BDCOM S3900 10G Routing Switch Series

Overview

BDCOM S3900 series is standard L3 switches, which are independently developed by BDCOM, providing the multi-layer switching capacity and the wire-speed route forwarding capability. BDCOM S3900 switch series can support up to 4 10G ports, which can provide sufficient bandwidth for the data transmission between the aggregation layer and the core layer. So users can flexibly configure their networks according to actual requirements.

BDCOM S3900 switch series has three models: S3928C, S3928GXB, S3948B and S3948GX.

S3928C

S3948B

Main Characteristics

Excellent performance

- 240G backplane bandwidth for S3928C/S3928GXB and a maximum expansion of 4 10G SFP+ ports
- 280G backplane bandwidth for S3948B/ S3948GX and a maximum expansion of 4 10G SFP+ ports
- Hardware routing and 131Mpps L3 packet forwarding rate
- Gigabit optical-fiber transmission with up to 80Km distance and directly connecting the MAN backbone network

High security and reliability

- Limiting the maximum number of hosts on a port
- Supporting IEEE802.1x and providing port-based user authentication
- Ethernet port binding in multiple paths to increasing bandwidth and redundancy
- Supporting strong ACL and L2 to L4 data filtration

Flexible and various management mode

- Adopting the cluster technology; supporting device cascading; managing uniquely through a unique IP address; saving address resources
- Supporting multiple management modes such as Console port, Web and SNMP
- Conducting software upgrade and BootRom through TFTP
- Supporting the DHCP server, DHCP relay and dynamic IP distribution
- Supporting standard SFP interfaces to effectively protect user's investment
- Providing redundant power sources and improving systematic reliability

Powerful flow and broadcast management

- Detecting and limiting broadcast storms automatically and supporting IGMP snooping to limit

broadcast flooding

- Supporting flow control in full-duplex mode or half-duplex mode
- Supporting rate limitation in a step of 64K on the Ethernet interface
- Supporting advanced cache management and the 802.1p protocol (Four transmission queues on each port map eight 802.1p priority levels)
- Supporting IP multicast and QoS

Multiple routing policies

- Supporting static route
- Supporting RIP v1/v2, OSPFv2, BEIGRP, BGPv4, etc
- Supporting multicast routing protocols such as PIM-SM and PIM-DM

Technical Indexes

	S3928C	S3928GXB	S3948B	S3948GX
Standard configuration	20 10/100/1000M TX ports 4 gigabit TX/SFP combo ports 1 expansion slots for a 10G module (it can be expanded up to 4 10G ports) One Console port	20 1000M SFP slots 4 gigabit TX/SFP combo ports 1 expansion slots for a 10G module (it can be expanded up to 4 10G ports) One Console port	44 10/100/1000M TX ports 4 gigabit TX/SFP combo ports 2 expansion slots for a 10G module (it can be expanded up to 4 10G ports) One Console port	44 1000M SFP slots 4 gigabit TX/SFP combo ports 2 expansion slots for a 10G module (it can be expanded up to 4 10G ports) One Console port
L3 forwarding rate	Full wire-speed filtering and forwarding, 96.1Mpps	Full wire-speed filtering and forwarding, 96.1Mpps	Full wire-speed filtering and forwarding, 131.1Mpps	Full wire-speed filtering and forwarding, 131.1Mpps
Backplane bandwidth	240Gbps	240Gbps	280Gbps	280Gbps
Switching mode	Store forwarding			
Processor	RISC 300MHz			
Flash	8MB			
Memory	64MB, which can be increased to 512MB			
Address table	8K			
Queue buffer	64MB			
Size	442mm × 316mm × 44mm		442mm × 374mm × 44mm	
Power source's	110-240VAC (auto-adaptable), 47-63Hz, 1A/230V, active RPS			

characteristics	
Power consumption	Max. 400W
Indicator	Power indicator, system indicator, connection/data forwarding indicator, 10/100M indicator
Temperature and humidity	Working temperature: 0-50℃ Storage temperature: -40-70℃ Humidity: 0-90% no condensation
STP	IEEE 802.1D STP IEEE 802.1w RSTP IEEE 802.1s MSTP
VLAN	Supporting port-based VLAN 802.1Q-tagged VLAN Super Vlan Private Vlan Dynamic VLAN configuration through GVRP Vlan Stacking (QinQ)
Flow control	Backpressure is adopted for half-duplex, while IEEE802.3x is adopted for full-duplex. CAR is supported; a 1M step limitation is conducted to the 100M port, and a 8M step limitation is conducted to the gigabit port.
Broadcast control	The broadcast storm is constrained. When the threshold value for controlling the broadcast storm is reached, the broadcast packets are stopped from being forwarded.
Multicast control	IGMP Snooping, automatic multicast snooping
Multicast routing	IGMP v1/v2/v3 PIM-SM &PIM-DM
Interface binding	Each port binding group contains up to 8 ports, and 6 port binding groups are supported meanwhile. Dynamic LACP or static aggregation is supported.
Port mirroring	Supporting flow-based mirroring and the or port
Cascading	Stacking 32 switches Adopting the cluster technology; managing uniquely through a unique IP address; saving address resources
Routing management	Static Route RIP v1/v2，OSPFv2，BEIGRP（compatible with Cisco EIGRP），BGPv4 Anti-virus intelligent route forwarding
Policy routing	Supporting IP-based policy routing
Proxy	Supporting Proxy ARP and DNS proxy
Redundancy	Supporting hot-standby routing protocols such as VRRP and HSRP

backup	
DHCP characteristics	Supporting DHCP Server, DHCP Client and DHCP relay
Security features	IEEE 802.1x port authentication Port security Supporting IP ACL, MAC ACL and Vlan ACL on hardware Supporting port-based IP+MAC+VLAN ID+ account binding on hardware Supporting user authentication through Web page Supporting remote RADIUS and TACACS+ authentication Supporting hierarchical user management and password protection
QoS	Head Of Line (HOL) mechanism Four transmission queues on each port are mapped to eight priority values of 802.1p. WRED, WFQ, SP and FIFO Best-effort service Differentiated service Strict priority Weighted round robin First come first served TOS re-labeling RTS
Network management	SNMP v1/v2 RMON (groups 1, 2, 3, 9) Telnet CLI window WEB page Supporting the general NMS software, Broad Director Supporting NTP Supporting SSH Supporting PDP (compatible with Cisco CDP)