

S5828 Switch



Supports Maximum 48 10GE Ports and 4 100GE QSFP28 Uplink Ports



Advanced Hardware Architecture and Industry-leading Port Density



Carrier-Level High Reliability Data-center TOR Switches Full Layer-3 Functions



Varied Service Characteristics Versatile IPv6 Solution Complete Security Mechanism



Product Overview

BDCOM S5800 Series is a new generation of full 10GE TOR switches, oriented for high-performance computing, data center and high-end campuses. The S5800 Series adopts our most advanced hardware architecture designs. S5800 Series (1U height) supports up to 2.56Tbps switching capacity and 48 10GE ports + 2 40GE ports + 4 100G ports or 72 10GE ports.

S5800 Series supports BVSS, TRILL, SDN and FCoE/ FC. By cooperating with S9500 Series, S5800 Series can converge data of 15000+ 10GE servers. Developed on the basis of BDROS 6 - a software platform BDCOM with its own independent intellectual property rights, S5800 Series provides high-performance L2/L3/L4 wire speed switching capacity by integrating services such as IPv6, MPLS VPN, network security, flow analysis, virtualization, with high reliable techniques including continuous forwarding, graceful restarting and loop network protection, all which works efficiency withing the S5800 Series fabric for guaranteed maximum runtime. S5800 Series supports the "GreenTouch" architecture and "Smart@CHIP". Its power consumption is lower than 200W.

Carrier-Level Aggregation Layer-3 Ethernet Switch

Innovative BVSS (BDCOM Virtual Switch System):

virtualize multiple physical devices into one. The performance, reliability and management capabilities of the virtual system combine to outperform that of individual physical devices;

Improved Performance: BVSS makes full use of each link in the physical device cluster, which avoids STP blocking on links and protects the original link to the maximum;

High Reliability: Based on the advanced distribution mechanism and efficient cross-physical link aggregation function, the logic control plane, service control plane and service data plane are separated. Thus, the device can support continuous layer3 routing forwarding, avoiding service interruption as a result of a single point of failure;

Easy Management : BVSS realizes single I P management , greatly improving the networking efficiency and lowering operating costs.

Product Characteristics

Rich Data Center Services

BVSS (BDCOM Virtual Switch System) S5800 Series supports BVSS, which can virtualize multiple physical devices into a single logical element. The virtualized system is superior to the independent physical device in performance, reliability, flexibility and management.

Doubled Performance: The virtualized system makes the best use of each link in the device and avoids blocking of STP to the links.

High-reliability: Based on the advanced distributed processing technique and the efficient function of cross-physical device link aggregation, the S5800 Series provides non-stop layer-3 routing forwarding and avoids single points of failure.

Flexibility: The virtual cluster function of the S5800 allows the distance of a cluster system to expand over up to 80KM, breaking the geographic restrictions of traditional cluster techniques.

Easy Management : The whole virtual system realizes single IP unified management and simplifies the management of network device and network topology.

***Large Layer-2 Network Technique:** S5800 Series adopts large layer-2 network technique which supports TRILL/SPB protocol. With this technique, the network structure has become simplified and compact, which better enables access for data center, large-scale servers.

***Unified Architecture:** S5800 Series supports FCoE (FC over Ethernet) technique, which solves the problem of discrepancy between LAN network and FC storage network and integrates computing, data and storage networking.

***SDN:** S5800 Series supports SDN (Software Defined Network), which can realize network virtualization and centralized management.

Security+

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+.

S5800 series supports storm/multicast/unicast limits, ensuring normal running conditions of the equipment when deployed in harsh network conditions.

S5800 series supports perfect ring detection mechanisms, ensuring long-term network performance stability.

S5800 series supports port isolation within the same VLAN, DHCP-Snooping, and IP + MAC + Port binding.

Versatile IPv6 Solution

S5800 Series supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc.;

S5800 Series supports Ping, Traceroute, Telnet, SSH, ACL based on IPv6;

S5800 Series supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc.;

Supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4 tunnel, ISATAP;

S5800 Series supports IPv4 transiting to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

Data Center Level High-reliability

S5800 Series adopts HPS (Hitless Protection System). The key components of the S5800 Series such as the power system and the fan system supports redundancy in design. All system modules support hot-swap and seamless switching without need of manual intervention.

S5800 Series supports redundancy protection mechanisms such as STP/RSTP/MSTP protocol, VRRP protocol, ring network protection, dual uplink active/standby link protection and LACP link aggregation.

S5800 Series supports ISSU (In-Service Software Upgrade), guaranteeing non-stop forwarding of service data while the system is upgrading.

S5800 Series supports BFD and realizes fault detection and service recovery in seconds through linking with layer-2 or layer-3 protocol.

S5800 Series has perfect Ethernet OAM, 802.3ah, 802.1ag and ITU-Y.1731 which can monitor the network operating state in real time and rapidly detect and locate the malfunction.

High Reliability (99.999%): The MTTR of the S5800 Series is 50ms, satisfying the requirement for reliable delivery of carrier-level service.

Product Specifications

| Item | | S5828 |
|-----------------------------------|------------------------|--|
| Interface | | 24 10GE/GE SFP+ ports, 4 100GE/40GE QSFP28 ports |
| Console | | 1 RJ45 console, 1 MGMT |
| Backplane | | 800Gbps |
| Forwarding Rate | | 600 Mpps |
| Chassis | Dimensions (WxDxH)(mm) | 440x350x44 |
| | Weight (KG)(empty) | 7:1 |
| Package | Weight (WxDxH)(mm) | 576x448x94 |
| | Weight (KG) | 8.3 |
| Power Consumption | No-load | 45W |
| | Full-load | 70W |
| Power Supply (hot-swap) | AC:100V-240V, 50Hz±10% | 2 |
| Power status monitoring | | Support |
| Total output BTU (1000BTU/H=293W) | | 238.91 |
| Fan Number | | 4 |
| Noise@25°C (dBA) | | 57 |
| MTBF (H) | | >100.000 |
| Forwarding mode | | Store-forward |
| Flash (MB) | | 32 |
| DRAM (MB) | | 1024 |
| MAC | | 32K |
| Jumbo Frame | | 9K |
| Routing table | IPv4 | 16K |
| | IPv6 | 12K |
| ARP table | IPv4 | 10K |
| | IPv6 | 10K |
| Total SVI | | 1K |

Features:

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|---------------|--|
| VLAN | · 4K Active VLAN, QinQ & Selective QinQ, GVRP, Private VLAN |
| Spanning Tree | · 802.1D (STP) · 802.1W (RSTP) and 802.1S (MSTP) · BPDU guard, root guard and loopback guard |
| Multicast | · PIM-SM, PIM-DM, · IGMP v1/v2/v3, · IGMP Snooping, · IGMP Fast Leave, |

| | |
|---------------|---|
| | <ul style="list-style-type: none"> · MVR, IGMP filter |
| IPv4 | <ul style="list-style-type: none"> · Static routing, RIP v1/v2, · OSPF, BGP, PBR, ECMP · BFD for OSPF, BGP |
| IPv6 | <ul style="list-style-type: none"> · 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 |
| MPLS | Multi-VRF |
| QOS | <ul style="list-style-type: none"> · 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 | <ul style="list-style-type: none"> · Port isolation, Port security, and "IP+MAC+port" binding, MAC · sticky DHCP Snooping and option 82, DAI & IP source guard, PPPoE+, · IEEE 802.1x, Radius and BDTacacs+ 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. |
| Reliability | <ul style="list-style-type: none"> · Static/LACP link aggregation, · Interface backup · BVSS virtual-stacking · EAPS and ERPS · URPF, LLDPISU · VRRP · 1+1 power backup |
| Management | <ul style="list-style-type: none"> · Console, Telnet, SSH v1/2, HTTP · HTTPSSNMP v1/v2/v3, RMON · TFTP, FTP, SFTP · NTP, SPAN, RSPAN |
| Environment | <ul style="list-style-type: none"> · Operating temperature/humidity: 0°C -50°C ,10%-90% non-condensing · Storage temperature/humidity: -20 °C -70 °C , 5%-95% non-condensing |
| Certification | <ul style="list-style-type: none"> · CE, FCC, ROHS |

Ordering Information:

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| S5828 | <p>Ethernet routing switch with 24 10GE ports, 4 100GE ports (1 console port, 1 out-band port, 24 10GE/GE SFP+ ports, 4 100GE/40GE QSFP28 ports (can expand to 4 10GE ports); 2 power slots with 2 hot-swap AC220V power supplies; 4 fan slots, including 4 fans; 1U, 19-inch rack-mounted installation)</p> |
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