernet fiber switch independently developed by Shogun. It has 24*10/100/1000Base-T RJ45 ports and 4*1/10G independently developed by Shogun. It has 24*10/100/1000Base-T RJ45 ports and 4*1/10G SFP+ fiber slot ports. Each port can support wire-speed forwarding.
The SG-38028FM has L3 full network management function, supports IPV4/IPV6 management, static route full line rate 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(<20ms) to improve link backup and network reliability. When 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 port traffic control, VLAN division, and SNMP through the Web network management mode. 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.

Features

Full Gigabit access, 10G SFP+ fiber port uplink

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

Intelligent PoE power supply function

- 24*10/100/1000Base-T RJ45 ports, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.
- IEEE 802.3af/at PoE standard, without damaging non-PoE devices.
- Priority system for PoE port, it will supply power to the high priority level port first when the power budget is insufficient and avoid overwork of the device.
- PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.

Security

- 802.1X authentication.
- Port autentication ,Storm control.
- IP-MAC address authentication.
- TACACS+

Stable and reliable

- Low power consumption, no fan mute design, galvanized steel metal casing.
- Self-developed power supply, high redundancy design, providing a long term and stable PoE power output.
- CCC,CE, FCC, RoHS.
- The user-friendly panel, it can show the device status through the LED indicator of PWR, Link,POE.

Strong business processing capability

- IEEE802.1Q VLAN, flexible VLAN division, Voice VLAN, Guest VLAN and QinQ configuration.
- QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including EQU, SP, WRR & SP+WRR.
- ALC, filter data packet through configuring matching rules, processing operation & time permission, and provide flexible and safe access control.
- IGMP V1/V2 and IGMP Snooping.
- Routing protocal RIPv1/v2, OSPF, OSPFv3, RiPNG, IS-IS, BGP, PBR, VRRP.
- ERPS/STP/RSTP/MSTP
- Static and dynamic aggregation.

Easy operation and maintenance management

- Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).
- HTTPS, SSLV3, and SSHV1/V2.
- RMON, system log, LLDP, and port traffic statistics.
- CPU monitoring, memory monitoring, Ping test, and cable diagnose.

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Model	SG-36028FM	SG-38028FM
Interface Characteristics		
Fixed Port	24*10/100/1000Base-T RJ45 ports (Data) 4*1/10G RJ45 ports (Data) 1*Console RS232 port (115200,N,8,1)	
Ethernet Port	Port 1-24 support 10/100/1000Base-T,auto-sensing,Full/half duplex MDI/MDI-X self-adaption	
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meter) 100BASE-TX: Cat5 or later UTP(≤100 meter) 1000BASE-T: Cat5e or later UTP(≤100 meter)	
SFP Slot Port	10G SFP+ optical fiber interface, default not matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)	
SFP Port Expansion	Turbo overclocking 2.5G optical module and ring	
Optical Cable/ Distance	Multi mode: 850nm / 0 ~ 500M(1.25G), 0-300M(10G), single mode: 1310nm /0 ~ 40KM, 1550nm 0 ~ 120KM.	
Chip Parameter		
Network Management Type	L2+	L3
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-SR/LR IEEE802.3x	
Forwarding Mode	Store and Forward(Full Wire Speed)	
Switching Capacity	598Gbps	
Forwarding Rate@64byte	96Mpps	
MAC	32K	
Buffer Memory	32M	
Jumbo Frame	9.6K	
LED Indicator	Power: PWR (yellow), system: SYS(yellow), Network: Link (yellow), fiber port: L/A (green)	
Reset Switch	yes, support one key to restore factory settings	

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Power		
Total PWR / Input Voltage	60W/AC100-240V)	
Power Consumption	Standby<25W, Full Load<35W	
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 1.0A	
Physical Parameter		
Operation TEMP / Humidity	-20~+55°C;5%~90% RH Non condensing	
Storage TEMP / Humidity	-40~+80°C;5%~95% RH Non condensing	
Dimension (L*W*H)	440*290*44.5mm	
Net /Gross Weight	<3.5kg / <4.0kg	
Installation	Desktop, wall mounted,19 inch 1U cabinet installation	
Certification & Warranty		
Lightning protection / protection level	Lightning protection: 4KV 8/20us; Protection level: IP30	
Certification	CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B; RoHS;	
Warranty	3 years, lifelong maintenance.	
Network Management Features		
Interface	IEEE802.3X (Full-duplex) Port temperature protection setting Port green Ethernet Energy-saving setting Broadcast storm control based on port speed The speed limit of the message flow in the access port. The minimum particle size is 64Kbps.	
Layer 3 Features	L2+ network management , IPV4/IPV6 management L3 soft routing forwarding, Static route, Default route @ 128 pcs, APR @ 1024 pcs	L3 network management , IPV4/IPV6 management L3 soft routing forwarding, Static route, Default route @ 128 pcs, APR @ 1024 pcs

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VLAN	VLAN based on the protocol Voice VLAN, QinQ configuration 4K VLAN based on port, IEEE802.1q Port configuration of Access, Trunk, Hybrid
Port Aggregation	Max 14 aggregation groups and 8 ports per group.
Spanning Tree	
Industrial Ring Network Protocol	G.8032 (ERPS),Recovery time less than 20ms 255 Ring at most, Max 1024 devices per ring.
Multicast	IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
Port Mirroring	
QoS	Flow-based Rate Limiting Flow-based Packet Filtering 8*Output queues of each port 802.1p/DSCP priority mapping Diff-Serv QoS,Priority Mark/Remark Queue Scheduling Algorithm (SP, WRR, SP+WRR)
ACL	Port-based Issuing ACL,ACL based on port and VLAN L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.
Security	IP-MAC-VLAN-Port binding ARP inspection,Anti-DoS attack AAA & RADIUS,MAC learning limit Mac black holes,IP source protection IEEE802.1X & MAC address authentication Broadcast storm control,Backup for host datum SSH 2.0,SSL,Port isolation,ARP message speed limit User hierarchical management and password protection

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28-Port 10G Uplink L3 Managed Ethernet Fiber Switch

VLAN	4K VLAN based on port, IEEE802.1q VLAN based on the protocol VLAN based on MAC Voice VLAN, QinQ configuration Port configuration of Access, Trunk, Hybrid
Port Aggregation	LACP, Static aggregation Max 14 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Industrial Ring Network Protocol	G.8032 (ERPS),Recovery time less than 20ms 250 Ring at most, Max 1024 devices per ring.
Multicast	MLD Snooping v1/v2,Multicast VLAN IGMP Snooping v1/v2, Max 250 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Flow-based Rate Limiting Flow-based Packet Filtering 8*Output queues of each port 802.1p/DSCP priority mapping Diff-Serv QoS,Priority Mark/Remark Queue Scheduling Algorithm (SP, WRR, SP+WRR)
ACL	Port-based Issuing ACL,ACL based on port and VLAN L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.
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DHCP	DHCP Client,DHCP Snooping,DHCP Server,DHCP Relay
Management	One-key recovery Cable Diagnose,LLDP Web Management (HTTPS) NTP,System work log,Ping Test CPU instant utilization status view Console/AUX Modem/Telnet/SSH2.0 CLI Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3
System	Category 5 Ethernet network cable Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network