SS2GR4000 series

L2 Gigabits Dual Stack Intelligent Switch

SS2GR4000 Series is L2 Gigabits intelligent switch designed for carrier and MAN networks. It supports comprehensive QoS, enhanced VLAN functions (VLAN VPN, Voice VLAN, QinQ, N:1 VLAN Translation etc), Ethernet Ring Protection Protocol (G.8032), classified bandwidth control, intelligent security control, OAM(Operations, Administration and Maintenance), manageability functions and Triple-Play services which fulfill the network requirements demanded by carrier network, MAN access. SS2GR4000 Series switch offers green features like IEEE 802.3az (Energy Efficient Ethernet), Fan-less design feature, which can dramatically lower power consumption, achieve green energy and save the cost for the carrier and MAN users.

SS2GR4000 Series have 6 types including SS2GR4010P, SS2GR4028P, SS2GR4028PL, SS2GR4010, SS2GR4028, SS2GR4052. Equipped with the full GE ports and 4 SFP(2 SFP) uplink ports, the series integrates advanced management and security functions to provide performance and scalability.

Main Features

- Green Energy
  - SS2GR4000 series comply with IEEE 802.3az (Energy-Efficient Ethernet) standard, dramatically lower power consumption
  - With Innovative port-LED Shut-off function, the user can automatically set the switch port-LED UP or DOWN at a specified time period according to their needs to achieve functional, energy-saving correct results.
  - Full account of low noise requirements of the environment, SS2GR4000 Series uses Fanless Design and Smart fan strategies to real-time temperature monitoring system, and reduce the noise pollution.

- Simple and Flexible Operation and Maintenance
  - Full Ethernet OAM technology (IEEE802.3ah/802.1ag*), VCT, DDM (Digital Diagnostic Monitoring) and other features achieve rapid detection of the network failures; reduce operation and maintenance difficulty.

- Enhanced Security
  - SS2GR4000 series provide a variety of security mechanisms like SYN Flood, Land, ICMP Flood attack prevention and other DOS class technology, BPDU Guard and Root Guard which avoid accidental topology loops and prevent illegal edge devices become root to cause unnecessary flapping.
  - IEEE 802.1X port-based access control ensures all users are authorized before being granted access to the network. User authentication is carried out using any standard-based RADIUS server.
  - Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets and forward by different policies. User-defined ACL provides more flexible access control for users.
  - SS2GR4000 series support DHCP snooping, which prevents DHCP attacks and illegal DHCP SERVER by setting trust ports and untrust ports. With DHCP Snooping binding and option82 enabled, it can combine modules like dot1x and ARP, or implement user-access-control independently.
  - SS2GR4000 series support much more L2 security features such as ARP guard, Anti-ARP scanning, and other ARP and MAC Security technology to protect network security and reliability.

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Revision 1.02

SS2GR4000 series

L2 Gigabits Dual Stack Intelligent Switch

- **High Reliability**

  - SS2GR4000 series support 4 Gigabit uplink ports, which could be designed to offer redundant uplinks with various ring protection applications, effectively raised the expansibility and performance of network.
  - G.8032 provides sub-50ms protection and recovery switching for Ethernet traffic in a carrier ring topology. SS2GR4000 series support G.8032 v2 and can be deployed in a variety of complex network topologies including single ring, tangent ring, intersecting rings, double rings and other home networking.

- **High adaptability VLAN Features**

  - SS2GR4000 series support 802.1Q and port based VLAN as well as MAC based VLAN, Voice VLAN and Protocol VLAN.
  - Abundant QinQ technology including Normal QinQ, Selective QinQ, and Flexible QinQ, gives users maximum freedom to configure QinQ policy.
  - N:1 VLAN Translation feature can translate multiple VLAN tags in the frames from access ports into one specified VLAN Tag. It provides a strong technical support for QoS policy convergence.

- **Abundant Multicast Features**

  - SS2GR4000 series also support MVR (Multicast VLAN Register), selectively allows traffic to cross between different VLANs for bandwidth and security reasons. With MVR Trunk function, which could associate multicast VLAN to trunk port, SS2GR4000 series combines the VLAN data into the same link, saving lots of resources for users.
  - SS2GR4000 series could prevent multicast traffic from flooding via IGMP Snooping, while multicast traffic is only forwarded to ports associated to multicast devices.

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Revision 1.02

SS2GR4000 series

L2 Gigabits Dual Stack Intelligent Switch

Specifications

- PoE models of SS2GR4000 series

Item	SS2GR4028P	SS2GR4028PL	SS2GR4010P
Ports	24 x 10/100/1000Base-T + 4 x 100/1000Base-X (SFP)	24 x 10/100/1000Base-T + 4 x 100/1000Base-X (SFP)	8 x 10/100/1000Base-T + 2 x 100/1000Base-X (SFP)
Performance			
Switching Capacity	56Gbps	56Gbps	20Gbps
Forwarding Rate	41.7Mpps	41.7Mpps	14.88Mpps
MAC ADDRESS	16K	16K	8K
Jumbo Frame	12K	12K	10K
ACL Table	2048	2048	1408
Queues per port	8	8	8
VLAN TABLE	4K	4K	4K
Physical			
Dimension(W×H×D)	442mm x 280mm x 43.6mm	442mm x 280mm x 43.6mm	330mm x 230mm x 43.6mm
weight	5.3kg	4.9kg	3.5kg
Power Input	100~240VAC, 50~60Hz	100~240VAC, 50~60Hz	100~240VAC, 50~60Hz
Power Consumption	390W	205W	144W
Cooling	Active	Active	Passive
Temperature	Working 0°C~50°C, Storage -40°C~70°C		
Relative Humidity	5%~95%,non-condensing		
EMC Safety	CE, RoHS		
POE	IEEE 802.3af POE(15.4W) IEEE 802.3at POE+ (30W) PoE output 370w	IEEE 802.3af POE(15.4W) IEEE 802.3at POE+ (30W) PoE output 185w	IEEE 802.3af POE(15.4W) IEEE 802.3at POE+ (30W) PoE output 124w
Main Features			
Forwarding	Storage and Forwarding		
VLAN	Port-based VLAN, IEEE802.1Q, private VLAN, Protocol VLAN, Voice VLAN, MAC VLAN Normal QinQ, Selective QinQ, Flexible QinQ VLAN Translation, N:1 VLAN Translation		
DHCP	IPv4/IPv6 DHCP Client,IPv4/IPv6 DHCP Relay Option 82, Option 37/38 IPv4/IPv6 DHCP Snooping,IPv4/IPv6 DHCP Server		
Reliability	Spanning Tree	802.1D STP, 802.1W RSTP, 802.1S MSTP Root Guard, BPDU Guard, BPDU Forwarding	
	LACP	16 groups / 8 ports	8 groups / 8 ports
	L2 Ring Protection	MRPP ITU-T G.8032 Loopback Detection Fast Link	

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Revision 1.02

Specifications

Item	SS2GR4028P	SS2GR4028PL	SS2GR4010P
Security	IP ACL, MAC ACL, MAC-IP ACL, User-Defined ACL		
	Time Range ACL		
	ACL on VLAN interface		
	Storm Control based on packets and bytes		
	Port Security, MAC Limit based on VLAN and Port		
	Anti-ARP-Spoofing , Anti-ARP-Scan, ARP Binding		
	ND Snooping		
	DAI		
	IEEE 802.1x		
	Authentication, Authorization, Accounting		
	Radius, TACACS+		
Multicast	IGMP v1/v2/v3 snooping, IGMP Fast leave		
	MVR		
	MLD v1/v2 snooping		
	IPv4/IPv6 DCSCM		
QoS	8 Queues Per Port		
	Bandwidth Control		
	Flow Redirect		
	Classification based on ACL, VLAN ID, COS, TOS, DSCP,		
	Policing Based on Port and VLAN		
	Single Rate single barrel double color for Policing		
	Remark DSCP, COS/802.1p, Precedence, TOS		
	SP, WRR, SWRR, DWRR for Scheduling		
	Match the IP fragmentation of message		
Maintenance and Operation Management	TFTP/FTP		
	CLI, Telnet, Console		
	Web/SSL (IPv4/IPv6)		
	SSH (IPv4/IPv6)		
	SNMPv1/v2c/v3		
	SNMP Trap		
	Public & Private MIB interface		
	RMON 1,2,3,9		
	Ping, Trace Route		
	Radius Authentication		
	Syslog (IPv4/IPv6)		
	SNTP/NTP (IPv4/IPv6)		
	Dual IMG, Multiple Configuration Files		
	Port Mirror, CPU Mirror, RSPAN		
	sFlow (SS2GR4028/SS2GR4052)		
	OAM EFM		
	VCT, DDM		
	ULDP(like Cisco UDLD)		
	LLDP/LLDP MED		
Green Energy	IEEE 802.3az (Energy Efficient Ethernet)		
	Fanless (SS2GR4010 and SS2GR4028)		
	LED Shut-off		

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Revision 1.02

SS2GR4000 series

L2 Gigabits Dual Stack Intelligent Switch

Specifications

- Non-PoE models of SS2GR4000 series

Item	SS2GR4052	SS2GR4028	SS2GR4010
Ports	48 x 10/100/1000Base-T + 4 x 100/1000Base-X (SFP)	24 x 10/100/1000Base-T + 4 x 100/1000Base-X (SFP)	8 x 10/100/1000Base-T + 2 x 100/1000Base-X (SFP)
Performance			
Switching Capacity	104Gbps	56Gbps	20Gbps
Forwarding Rate	77.4Mpps	41.7Mpps	14.88Mpps
MAC ADDRESS	16K	16K	8K
Jumbo Frame	12K	12K	10K
ACL Table	2048	2048	1408
Queues per port	8	8	8
VLAN TABLE	4K	4K	4K
Physical			
Dimension(W×H×D)	442mm x 220mm x 43.6mm	442mm x 220mm x 43.6mm	250mm x 180mm x 43.6mm
weight	4.7kg	2.42kg	1.1kg
Power Input	100~240VAC, 50~60Hz	100~240VAC, 50~60Hz	100~240VAC, 50~60Hz
Power Consumption	40W	20W	20W
Cooling	Active	Passive	Passive
Temperature	Working 0°C~50°C, Storage -40°C~70°C		
Relative Humidity	5%~95%,non-condensing		
EMC Safety	CE, RoHS		
Main Features			
Forwarding	Storage and Forwarding		
VLAN	Port-based VLAN, IEEE802.1Q, private VLAN, Protocol VLAN, Voice VLAN, MAC VLAN Normal QinQ, Selective QinQ, Flexible QinQ VLAN Translation, N:1 VLAN Translation		
DHCP	IPv4/IPv6 DHCP Client,IPv4/IPv6 DHCP Relay Option 82, Option 37/38 IPv4/IPv6 DHCP Snooping,IPv4/IPv6 DHCP Server		
Reliability	Spanning Tree	802.1D STP, 802.1W RSTP, 802.1S MSTP Root Guard, BPDU Guard, BPDU Forwarding	

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Revision 1.02

Specifications

- Non-PoE models of SS2GR4000 series

Item		SS2GR4052	SS2GR4028	SS2GR4010
	LACP	16 groups / 8 ports		8 groups / 8 ports
	L2 Ring Protection	MRPP ITU-T G.8032 Loopback Detection Fast Link		
	Security	IP ACL, MAC ACL, MAC-IP ACL, User-Defined ACL Time Range ACL ACL on VLAN interface Storm Control based on packets and bytes Port Security, MAC Limit based on VLAN and Port Anti-ARP-Spoofing , Anti-ARP-Scan, ARP Binding ND Snooping DAI IEEE 802.1x Authentication, Authorization, Accounting Radius, TACACS+		
	Multicast	IGMP v1/v2/v3 snooping, IGMP Fast leave MVR MLD v1/v2 snooping IPv4/IPv6 DCSCM		
	QoS	8 Queues Per Port Bandwidth Control Flow Redirect Classification based on ACL, VLAN ID, COS, TOS, DSCP, Policing Based on Port and VLAN Single Rate single barrel double color for Policing Remark DSCP, COS/802.1p, Precedence, TOS SP, WRR, SWRR, DWRR for Scheduling Match the IP fragmentation of message		
	Maintenance and Operation Management	TFTP/FTP CLI, Telnet, Console Web/SSL (IPv4/IPv6) SSH (IPv4/IPv6) SNMPv1/v2c/v3 SNMP Trap Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication		

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Revision 1.02

Specifications

- Non-PoE models of SS2GR4000 series

Item	SS2GR4052	SS2GR4028	SS2GR4010
	Syslog (IPv4/IPv6)		
	SNTP/NTP (IPv4/IPv6)		
	Dual IMG, Multiple Configuration Files		
	Port Mirror, CPU Mirror, RSPAN		
	sFlow (SS2GR4028 / SS2GR4052)		
	OAM EFM		
	VCT, DDM		
	ULDP(like Cisco UDLD)		
	LLDP/LLDP MED		
Green Energy	IEEE 802.3az (Energy Efficient Ethernet)		
	Fanless (SS2GR4010 and SS2GR4028)		
	LED Shut-off		

- Ordering information

Product	Description
SS2GR4052	L2 Gigabit Intelligent Ethernet Switch with 48 10/100/1000Base-T and 4 100/1000Base-SFP ports, 100-240VAC Power Input
SS2GR4028	L2 Gigabit Intelligent Ethernet Switch with 24 10/100/1000Base-T and 4 100/1000Base-SFP ports, 100-240VAC Power Input
SS2GR4010	L2 Gigabit Intelligent Ethernet Switch with 8 10/100/1000Base-T and 2 100/1000Base-SFP ports, 100-240VAC Power Input
SS2GR4010P	L2 Gigabit Intelligent Ethernet PoE Switch with 8*10/100/1000Base-T and 2*100/1000Base-SFP ports, 100-240VAC Power Input. 30w POE+ Supported. PoE output 124w
SS2GR4028P	L2 Gigabit Intelligent Ethernet PoE Switch with 24*10/100/1000Base-T and 4*100/1000Base-SFP ports, 100-240VAC Power Input. 30w POE+ Supported. PoE output 370w
SS2GR4028PL	L2 Gigabit Intelligent Ethernet PoE Switch with 48*10/100/1000Base-T and 4*100/1000Base-SFP ports, 100-240VAC Power Input. 30w POE+ Supported. PoE output 185w

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