



# BDCOM

## BDCOM S2900 Series 10GE Switches

## BDCOM S2900 Series

### Product Overview

BDCOM S2900 Series is a new-generation smart switch designed for carrier's IP MAN and enterprise networks. Based on the new-generation high-performance hardware and BDROS platform, it supports functions such as ACL, selective QinQ, 1:1 and N:1 VLAN switch, Ethernet OAM, carrier QoS, industrial 10GE Ethernet ring.

BDCOM S2900 Non-POE switches have three models: S2928, S2952 and S2956; and S2900 POE switches have two models: S2928P and S2928P-800.



**S2928**



**S2952**



**S2956**

- ✓ S2928: 24 GE Base-T ports, 4 100/1000M auto-adaptation SFP/Base-T combo ports, 4 GE/10GE auto-adaptation SFP ports;
- ✓ S2952: 48 GE Base-T ports, 4 GE SFP ports, 4 GE/10GE auto-adaptation optical ports;
- ✓ S2956: 48 GE Base-T ports, 8 GE/10GE auto-adaptation SFP ports;
- ✓ S2928P/S2928P-800: 24 Gigabit POE Base-T ports, 4 GE/10GE optical ports;

### Product Characteristics

- **Advanced Hardware Architecture, and Industry-Leading Port Intensity**
  - 1U box-shaped switch with 48 GE ports and 8 10GE ports with high-performance ASIC switch chip.
- **Industrial Ethernet Ring with Zero Delay and Zero Packet Loss**
  - The S2900 supports industrial Ethernet ring network protection protocol. The protection switching time is less than 50ms. The solution has been applied in power industry, rail transportation industry and military projects for decades. It can achieve zero packet loss.
- **Complete POE Power Supply**
  - The S2900 supports IEEE 802.3AF/AT standard, built-in large power supply, free of external power supply, that is, 24-port AF full load power supply;
  - The S2900 supports hot restart and POE non-stop power supply;

- The S2900 supports the configuration of electrical port priority when the power is inadequate.
- The S2900 supports up to 2KV thunder-proof of the POE port and power supply

#### ➤ **Carrier-class Ethernet Switches**

- The S2900 supports carrier Ethernet ring network protection protocol. The protection switching time is less than 50ms. It also supports simple and effective redundancy protection mechanism such as STP/RSTP/MSTP protocol and dual uplink standby link protection and LACP link aggregation. These functions meet the requirement of carrier grade high reliability.
- The solution has perfect Ethernet OAM, which can real time monitor the network operating state and rapidly detect and locate the malfunction.
- The solution supports strong ACL function. The solution supports L2~L7 data access and control based on the physical port, VLAN IDs, source MAC/IP addresses and protocol port, which provides flexible ways of policy control.
- The S2900 supports ISSU (In-Service Software Upgrade), guaranteeing the user data non-stop forwarding when the system is upgrading.
- The S2900 supports various L2 multicast function, including IGMP-Snooping, user fast-leave mechanism and cross VLAN multicast replication function.

#### ➤ **Carrier-class QoS Policies**

- The S2900 supports complex traffic classification based on VLAN, source MAC/IP addresses, destination MAC/IP addresses, IP protocols, or priorities. It also supports priority remark. These functions provide an effective way for users to optimize their businesses.
- The S2900 provides flexible bandwidth control policies and support a port base or flow-based Committed Access Rate (CAR) and guarantees Layer 3 line-speed forwarding.
- Every port supports 8 priority queues.
- The S2900 also supports multiple queue grooming algorithms such as SP, WRR or SP+WRR.

#### ➤ **Comprehensive IPv6 Solutions**

- The S2900 comprehensively supports IPv6 Neighbor Discovery, ICMPv6、 Path MTU Discovery.
- The S2900 supports IPv6 based Ping, Traceroute, Telnet, SSH, ACL, meeting the need of IPv6 network equipment management and service control.

#### ➤ **Comprehensive Security Mechanisms**

- The S2900 adopts advanced hardware architecture design, realizing the hierarchical scheduling and protection of the packet. It provides multiple security measures to defend against DOS or TCP attacks; and supports command line authority control based on user levels.
  - Comprehensive Security Certification: The S2900 complies with IEEE 802.1x, Radius, BDTacacs+.
  - The S2900 supports the suppression of broadcast, multicast and unknown unicast packet, ensuring the equipment can operate normally in harsh network conditions.
  - The S2900 has the perfect loop detection mechanism.
  - The S2900 supports the port isolation in a same VLAN and DHCP-Snooping、IP+MAC+ port binding.
- **Convenient Management and Maintenance**
- The S2900 supports multiple management styles such as Console, Telnet, SSH.
  - The S2900 supports WEB based management. The management is more simple and effective.
  - The S2900 supports upload and download of TFTP files.
  - The S2900 supports ISSU (In-Service Software Upgrade).
  - The S2900 supports SNMP. By cooperating with Baud's smart "NMS", functions including the equipment auto-discovery, the topology management, the equipment configuration management, the performance data analysis, and the fault management can be realized. In this way, the network management is simplified and the user gets a new product experience.

## Product Specifications

Item	S2928	S2952	S2956	S2928P	S2928P-800
Backplane	256Gbps	256Gbps	256Gbps	256Gbps	256Gbps
Forwarding rate	96Mpps	138Mpps	180Mpps	96Mpps	96Mpps
MAC	16K	32K	32K	16K	16K
Ports	24 gigabit Base-T ports, 4 combo 100M/1000M	48 gigabit Base-T ports, 4 gigabit SFP ports; 4	48 gigabit Base-T ports, 8 GE/10GE SFP+ ports	24 gigabit POE ports, 4 GE/10GE SFP+ ports	24 gigabit POE ports, 4 GE/10GE SFP+ ports

	SFP/Base-T ports, 4 GE/10GE SFP+ ports	GE/10GE SFP+ ports			
Dimensions mm (W x D x H)	440x180x44	442.5x315x44	442.5x315x44	440x280x44	440x280x44
Power consumption	<40W	<55W	<55W	<40W	<40W
POE power	N/A			400W	800W
Power supply	AC: 100V-240V, 50Hz±10% DC: -36V~-72V (POE model without DC power supply)				
Environment	Operating temperature/humidity: 0°C-50°C, 10%-90% non-condensing Storage temperature/ humidity: -20°C-70°C; 5%-95% non-condensing				
MAC switching function	Static configuration and dynamically learning of MAC address Check and delete MAC address Configuring of MAC address aging time Limit on MAC address learning number MAC address filtering function Black-hole MAC items				
VLAN	4K VLAN entries GVRP 1:1 and N:1 VLAN Mapping QinQ and selective QinQ Private VLAN				
STP	802.1D (STP), 802.1W (RSTP), 802.1S (MSTP) BPDU protection, root protection and ring protection				
Multicast	IGMP v1/v2/v3 IGMP Snooping IGMP Fast Leave multicast group policy and multicast number limit multicast traffic cross VLAN duplication				
IPv4	Static routing, RIP v1/v2, OSPF, BGP				

	<p>Strategy routing</p> <p>Load balance through equivalent routing</p> <p>BFD for OSPF, BGP</p>
IPv6	<p>ICMPv6, DHCPv6, ACLv6, IPv6 Telnet</p> <p>IPv6 Neighbor Discovery</p> <p>Path MTU Discovery</p> <p>MLD v1/v2</p> <p>MLD Snooping</p>
QoS	<p>Traffic classification of L2/L3/L4 protocol headers</p> <p>CAR traffic control</p> <p>802.1P/DSCP priority remark</p> <p>Multiple queuing algorithms such as SP, WRR or SP+WRR</p> <p>Tail-Drop, WRED</p> <p>Traffic supervision and traffic shaping</p>
Security features	<p>Identification and filtering of L2/L3/L4 based ACL</p> <p>Defend against DDoS attack, SYN Flood attack of TCP and UDP Flood attack</p> <p>Suppression of broadcast, multicast and unknown unicast packet.</p> <p>Port isolation</p> <p>Port Security, IP+MAC+port binding</p> <p>DHCP Snooping, DHCP Option 82</p> <p>IEEE 802.1x authentication</p> <p>Radius, BDTacacs+ authentication</p> <p>Command line authority control based on user levels</p>
Reliability	<p>Static/LACP link aggregation</p> <p>EAPS, ERPS</p> <p>ISSU</p>
Management	<p>Console, Telnet, SSH 2.0</p> <p>WEB based management</p> <p>SNMP v1/v2/v3</p> <p>Upload and download of TFTP files</p> <p>RMON</p>

## Ordering Information

Item	Description
<b>S2900 Series Non-POE Switches</b>	
S2928	Ethernet switch with 24 gigabit Base-T ports, 4 combo ports and 4 10GE optical ports (1 console port, 24 gigabit Base-T ports, 4 100M/1000M auto-adaptation combo SFP/Base-T ports, 4 GE/10GE auto-adaptation SFP+ ports; the standard AC220V power supply, the cooling fan, 1U, standard 19-inch rack-mounted installation)
S2952	Ethernet switch with 48 gigabit Base-T ports, 4 gigabit optical ports and 4 10GE SFP+ ports (1 Mini usb console port, 48 gigabit Base-T ports, 4 GE SFP ports, 4 GE/10GE SFP+ ports; the standard AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
S2956	Ethernet switch with 48 gigabit Base-T ports and 8 10GE SFP+ ports (1 Mini usb console port, 48 GE Base-T ports, 8 GE/10GE auto-adaptation SFP+ ports; the standard AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
<b>S2900 Series POE Switches</b>	
S2928P	Ethernet switch with 24 gigabit Base-T ports and 4 10GE optical ports (1 console port, 24 gigabit POE ports, 4 GE/10GE SFP+ ports; the standard AC220V power supply, 400W POE power, the cooling fan, 1U, standard 19-inch rack-mounted installation)
S2928P-800	Ethernet switch with 24 gigabit Base-T ports and 4 10GE optical ports (1 console port, 24 gigabit POE ports, 4 GE/10GE SFP+ ports; the standard AC220V power supply, 800W POE power, the cooling fan, 1U, standard 19-inch rack-mounted installation)
<b>Optical Modules</b>	
<b>100M Optical Modules</b>	

FSFP-SX-1310	100M SFP multi-mode (2Km, 1310nm, LC, DDM)
FSFP-LX-15	100M SFP single mode (15Km, 1310nm, LC, DDM)
FSFP-LX-40	100M SFP single mode (40Km, 1310nm, LC, DDM)
FSFP-ZX-80	100M SFP single mode (80Km, 1550nm, LC, DDM)
FSFP-LX-SM1310-20-BIDI	100M SFP single mode, single core bidirectional (20Km, TX1310/RX1550, LC, DDM)
FSFP-LX-SM1550-20-BIDI	100M SFP single mode, single core bidirectional (20Km, TX1550/RX1310, LC, DDM)
FSFP-LX-SM1310-40-BIDI	100M SFP single mode, single core bidirectional (40Km, TX1310/RX1550, LC, DDM)
FSFP-LX-SM1550-40-BIDI	100M SFP single mode, single core bidirectional (40Km, TX1550/RX1310, LC, DDM)
FSFP-LX-SM1310-80-BIDI	100M SFP single mode, single core bidirectional (80Km, TX1310/RX1550, LC, DDM)
FSFP-LX-SM1550-80-BIDI	100M SFP single mode, single core bidirectional (80Km, TX1550/RX1310, LC, DDM)

#### GE Optical Modules

GSFP-TX-B	GE SFP-to-RJ45 module
GSFP-SX-D	Gigabit SFP multi-mode (500m, 850nm, LC, DDM)
GSFP-LX-10-D	Gigabit SFP single mode (10Km, 1310nm, LC, DDM)
GSFP-LX-20-D	Gigabit SFP single mode (20Km, 1310nm, LC, DDM)
GSFP-LX-40-D	Gigabit SFP single mode (40Km, 1310nm, LC, DDM)
GSFP-ZX-80-D	Gigabit SFP single mode (80Km, 1550nm, LC, DDM)
GSFP-ZX-120-D	Gigabit SFP single mode (120Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI	Gigabit SFP single mode, single core bidirectional (10Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	Gigabit SFP single mode, single core bidirectional (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	Gigabit SFP single mode, single core bidirectional (20Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	Gigabit SFP single mode, single core bidirectional (20Km, TX1550/RX1310, LC, DDM)



GSFP-LX-SM1310-40-BIDI	Gigabit SFP single mode, single core bidirectional (40Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-40-BIDI-1310	Gigabit SFP single mode, single core bidirectional (40Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1490-80-BIDI	Gigabit SFP single mode, single core bidirectional (80Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-80-BIDI	Gigabit SFP single mode, single core bidirectional (80Km, TX1550/RX1490, LC, DDM)
GSFP-LX-SM1490-120	GE SFP single mode, single core bidirectional (120Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-120	Gigabit SFP single mode, single core bidirectional (120Km, TX1550/RX1490, LC, DDM)

#### 10GE Optical Modules

SFP+SX	10GE SFP+ multi-mode (300m, 850nm, LC)
SFP+LX-10	10GE SFP+ single mode (10Km, 1310nm, LC, DDM)
SFP+LX-20	10GE SFP+ single mode (20Km, 1310nm, LC, DDM)
SFP+LX-40	10GE SFP+ single mode (40Km, 1550nm, LC, DDM)
SFP+LX-80	10GE SFP+ single mode (80Km, 1550nm, LC, DDM)
SFP+LX-SM-1270-10	10GE SFP single mode, single core bidirectional (10Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-10	10GE SFP single mode, single core bidirectional (10Km, TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-20	10GE SFP single mode, single core bidirectional (20Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-20	10GE SFP single mode, single core bidirectional (20Km, TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-40	10GE SFP single mode, single core bidirectional (40Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-40	10GE SFP single mode, single core bidirectional (40Km, TX1330/RX1270, LC, DDM)

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TX1330/RX1270, LC, DDM)

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**For More Information**

For more information about [BDCOM S2900 Series](#), please contact your local BDCOM account representative.

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