WD-GS-8G4O

Stackable Managed Switch with 8GE TX ports, 4 x 10GE/GE SFP+ ports

Overview

WD-GS-8G4O is a next-generation aggregation 10GE switch. It is targeted at the IP MAN (metropolitan area network), government and enterprise networks, Internet café and disk-less working environment.

It supports functions such as powerful ACL, flexible QinQ, 1:1 or N:1 VLAN switching, Ethernet OAM, carrier-level QoS and industry-level 10GE Ether-ring, ensuring this switch series meets application requirements in all kinds of complicated sites. It also supports layer-3 routing protocol.

Characteristics

Innovative Virtual Cluster Switching Technique

- Innovative VSS (Virtual Switch System): L3-lite Series virtualizes multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical ones.

- Improved Performance: VSS makes full use of each link in the physical devices, which avoids STP blocking the link and protects the original link to the maximum extent.

- High Reliability: Based on the advanced distribution mechanism and efficient cross-physical link aggregation link function, the logic control plane, service control plane and service data plane are separated. Thus, L3-lite Series can support continuous layer-3 routing forwarding, avoiding service interruption as a result of a single point of failure.

- Easy Management: VSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

- Supports industry-level EAPS and their protection shift time is less than 50ms. Their high reliability is represented by the null packet loss, which has been proved by many years of application in the Grid, rail transportation and defense systems.

Telecom- Level Ethernet Switch

- Supports the telecom-level Ethernet-ring protection protocol with a protection shift time of less than 50ms, STP/RSTP/MSTP, backup of active and standby uplinks and LACP link aggregation to cater to the requirements of high reliability of carriers.

- Support Ethernet standard 802.3u, 802.3x, 802.3ad, 802.1d, 802.1p, 802.1q, 802.1w, 802.1ad.

- Support system status LED, port dynamic LED

- Provides the perfect Ethernet OAM mechanism to monitor the network running status in real time for rapid trouble locating and detection.

- Supports powerful ACL functions to access and control L2-L7 data based on physical port, VLAN, MAC, IP and protocol port ID, and providing carriers flexible and various policy control methods.

- Supports In-Service Software Upgrade (ISSU) to ensure the unremitting data forwarding during system upgrade.

- Supports various L2 multicast functions, including

- IGMP-Snooping, fast-leave and trans-VLAN

Flexible and Convenient Management and Maintenance

- Supports management modes such as the console port, Telnet, SSH, etc.

- Supports the WEB management mode, which is easy and efficient so that it makes installation and debugging convenient.

- Supports TFTP-patterned file upload/download management.

- Supports ISSU (In-Service Software Upgrade).

- Support SNMP and NMS smart network management platform to realize automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management.

Carrier-Level QoS Policies

- Supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority to better streamline carrier's services.

- Supports provides flexible bandwidth control policies and supports port-/flow-based flow limit and ensuring the line speed forwarding of each port to make sure the high quality of video, audio and data services.

- Supports 8 priority queues by each port.

- Supports multiple queue schedule algorithms such as SP, WRR, and SP+WRR".

Versatile IPv6 Solutions

- Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, etc.

- Supports Ping, Traceroute, Telnet, SSH, ACL and so like on the basis of IPv6, meeting IPv6 networks' equipment management requirements and service control requirements.

Perfect Security Mechanisms

- Equipment-level security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP-related SYN flood, UDP flood, broadcast storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions.

- Supports perfect security authentication mechanisms: IEEE 802.1x, Radius and Tacacs+.

- Supports storm/multicast/unicast limit to ensure the normal running of equipment in harsh network conditions.

- Supports a perfect ring detection mechanism to ensure the long-term stable running of network.

- Supports port isolation within the same VLAN, DHCP-Snooping, and IP plus MAC plus Port binding for ensuring user data security.

Features

VLAN: 4K Active VLAN, QinQ & Selective QinQ, GVRP, Private VLAN, Voice VLAN

Spanning Tree: 802.1D (STP) 802.1W (RSTP) and 802.1S (MSTP); BPDU guard, root guard and loopback guard

Multicast: IGMP v1/v2/v3, IGMP Snooping, PIM-SM, PIM-DM, MVR, IGMP Fiter, IGMP Fast Leave

MPLS: LDP Protocol, Multi VRF, MPLS L2 VPN

IP: Static route, RIP, OSPF; IPv4/v6 dual stack

IPv6: ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet; IPv6 neighbor discovery, Path MTU discovery; MLD v1/2, MLD snooping; IPv6 Static Routing, RIPng, OSPFv3; Manual tunnel, ISATAP tunnel,6 to 4 tunnels

QoS: CAR, HQoS, MAC/IP/TCP/UDP/VLAN/ COS/ DSCP/ TOS based QoS, 802.1P/ DSCP priority re-labeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring and traffic shaping

Security: Port isolation, Port security, and "IP + MAC + port" binding, MAC sticky DAI & IP source guard, PPPoE+; IEEE 802.1x, AAA, Radius and Tacacs+; L2/L3/L4 ACL flow identification and filtration Anti-attack from DDoS, TCP's SYN Flood, UDP Flood, etc.; Broadcast/multicast/unknown unicast storm-control; MD5, SHA-256, RSA-1024, AES256, etc.

DHCP: DHCP server/relay/client; DHCP snooping/option82.

Reliability: Static/LACP link aggregation, Interface backup; EAPS and ERPS; ISSU uninterrupted system upgrade; VSS, ups to 16-units per stack; VRRP; UDLD

Management: Console, Telnet, SSH v1/2, HTTP, HTTPS SNMP v1/v2/v3, RMON; TFTP, FTP, SFTP; NTP; ZTP (Zero Touch Provisioning); SPAN, RSPAN; Dying gasp*

Environment: Operating temperature/humidity: 0℃ -50℃, 10%-90% non-condensing

Storage temperature/humidity: -20℃ -70℃, 5%-95% non-condensing

Accessories: Power cord, rack-mount kits, console cable

Certification: CE, FCC, ROHS

Specifications

Model No.: WD-GS-8G4O

Model	WD-GS-8G4O
Product Description	8 Port L3 Managed Switch
Fixed Port	8*100/1000M RJ45 4*100/1000/2500/10000M SFP
Console port	1*console port
Reset Key	1
CPU	MIPS-34Kc 800GHz
DDR	4G DDR3
FLASH	512MBytes
RAM	512MBytes
Bandwidth	96Gbps
Packet Forwarding	71.04Mpps
MAC	16K
Buffer	12Mbit SRAM Packet Buffer
Jumbo Frame	Jumbo frame up to 9K
VLAN Address	4K
Link Aggregation	Supports 128 trunk groups with up to 8 members per group
L3 Routing	IPV4 supports 6K; IPV6 supports 2K；
QoS Queue	8
Transmission Distance	10BASE-T ： Cat3,4,5 UTP(≤250 meter) 100BASE-TX ： Cat5 or later UTP(150 meter) 1000BASE-TX ： Cat6 or later UTP(150 meter) SFP: 100M/1G/10G single-mode multi-mode optical module, the maximum distance is ≤120km (depending on the optical module)
LED Indicator	PWR:Power LED SYS:System LED 1-8:100、1000M SFP connection indicator 9-12:10G SFP connection indicator
Power	Built-in power AC：100-240Vac 50-60Hz 0.3A max 25W
Operating Temperature/Humidity	-10～+55°C；5%～90% RH Non coagulation
Storage Temperature/Humidity	-40～+75°C；5%～95% RH Non coagulation
Lightning Protection level	6KV 8/20us；IP30
Port Speed	Support autonegtiate, full-1000, full-100, half-100, full-10, half-10
Flow Control	support full-duplex IEEE 802.3x, half-duplex back pressure
Storm Control	Supports rate limit for broadcast, multicast, and DLF packets
Storm Constrain	Support the detection of broadcast packets, multicast packets,

	or unicast packets on the port, shutdown the port if the rate is over the threshold.
Port Mirror	Support
Port Rate Limit	Support port ingress and egress rate limit
Link Aggregation	Support manual link aggregation Support LACP dynamic link aggregation Supports up to 32 aggregation groups, each group up to 8 ports Support source MAC, destination MAC, source destination MAC, source IP, destination IP, source destination IP routing strategy
Port Isolate	Support
Jumbo Frame	Support up to 16KB packet
Redundant Port	Support
MAC	
MAC Table Management	Support
Forwarding mode	Support IVL forwarding mode
Static MAC Address	Support
MAC Address Binding	Support
MAC Address Filtering	Support
MAC Learning Control	Control the MAC learning based on port
VLAN	
Number of VLANs	4K
802.1q-based VLAN	Support
MAC-based VLAN	Support
IP-based VLAN	Support
Protocol-based VLAN	Support
Voice VLAN	Support
VLAN Mapping	Support 1:1 mapping
QinQ	Support basic QinQ Support flexible QinQ
Reliability	
Spanning Tree Protocol	Support STP/RSTP/MSTP
Port Loop Detection	Support
EAPS	Support
ERPS	Support G.8032/Y.1344
LLDP	Support LLDP & LLDP-MED
UDLD	Fully compatible with CISCO's UDLD protocol
VLLP (VRRP Layer-2 Loop Protection)	Support, Only used with VRRP
L3	
ARP	Support static and dynamic ARP
Static Route	Support
VLAN Interface	Support 32 VLAN interfaces

RIP	Support RIP v1/v2
OSPF	Support OSPFv2
Policy Route	Support
VRRP	Support
Multicast	
Static Multicast MAC Address	Support
IGMP SNOOPING	Support IGMP SNOOPING v1/v2/v3
	Support IGMP Querier
	Support IGMP SNOOPING Filter
MVR	Support
GMRP	Support
ACL	
Standard IP-based ACL	Support
Extended IP based ACL	Support
MAC IP-based ACL	Support
MAC ARP-based ACL	Support
ACL Port Filtering	Support
Time-based ACL	Support
QoS	
Port Queue Number	8
Port Queue Scheduling Mode	Support WRR，RR，WDRR，SP
Port-based Classification	Support
802.1p-based Classification	Support
DSCP-based Classification	Support
ACL-based Classification	Support
QoS Policy	Support packets mapping to queue
	Support COS or DSCP Remarking
	Support rate limits of data flow
	Support data flow statistics
	Support mirroring of data flow
DHCP	
DHCP Client	Support
DHCP Snooping	Support
DHCP Relay	Support
DHCP Server	Support
DHCP option 82	Support
Management	
CLI Management	Support Console, Telnet and SSH
WEB Management	Support HTTP and HTTPS

SNMP Management	Support SNMP v1, v2c
	Support SNMP TRAP
	Support lots of standard and private MIBs
User Management	Support multiple user management
Log Management	Support local log management
	Support SYSLOG
RMON	Support RMON 1, 2, 3 and 9 groups
Cluster Management	Support NDP
	Support NTDP
	Support manual and automatic joining of cluster groups
	Support cluster unified management
Configuration File	Support uploading and downloading configuration file
Upgrade software	Support
Clock Management	Support local clock management
	Support SNTP
Security	
Switch Management Security	Support enabling and disabling TELNET, WEB and SNMP services
	Support TELNET, WEB and SNMP services to bind to standard IP ACLs
	Support for limiting the number of TELNET connections
CPU Protection	The switch's own security protection prevents large data streams from attacking the switch itself.
AAA	Support 802.1x
	Support RADIUS
	Supports authentication, authorization, and accounting through RADIUS server
	Support port-based and MAC-based 802.1x
	Support 802.1x guest VLAN
IP MAC Binding	Support static configuration of IP, MAC and port binding
DHCP SNOOPING	Support dynamic ARP binding to prevent ARP spoofing
	Support dynamic IP, MAC and port binding
	Support fixed port to connect to DHCP server to prevent private connection to DHCP server
Prevent ARP Spoofing	Support manually configuring MAC ARP-based ACL rules to prevent ARP spoofing.
	Support the DHCP SNOOPING function. During the process of obtaining an IP address by DHCP, the switch dynamically binds ARP to the port to prevent ARP spoofing.
POE	
Switch Control	Support POE powering of ports on and off
Power Control	Support setting total power
Other Advanced Features	Support POE scheduling policy and PD online query, etc.
Debugging	
PING	Support
TRACEROUTE	Support

TELNET Client	Support

Ordering Information

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