BDCOM

S5800-S SERIES

⊘ Varied Service Characteristics Versatile IPv6 Solution Complete Security Mechanism

Carrier-Level High Reliability Full Layer-3 Functions

Advanced Hardware Architecture and Industry-leading Port Density

Supports full data-center functions such as VxLAN, MLAG, Netconf

Product Overview

BDCOM S5800 series is a new generation high-performance data center full Gigabit TOR switch oriented for cloud computing, data centers and high-end campus networks. S5800 series adopts an advanced hardware architecture design, providing the cutting-edge switching performance and rich data center service features.

S5800-S series provides high-density 10G/25G/100G data center access capabilities. To meet the network resource pooling requirements of cloud computing data centers, S5800 series offers rich data center features such as VXLAN, EVPN, M-LAG, and NETCONF;

S5800-S series meets the requirements for building data center networks and deploying large layer-2 networks within data centers. In combination with BDCOM S9500 series data center core switch, it can realize the access of 15,000+ 10 Gigabit servers, providing a complete network solution for super-large data centers.

S5800 Series is equipped with the BDROS 6th generation operating system with BDCOM's

independent intellectual property rights. While providing high-performance L2/L3/L4 line-speed switching services, S5800 further integrates various network services such as IPv6, network security, traffic analysis, and virtualization. Combined with a variety of data center high-reliability technologies such as uninterrupted upgrade, uninterrupted forwarding, graceful restart, redundancy protection, S5800 ensures the longest uninterrupted network communication.

SS5800 inherits advanced "GreenTouch" concept and the cutting-edge "Smart@CHIP" energy-saving technology, which is low-carbon and environmentally friendly, effectively reducing the operating cost of the data center, and providing the green and sustainable development of the network.

BDCOM S5800-S series consists of S5800-32C2X-S, S5800-48Y8C-S, S5800-48X8C-S, which can meet the port density and performance requirements of different scale networks.

Product Characteristics

Advanced Hardware Architecture Design & Leading Processing Capacity

Adopts the advanced hardware architecture, high-density data center access design, 1U device supports up to 48-port 25G SFP28 + 8-port 100G QSFP28 or a single machine can support 32-port 100G QSFP28 + 2-port 10G SFP+ access.

Product Characteristics

Equipped with high-performance ASIC switching chips and multi-core processors, supports up to 6.4Tbps switching capacity, meeting the high-performance, high-capacity, high-density and expandable requirements of data centers.

Standard front-to-back or back-to-front airflow design, supports flexible selection of airflow direction.

Rich Data Center Business Features

Supports VXLAN, EVPN, M-LAG, NETCONF data center features;

Satisfies the data center Overlay network construction and large-scale layer-2 network deployment inside the data center;

End-to-end OAM based on IEEE802.1ag and ITU-T Y.1731 protocols enables Ethernet service providers to proactively monitor services and measure end-to-end performance;

Supports Telemetry, which can finely monitor device and business operation status.

Data Center High Reliability

Based on the HPS (Hitless Protection System), the key power supply system adopts a redundant design, modularized and hot-swappable, and supports seamless switching in case of failure without interrupting business.

Supports redundancy protection mechanism such as STP/RSTP/MSTP protocol, VRRP protocol, ring network protection, dual uplink active/standby link protection and LACP link aggregation.

Supports ISSU (In-Service Software Upgrade) and GR (Graceful Restart), guaranteeing the user data non-stop forwarding when the system is upgrading.
Supports ultra-high-precision BFD and realizes fault detection and service recovery in seconds through linking with layer-2 or layer-3 protocol.

Provides perfect Ethernet OAM, and supports 802.3ah, 802.1ag and ITU-Y.1731, which can real-time monitor the network operating state and rapidly locate the malfunction.

High Reliability (99.999%): MTTR is 50ms, meeting the requirement of the carrier-level service.

Abundant Business Features

Supports rich Ethernet layer 2 and layer 3 business features;

Supports IPv4/IPv6 dual protocol stack and rich unicast and multicast routing protocols, and provides flexible network communication solutions according to IPv4/IPv6 network planning and network status.

Comprehensive Security Mechanisms

Equipped with multiple reliability protections at the device level and link level;

Supports fast link failure recovery with 50~200ms to ensure uninterrupted transmission of key services;

Supports cross-device link aggregation, which is convenient for access to servers and dual-active link uplink of switches;

Adopts redundant backup design for key hardware components;

Adopts over-current protection, over-voltage protection and over-heat protection technology.

Comprehensive Security Mechanisms

Inherits BDCOM advanced "GreenTouch" concept, energy saving and environmental.

Intelligent Power Management System: adopts advanced power system architecture design which can realize the function of efficient power switching, private power monitoring, soft start, real-time monitoring, intelligent adjustment and energy-saving.

Intelligent Fan Management System: S5800 is designed with the intelligent fan and supports switching between front-back and back-front mode and fan automatic speed regulation.

Supports Efficient Ethernet and complies with International standard IEEE 802.3az.

Model Lists A

S5800-48X8C-S

- 48-Port 10G SFP+
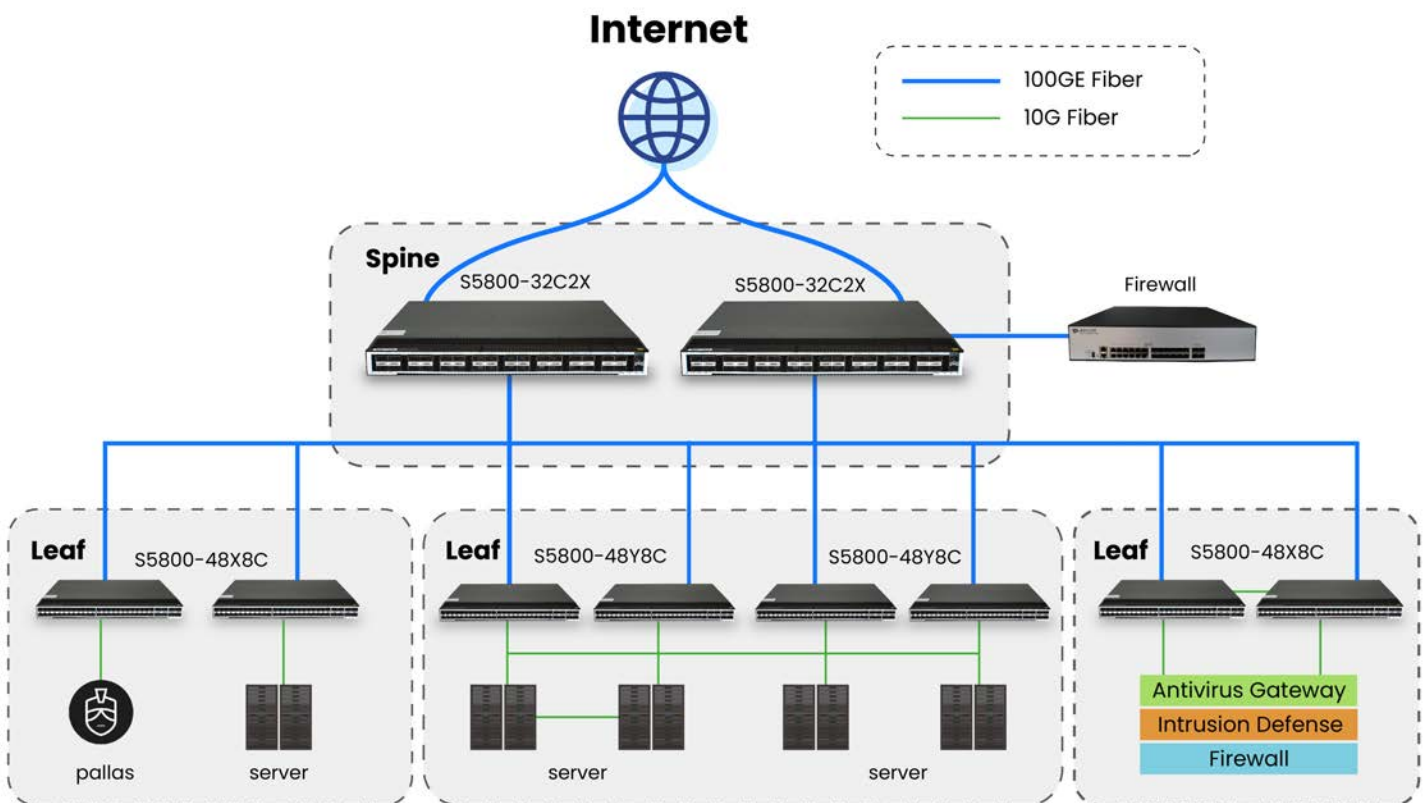- 8-Port 100G/40G QSFP28

S5800-48Y8C-S

- 48-Port 25G SFP28
- 8-Port 100G/40G QSFP28

S5800-32C2X-S

- 32-Port 100G/40G QSFP28
- 2-Port 10G SFP+

Application Diagram

Product Specifications

Item	S5800-48X8C-S	S5800-48Y8C-S	S5800-32C2X-S
Switching capacity	2.56Tbps	6.4Tbps	6.4Tbps
Forwarding	1920Mpps	3000Mpps	4800Mpps
Power supply slot	2	2	2
Ports	48-port 10G SFP+ 8-port 100G QSFP28	48-port 25G SFP28 8-port 100G QSFP28	32-port 100G QSFP28 2-port 10G SFP+
Dimensions(WxDxH)(mm)	440x400x44	440x400x44	440x488x44
Environment	Operating temperature/humidity: -10°C-50°C; 10%-90% non-condensing Storage temperature/humidity: -20°C -70°C; 5%-95% non-condensing		
Vxlan	Manually configuring VxLAN tunnel VxLAN distributed gateway VxLAN dual-active link access VxLAN interconnection across data centers VxLAN pass-through of L2 Protocol packets Supports modification of VxLAN outer header DSCP BGP EVPN Supports overlay split horizon, and separate control on different VNIs		
STP	802.1d STP, 802.1w RSTP, 802.1s MSTP BPDU protection, root protection and ring protection		
Multicast	IGMP v1/v2c/v3 IGMP Snooping IGMP Fast Leave Multicast group policy and multicast number limit MVR PIM-SM, PIM-DM		
IPv4	Static routing, RIP v1/v2, OSPF, BGP, IS-IS, BEIGRP Policy Based Routing(PBR) ECMP BFD for OSPF, BGP		
IPv6	ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet IPv6 neighbor discovery Path MTU discovery MLD v1/v2 MLD snooping IPv6 Static Routing, RIPng, OSPFv3, BGP4+ Manual tunnel, ISATAP tunnel, 6-to-4 tunnel		
QoS	Traffic classification based on fields in L2/L3/L4 protocol headers Committed Access Rate (CAR) traffic restriction Re-marking of 802.1P/DSCP priority Multiple queuing algorithms such as SP, WRR or SP+WRR Congestion avoidance mechanisms like Tail-Drop and WRED Traffic supervision and traffic shaping Ingress and Egress ACL, supports matching L2, L3, L4 and IP quintuples, and performs replication, forwarding and discarding Hash-based load balancing algorithm to ensure session integrity		
Security features	L2~L4 ACL flow identification and filtering security mechanism DDoS attack prevention, TCP-SYN/UDP Flood attack prevention Suppression of multicast, broadcast, and unknown unicast packets Port isolation Port Security, IP+MAC+port binding DHCP Snooping, DHCP Option 82 IEEE 802.1x authentication Radius, TACACS+URPF Command line hierarchical protection		

Item	S5800-48X8C-S	S5800-48Y8C-S	S5800-32C2X-S
Reliability	Power 1+1 backup Static/LACP link aggregation EAPS, ERPS HSRP, VRRP GR for OSPF and BGP BFD for OSPF and BGP ISSU		
Management	Console, Telnet, SSH 2.0 Zero Touch Provisioning (ZTP) Web-GUI SNMP v1/v2c/v3 Upload and download of FTP/TFTP/SFTP files RMON event history Traffic statistical analysis such as sFLOW		
Energy saving	IEEE 802.3az		

Ordering Information

Item	Description
S5800-S series switches	
S5800-48X8C-S	48-Port 10G SFP+ 8-Port 40/100G QSFP28 L3 Stackable Managed Switch (2 hot-swappable power slots with dual AC220V power supplies; 1U, 19-inch rack-mounted installation)
S5800-48Y8C-S	48-Port 25G SFP28 + 8-Port 40/100G QSFP28 L3 Stackable Managed Switch (2 hot-swappable power slots with dual AC220V power supplies; 1U, 19-inch rack-mounted installatio
S5800-32C2X-S	32-Port 40/100G QSFP28 + 2-Port 10G SFP+ L3 Stackable Managed Switch (2 power slots with dual AC220V power supplies; built-in 4 fans with left and right air ducts, 1U, 19-inch rack-mounted installation
Optical Modules	
100G Optical Modules	
QSFP28-SR4-100m	100G multi-mode QSFP28 optical module(100m, 850nm, MPO, DDM)
QSFP28-LR4-10	100G single-mode QSFP28 optical module(10km,1310nm,LC,DDM)
QSFP28-LR4-20	100G single-mode QSFP28 optical module(20Km,1310nm,LC,DDM)
40GE optical modules	
QSFP+SR4-100m	40G multi-mode QSFP+ optical module (100m, 850nm, MPO, DDM, supports 1 to 4)
QSFP+LR4-10	40G single-mode QSFP+ optical module (10km, 1310nm, LC, DDM)
QSFP+LR4-20	40G single-mode QSFP+ optical module(20Km, 1310nm, LC, DDM)
QSFP+ER4-40	40G single-mode QSFP+ optical module(40Km, 1310nm, LC, DDM)
10GE optical modules	
SFP+TX	10GE SFP+-to-RJ45 module
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-40-1310	10GE SFP+ single-mode (40km, 1310nm, LC, DDM)
SFP+LX-80	10GE SFP+ single-mode (80Km, 1550nm, LC, DDM)
SFP+LX-SM-1270-10 SFP+LX-SM-1330-10	10GE SFP+ single-mode, single-fiber (10Km, TX1270/RX1330, LC, DDM) 10GE SFP+ single-mode, single-fiber (10Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-20 SFP+LX-SM-1330-20	10GE SFP+ single-mode, single-fiber (20Km, TX1270/RX1330, LC, DDM) 10GE SFP+ single-mode, single-fiber (20Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-40 SFP+LX-SM-1330-40	10GE SFP+ single-mode, single-fiber (40Km, TX1270/RX1330, LC, DDM) 10GE SFP+ single-mode, single-fiber (40Km,TX1330/RX1270, LC, DDM)
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-ZX-120-D	GE SFP single-mode (120Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI GSFP-LX-SM1550-10-BIDI	GE SFP single-mode, single core bidirectional (10Km, TX1310/RX1550, LC, DDM) GE SFP single-mode, single core bidirectional (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI GSFP-LX-SM1550-20-BIDI	GE SFP single-mode, single core bidirectional (20Km, TX1310/RX1550, LC, DDM) GE SFP single-mode, single core bidirectional (20Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-40-BIDI GSFP-LX-SM1550-40-BIDI	GE SFP single-mode, single core bidirectional (40Km, TX1310/RX1550, LC, DDM) GE SFP single-mode, single core bidirectional (40Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1490-80-BIDI GSFP-LX-SM1550-80-BIDI	GE SFP single-mode, single core bidirectional (80Km, TX1490/RX1550, LC, DDM) GE SFP single-mode, single core bidirectional (80Km, TX1550/RX1490, LC, DDM)
GSFP-LX-SM1490-120 GSFP-LX-SM1550-120	GE SFP single-mode, single core bidirectional (120Km, TX1490/RX1550, LC, DDM) GE SFP single-mode, single core bidirectional (120Km, TX1550/RX1490, LC, DDM)

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