BDCOM
Professional Network Technology

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BDCOM S2900 Series
10GE Switches

BDCOM S2900 Series 10GE Switches

Product Overview

BDCOM S2900 Series switches are new-generation smart access ones developed by Shanghai Baud Data Communication Co., Ltd for carrier's IP MAN and enterprise networks. S2900, based on the new-generation high-performance hardware and the BDROS platform, supports functions such as powerful ACL, flexible QinQ, 1:1 or N:1 VLAN switching, Ethernet OAM, carrier-level QoS and industry-level 10G Ether-ring, ensuring this switch series meets application requirements in all kinds of complicated sites.

BDCOM S2900 non-POE switch series has three models: S2928, S2952 and S2956. BDCOM S2900 -POE switch series has two models: S2928P and S2928P-800.

S2928 **S2952** **S2956**

- S2928: 24 gigabit TX ports, 4 1000M/100M auto-adaptation TX/SFP combo ports, 4 10GE/GE auto-adaptation SFP+ ports;
- S2952: 48 gigabit TX ports, 4 gigabit SFP ports, 4 10GE/GE auto-adaptation SFP+ ports;
- S2956: 48 GE TX ports, 8 10GE/GE auto-adaptation SFP+ ports;
- S2928P/S2928P-800: 24 GE POE TX ports, 4 10GE/GE SFP+ ports;

Product Characteristics

- **Advanced Hardware Architecture, and Industry-Leading Port Intensity**
- A 1U box switch bears 48 gigabit ports and 8 10G ports, which is considered the highest port density in this industry. It adopts the high-performance ASIC switch chip, which can meet the requirements of all kinds of complicated application sites.

- **Industrial Ethernet Ring with Zero Delay and Zero Packet Loss**
- This switch series 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.

- **Complete POE Power Supply**

- This switch series supports IEEE 802.3AF/AT standard, built-in large power supply with 24 ports.

- This switch series supports hot restart and POE non-stop power supply.

- This switch series supports the configuration of TX port priority when the power is inadequate.

- This switch series' ports and power supply support up to 2KV thunder-proof function.

➢ Telecom-Level Ethernet Switch

- Supporting 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

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

- Having 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

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

- Supporting various L2 multicast functions, including IGMP-Snooping, fast-leave and trans-vlan multicast copy

➢ Carrier-Level QoS Policies

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

- Providing flexible bandwidth control policies, supporting 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

- Supporting 8 priority queues by each port

- Supporting multiple queue schedule algorithms such as SP, WRR, or "P plus WRR"

➢ **Versatile IPv6 Solutions**

● Supporting the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, etc.

● Supporting 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.

● Perfect security authentication mechanisms: IEEE 802.1x, Radius and BDTacacs+

● Storm/multicast/unicast limit to ensure the normal running of equipment in harsh network conditions

● Perfect ring detection mechanism to ensure the long-term stable running of network

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

➢ **Flexible and Convenient Management and Maintenance**

● Supporting management modes such as the console port, Telnet, SSH, etc

● Supporting the WEB management mode, which is easy and efficient so that it makes installation and debugging convenient

● Supporting TFTP-patterned file upload/download management

● Supporting ISSU (In-Service Software Upgrade)

● Supporting SNMP and BDCOM NMS smart network management platform to realize automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management

Product Specifications

Item	S2928	S2952	S2956	S2928P	S2928P-800
Backplane	256Gbps	256Gbps	256Gbps	256Gbps	256Gbps
Forwarding	96Mpps	138Mbps	180Mpps	96Mpps	96Mpps
MAC	16K	32K	32K	16K	16K
Ports	24 gigabit TX ports, 4 1000M/100M auto-adaptation TX/SFP combo ports, 4 10GE/GE auto-adaptation SFP+ ports,	48 gigabit TX ports, 4 gigabit SFP ports, 4 10GE/GE auto-adaptation SFP+ ports	48 GE TX ports, 8 10GE/GE auto-adaptation SFP+ ports	24 GE POE TX ports, 4 10GE/GE SFP+ ports	24 GE POE TX ports, 4 10GE/GE SFP+ ports
Dimensions (W×H×D) mm	440×180×44	442.5×315×44	442.5×315×44	440×280×44	440×280×44
Consumption	<40W	<55W	<55W	<40W	<40W
POE power	N/A			400W	800W
Power supply	AC: 100V-240V, 50Hz±10% DC: -36V~-72V (The POE series without DC power supply.)				
Environment	Operating temperature and humidity: 0℃-50℃, 10%-90% non-condensing Storage temperature and humidity: -20℃-70℃, 5%-95% non-condensing				
MAC exchange	Static configuration and dynamic MAC learning MAC browsing and removal Configurable aging time of the MAC address Limited number of learnable MAC addresses MAC filtration Black-hole MAC list				

VLAN	4K VLAN
	GVRP
	1:1 VLAN mapping and N:1 VLAN mapping
	QinQ and flexible QinQ
	PVLAN
STP	802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP)
	BPDU protection, root protection, and loopback protection
Multicast	IGMP v1/v2/v3
	IGMP snooping
	IGMP Fast Leave
	Multicast group strategy and quantity limitation
	Multicast flow copying over VLANs
IPv4	Static routing, RIP v1/v2, OSPF, BGP
	Strategy routing
	Load balance by equivalent routing
	BFD for OSPF, BGP
IPv6	ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
	IPv6 neighbor discovery
	Path MTU discovery
	MLD V1/V2
	IGMP snooping
QoS	Flow classification based on L2~4 protocols
	CAR flow limit
	802.1P/DSCP priority re-labeling
	SP, WRR, and "SP+WRR"
	Congestion avoidance mechanisms like Tail-Drop and WRED
	Flow monitoring and flow shaping
Security	L2/L3/L4 ACL flow identification and filtration
	DDoS attack prevention, TCP's SYN Flood attack prevention, UDP Flood attack prevention,

	etc
	Broadcast/multicast/unknown unicast storm-control
	Port isolation
	Port security, and "IP+MAC+port" binding
	DHCP snooping and DHCP option 82
	IEEE 802.1x authentication
	Radius BDTacacs+ authentication
	Level-based command line protection
Reliability	Static/LACP link aggregation
	EAPS and ERPS
	ISSU uninterrupted system upgrade
Management	Console, Telnet, SSH, Web
	SNMP v1/v2/v3
	TFTP
	RMON

Ordering Information

Item	Description
S2900 Non-POE Series	
S2928	Ethernet switch with 24 gigabit ports, 4 gigabit combo ports and 4 10GE ports (1 console port, 24 gigabit TX ports, 4 1000M/100M auto-adaptation TX/SFP combo ports, 4 10GE/GE auto-adaptation SFP+ ports, AC220V power supply, the cooling fan, 1U, 19-inch rack-mounted installation)
S2952	Ethernet switch with 48 gigabit ports, 4 gigabit optical ports and 4 10GE optical ports (1 Mini usb console port, 48 gigabit TX ports, 4 gigabit SFP ports, 4 10GE/GE auto-adaptation SFP+ ports, AC220V power supply, the cooling fan, 1U, 19-inch rack-mounted installation)

S2956	Ethernet switch with 48 gigabit ports and 8 10GE ports (1 mini USB console port, 48 GE TX ports, 8 10GE/GE auto-adaptation SFP+ ports, AC 220V power supply, the cooling fan, 1U, 19-inch rack-mounted installation)
S2900 POE Series	
S2928P	Ethernet switch with 24 GE ports and 4 10GE ports (1 mini USB console port, 24 GE POE TX ports, 4 10GE/GE SFP+ ports, AC 220V power supply, 400W POE power, the cooling fan, 1U, 19-inch rack-mounted installation)
S2928P-800	Ethernet switch with 24 GE ports and 4 10GE ports (1 mini USB console port, 24 GE POE TX ports, 4 10GE/GE SFP+ ports, AC 220V power supply, 800W POE power, the cooling fan, 1U, 19-inch rack-mounted installation)
Optical Modules	
GE Optical Modules	
GSFP-TX-B	GE SFP-to-RJ45 module
GSFP-SX-D	GE SFP multi-mode (500m, 850nm, LC, DDM)
GSFP-LX-10-D	GE SFP single-mode (10Km, 1310nm, LC, DDM)
GSFP-LX-20-D	GE SFP single-mode (20Km, 1310nm, LC, DDM)
GSFP-LX-40-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-ZX-80-D	GE SFP single-mode (80Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI	GE SFP single-mode, single-fiber (10Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	GE SFP single-mode, single-fiber (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	GE SFP single-mode, single-fiber (20Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	GE SFP single-mode, single-fiber (20Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-40-BIDI	GE SFP single-mode, single-fiber (40Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-40-BIDI-1310	GE SFP single-mode, single-fiber (40Km, TX1550/RX1310, LC, DDM)

GSFP-LX-SM1490-80-BIDI	GE SFP single-mode, single-fiber (80Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-80-BIDI	GE SFP single-mode, single-fiber (80Km, TX1550/RX1490, LC, DDM)
10GE Optical Modules	
SFP+SX	TE SFP+ multi-mode (300m, 850nm, LC)
SFP+LX-10	TE SFP+ single-mode (10Km, 1310nm, LC, DDM)
SFP+LX-20	TE SFP+ single-mode (20Km, 1310nm, LC, DDM)
SFP+LX-40	TE SFP+ single-mode (40Km, 1550nm, LC, DDM)
SFP+LX-80	TE SFP+ single-mode (80Km, 1550nm, LC, DDM)

For More Information

For more information about BDCOM S2900 Series, please contact your local BDCOM account representative.

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