Foredge

100G Uplink 24-Port 2.5G L3 Managed Switch (Based on SONIC)

S6700-24GX-2QF

Product Brochure

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Product introduction

S6700-24GX-2QF is a multi-gigabit Ethernet switch oriented for the next-generation IP metropolitan area network, large campus network, and enterprise network.It adopts the cutting edge hardware architecture and is equipped with the operating system of SONIC(Software for Open Networking in the Cloud) which is an open-source network operating system, aiming to provide a highly available, scalable, and easy to manage network architecture for cloud computing and data centers.On the basis of providing high-performance L2/L3/L4 wire- speed switching services, S6700-24GX-2QF further integrates various network services such as IPv6 and network security. It has a variety of product specifications, supporting 24 2.5G access, 100G/40G high-speed uplink ports.It is widely used in high-end cyber cafes, E-sports hotels, and high-speed enterprise network.

Main features

Port 6kV lightning protection, dual power redundancy design

• The full port supports 6kV lightning protection.
• Dual power redundancy design supports seamless switching in case of failure without manual intervention.

Support SONIC open-source network operating system

• Support SONIC (Software for Open Networking in the Cloud) open-source network operating system developed by Microsoft, aiming to provide a highly available, scalable, and easy to manage network architecture for cloud computing and data centers. SONIC OS adopts a modular design concept and supports multiple hardware platforms and network devices.

Powerful business processing capabilities

• Support 802.1Q VLAN, MAC VLAN, IP VLAN, users can flexibly divide VLAN as needed.
• Support QoS, 8 port queues, support port priority, 802.1P priority, DSCP priority, support SP, WRR, SP+WRR, WFQ priority scheduling algorithm.
• Support ACL, support L2 (Layer 2) ~ L4 (Layer 4) packet filtering function, provide flexible and secure access control policy.
• Support IGMP v1/v2/v3 Snooping, MLD v1/v2 Snooping to meet the requirements of multi-terminal HD video surveillance or video conference.
• Supports the fast leave mechanism and querier of Layer 2 multicast, supports Layer 2 IPv4 static multicast and Layer 2 IPv6 static multicast.
• Support RIP dynamic routing protocol, solve the routing problem after the small and medium-sized network is divided into subnets, and simplify the network
configuration.
• Support static routing protocol, and manually configure routing entries to realize communication between different network segments.
• Support ARP configuration, so that hosts in different physical networks on the same network segment can communicate normally.

Perfect security mechanism

• Complete security authentication mechanism: It supports IEEE 802.1x, Radius, Tacacs+, etc., and can provide users with a complete security authentication mechanism.
• The perfect loop detection mechanism can ensure the stable operation of the network for a long time.
• Provide port isolation in the same VLAN, and security features such as DHCP-Snooping, IP+MAC+port binding, etc., to further ensure user data security.
• Support ARP protection, IP source protection, DoS protection.
• Support to restrict user access based on port number, IP address and MAC

Diverse reliability protection

• Support STP (IEEE 802.1d), RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s) protocols to eliminate Layer 2 loops and implement link backup.
• Supports loop protection, root bridge protection, TC protection, BPDU protection, and BPDU filtering.
• Support 50ms switching of optical ports.

Flexible and convenient management and maintenance

• Supports various management methods such as Console, Telnet, and SSH.
• Support WEB network management (HTTP, HTTPS, SSL V3), which is simpler and more efficient, and is convenient for users to install and debug.
• Supports file upload and download management in TFTP mode.
• Support SNMP V1/V2/V3 to facilitate device management through the network management platform.
• Support one-stop management and maintenance of Fengrunda Apollo cloud platform, which can realize all-round remote operation and maintenance such as automatic device discovery, network topology management, and remote configuration management of devices.

Specifications:

Hardware Specifications	
Network Interface	● 24 * 1000M/2.5G RJ45 port ● 4*10G SFP+ fiber port ● 2 * 100G QSFP28 fiber port ● 1 Console port,1 Management Port
Network protocol	● IEEE 802.3、IEEE 802.3i、IEEE 802.3u、IEEE 802.3ab、IEEE 802.3z、IEEE 802.3ad、IEEE 802.3x、IEEE 802.1p、IEEE 802.1q、IEEE 802.1d、IEEE 802.1s、IEEE 802.1w
Performance Specifications	● bandwidth：880Gbps ● Packet forwarding rate：540Mpps ● MAC address：96K ● port cache：9Mb ● DRAM：2GB ● Flash：4GB ● Forwarding mode: store and forward
LED indicator	● 24 * 1000M/2.5G Link/Act indicator ● 4 * 10G SFP+ Link/Act indicator ● 2 * 100G QSFP28 Link/Act indicator ● 2 Power indicator ● 1 SYS indicator
Power	● Input：AC 100-240V/50-60Hz ● Dual power redundant input
Dimensions (LxWxH):	● 440mm×320mm×44mm
Environmental Specifications	● Operating temperature：0℃~40℃ ● Storage temperature：-40℃∽70℃ ● Working humidity：10%~ 90% RH non condensing ● Storage humidity：5%∽90% RH non condensing
Safety regulations	● CE/ROHS/FCC

Software Specifications: Based on Foredge Networking Operation System (RunOS)	
Protocol standard	IEEE 802.3:Ethernet media access control (MAC) IEEE 802.3i:10BASE-T Ethernet IEEE 802.3u:100BASE-TX fast Ethernet IEEE 802.3ab:1000BASE-T gigabit Ethernet IEEE 802.3z:1000BASE-X Gigabit Ethernet (optical fiber) IEEE 802.3ad:standard method of link aggregation IEEE 802.3x:flow control IEEE 802.1p:LAN layer 2 qos/cos protocol related to traffic priority (multicast filtering function) IEEE 802.1q:VLANBridge operation IEEE 802.1d:STP Spanning tree IEEE 802.1s:MSTP Spanning tree IEEE 802.1w:RSTP Spanning tree
Layer3 interface	Support Layer3 interface Support IPv4 and IPv6 address configuration Support ARP configuration Support ND configuration
Layer 3 routing	Support IPv4 static routing Support IPv4 dynamic routing RIP v1/v2 Support IPv4 dynamic routing OSPFv2 Support IPv6 static routing Support IPv6 dynamic routing RIPng Support IPv6 dynamic routing OSPFv3

Software Specifications: Based on Foredge Networking Operation System (RunOS)	
VLAN	Support 4K VLAN Support 802.1Q VLAN、MAC VLAN ,IP VLAN， Voice VLAN
DHCP	Support DHCP server Support DHCP relay Support DHCP Snooping
MAC address table	Comply IEEE 802.1d standard Support MAC address automatic learning and aging Support static, dynamic and filtered address tables
Safety features	Password protection Support restricting user access based on port number, IP address and MAC address Support HTTPS、SSL V3、TLS V1、SSH V1/V2 SupportIP-MAC-PORT ternary binding Support ARP protection, IP source protection, DOS protection SupportDHCP Snooping、DHCP Attack protection Support802.1X certification、AAA Support Port security, port isolation SupportCPU Protection function
Access control(ACL)	SupportL2(Layer 2)～L4(Layer 4) packet filtering function Support Port mirroring, flow speed restriction, QoS re marking
QoS	Support 8 port queues Support port priority, 802.1p priority, DSCP priority SupportSP、WRR、SP+WRR、WFQ priority scheduling
Spanning tree	SupportSTP(IEEE 802.1d)， RSTP(IEEE 802.1w) and MSTP(IEEE 802.1s) standard Support Loop protection, root bridge protection, TC protection, BPDU protection, BPDU filtering Support optical port 50ms switching

Software Specifications: Based on Foredge Networking Operation System (RunOS)	
Multicast	Support IGMP v1/v2/v3 Snooping Support MLD v1/v2 Snooping Support Fast leave mechanism and querier of layer 2 multicast Support Layer 2 IPv4 static multicast Support Layer 2 IPv6 static multicast Support IGMP v1/v2/v3 layer 3 multicast
Storm suppression	Support Multicast suppression Support Broadcast suppression Support Unknown unicast suppression
Link convergence	Support Static convergence Support Dynamic convergence Support based on IP, MAC and mixed load balancing mode Support 32 aggregation groups at most
IPv6	Support IPv6 Ping、IPv6 Tracert、IPv6 Telnet Support IPv6 SSH 、IPv6 SSL
Network management	Support SONIC Operation system Support WEB management（HTTP、HTTPS、SSL V3） Support CLI（Telnet、SSH V1/V2、local serial port） Support SNMP V1/V2/V3 Support RMON V1/V2 Support LLDP device discovery Support NTP time synchronization Support DNS Client Support CPU Monitoring, memory monitoring Support System log, classification warning Support Ping、Tracert Detection, cable detection Support Apollo cloud platform one-stop management and maintenance