Foredge

16-Port 2.5G High Speed L3 Managed Ethernet Switch

NS3016XGSH

Product Brochure

Shenzhen Fengrunda Technology Co., Ltd

Product Introduction:

NS3016XGSH is a 2.5G high bandwidth three-layer management switch designed specifically for building high-performance 10 Gigabit network requirements. The product adopts a new generation of high-performance hardware and software platforms, providing flexible and cost-effective 2.5G access and 10 Gigabit uplink ports. This model of switch provides 8*2.5G ports, 8*GE ports,2*10G electric ports, and 2*10G optical uplink ports. Supports three-layer routing protocols, comprehensive security protection mechanisms, comprehensive ACL/QoS policies, and rich VLAN functions, making it easy to manage and maintain, meeting users' networking needs for easy management, high security, and low cost of network equipment. It is suitable for high bandwidth switches such as internet cafes, esports hotels, esports halls, school electronic academic rooms, and high-speed enterprise networks.

Main Features:

Port 6KV lightning protection

• All ports support 6KV lightning protection

Advanced hardware architecture design, powerful processing capability

•Realtek high-performance switching chips are used to meet the application requirements of various complex scenarios, greatly improve the network data processing rate, and prevent data transmission from being stuck.

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 address.

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 Specification:	
Network Interface	● 8*1000M/2.5Gbps RJ45 ports ● 8*1000M RJ45 ports ● 2*10G RJ45 ports ● 2*10G SFP+ ports ● 1*Console 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	● Bandwith：136Gbps ● Packet forwarding rate：101.2Mpps ● MAC table size：16K ● Port buffer：12Mb ● Forwarding type：storage forwarding
LED Indicator	● 20*Link/Act indicator ● 1*Power indicator ● 1*SYS indicator
Power Supplier	● Power input：AC 100-240V/50-60Hz
Dimension	● WxDxH：440mm×320mm×44mm
Evironment	● Operating temperature：0℃~40℃ ● Storage temperature：-40℃∽70℃ ● Operating humidity：10%~ 90% RH non condensing ●Storage humidity：5%∽90% RH non condensing
Safty Regulations	● CE/ROHS/FCC

Software Specifications:	
Protocol Standards	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:VLAN Bridge operation IEEE 802.1d:STP Spanning tree IEEE 802.1s:MSTP Spanning tree IEEE 802.1w:RSTP Spanning tree
L3 Interface	Support L3 interface Support IPV4,IPV6 addresses configuration Support ARP configuration Support ND configuration
L3 Routing	Support IPV4 static routing Support IPV4 RIP v1/v2 Support IPV4 OSPFv2 Support IPV6 static routing Support IPV6 RIPng Support IPV6 OSPFv3

Software Specifications:	
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 Table	Support IEEE 802.1d standard Support MAC addresses automatic learning and aging Support static, dynamic and filtered address tables
Security Features	Password guard Support restricting user access based on port number, IP address and MAC address Support HTTPS,SSL V3,TLS V1,SSH V1/V2 Support IP-MAC-PORT ternary binding Support ARP protection, IP source protection, DOS protection Support DHCP Snooping,DHCP Attack protection Support 802.1X certification,AAA Support Port security, port isolation Support CPU Protection function
ACL	Support L2(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 Support SP,WRR,SP+WRR,WFQ priority scheduling
STP	Support STP(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:	
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
LACP	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 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