BDCOM

Shanghai Baud Data Communication Co., Ltd.

Switch Series

BDCOM S2500-48T4S
All-Gigabit L3-lite Switch

Overview

BDCOM S2500-48T4S is a next-generation intelligent access switch designed for the networking and access needs of enterprises, smart communities, hotels, office networks, and campus networks. Built on high-performance hardware and BDCOM's proprietary BDROS software platform, it provides 48 × 10/100/1000 Mbps auto-negotiation ports plus 4 × Gigabit SFP optical uplinks for higher-bandwidth upstream connections. Adopting a store-and-forward architecture with dynamic buffer allocation, it ensures efficient bandwidth distribution per port. It supports port-based VLAN ACLs for easy network monitoring, traffic policing, priority remarking, and forwarding control; and implements STP/RSTP/MSTP Layer-2 link protection to greatly enhance fault tolerance and redundancy for stable operation. Time-based ACLs enable precise, schedule-driven access control, while 802.1X authentication (port-based and MAC-based) simplifies user access management. Comprehensive QoS policies and rich VLAN features make the switch easy to operate and maintain. A high-reliability, wide-range AC power design is built in, ensuring normal operation even under unstable mains voltage.

- S2500-48T4S: 48-port Gigabit RJ45 + 4-port Gigabit SFP

Features

➢ Carrier-Level Ethernet Access Switch

- Supports the carrier-level Ethernet-ring protection protocol with a protection shift time of less than 50ms, STP/RSTP, link backup, and LACP link aggregation to cater to the requirements of high reliability of carriers;
- Equipped with powerful ACL functions to access and control of L2-L7 data, and provides carriers flexible and various policy control methods;
- Supports In-Service Software Upgrade (ISSU) to ensure the unremitting data forwarding during system upgrade;

- Supports various L2 multicast functions, including IGMP-Snooping, fast-leave and MVR.

➢ Rich QoS Policy

- Supports priority re-mapping and complicated flow classification based on VLAN, MAC, source address, destination address, IP protocol or priority to better streamline carrier's services;
- Provides flexible bandwidth control policies, and supports port-/flow-based flow limit, ensuring the line speed forwarding of each port to make sure the high quality of services;
- Supports multiple queue schedule algorithms such as SP, WRR, or "SP+WRR".

➢ Comprehensive IPv6 Solutions

- Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery.
- Supports Ping, Traceroute, Telnet, SSH, ACL and so on, meeting IPv6 network devices management 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 Tacacs+;
- Storm/multicast/unicast limit to ensure the normal running of devices in harsh environment;
- Perfect ring detection mechanism to ensure the long-term stable running of network;
- Port isolation within the same VLAN, DHCP-Snooping, and IP-MAC-Port binding for ensuring user data security.

➢ Flexible Management and Maintenance

- Supports management modes such as the Console, Telnet, SSH, etc;
- Supports the WEB management mode, which is convenient to install and debug;
- Supports TFTP-based upload/download management;
- Supports ISSU (In-Service Software Upgrade);

- Supports 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.

Specifications

Item	**S2500-48T4S**
Ports	48-port Gigabit RJ45 4-port Gigabit SFP
Switching capacity	336Gbps/3.36Tbps
Forwarding rate	78Mpps
Dimensions (WxHxD)	440x208x44mm
MAC address	16K
Power supply	AC: 100V-240V, 50Hz±10%
Environment requirement	Operating temperature/humidity: 0°C-45°C,10%-90% RH non-condensing Storage temperature/humidity: -40°C -70°C; 5%-90% RH non-condensing
Mac switching	Static configuration and dynamic MAC learning MAC browsing and removal Configurable aging time of the MAC address Limited number of learnable MAC addresses MAC addresses filtration
VLAN	4K VLAN entries GVRP QinQ Private VLAN voice vlan
Ring Protection	802.1D (STP), 802.1W (RSTP), 802.1S (MSTP) BPDU Guard, Root Guard, Loop Guard EAPS (Ethernet Automatic Protection Switching) ERPS (Ethernet Ring Protection Switching)
Multicast	IGMP v1/v2

	IGMP Snooping IGMP Fast Leave Multicast group policies and group count limits MVR (Multicast VLAN Registration)
IP routing	ipv4/ipv6 dual stack Static routing RIP, OSPF
IPv6	ICMPv6, ACLv6, IPv6 Telnet IPv6 Neighbor discovery Path MTU discovery MLD v1/v2 MLD Snooping
DHCP	DHCP Server DHCP Relay DHCP Client DHCP Snooping
ACL	L2~4 ACL IPv4/v6 ACL VLAN ACL
QoS	Flow classification based on L2~4 protocols CAR rate limiting 802.1P/DSCP priority re-labeling SP, WRR, and “SP+WRR” Queue scheduling Congestion avoidance mechanisms like Tail-Drop and WRED Flow monitoring and flow shaping
Security Features	L2/L3/L4 ACL-based flow identification & filtering Protection against DDoS, TCP SYN Flood, UDP Flood, etc. Suppression of multicast/broadcast/unknown unicast storms Port isolation Port security, IP+MAC+Port binding DHCP Snooping, DHCP Option 82 IEEE 802.1X authentication RADIUS and Tacacs+ authentication CLI privilege levels (command-line hierarchical protection)

Reliability	Link aggregation (Static / LACP) UDLD (Unidirectional Link Detection) Ethernet OAM
Management & Maintenance	Console, Telnet, SSH Web-based management (HTTP/HTTPS) SNMP v1/v2c/v3 TFTP file upload/download RMON events and history

Order Information

Item	Description
S2500-48T4S	48-port Gigabit RJ45 + 4-port Gigabit SFP L3-lite Switch (standard AC 220V power supply; fan cooling, 1U, 19-inch rack-mounted installation)
Optical Modules	
Gigabit Optical Modules	
GSFP-TX-B	Gigabit 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-SM1310-10-BIDI	Gigabit SFP single-mode, Single-fiber BiDi (10Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	Gigabit SFP single-mode, Single-fiber BiDi (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	Gigabit SFP single-mode, Single-fiber BiDi (20Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	Gigabit SFP single-mode, Single-fiber BiDi (20Km, TX1550/RX1310, LC, DDM)

For More Information

For more information about BDCOM S2500 Series, please contact your local BDCOM account representative.

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Shanghai Baud Data Communication Co., LTD.

No.123, Juli Road,

Pudong Zhangjiang High-Tech Park,

Shanghai 201203, China

Tel: +86-21-50800666

Advanced Innovations

Sede Usmate Velate

Via dell'Artigianato, 32F
20865 Usmate Velate (MB)
+39 039 682 96 36
info@ad-in.net
adin.it

Filiale Roma

Via Pontina, 583
00128 Roma (RM)
+39 06 80079273

Filiale Padova

Via San Crispino, 64
35129 Padova (PD)
+39 039 682 96 36

Filiale di Shenzhen

Room 2305D, 23/F, Tower A,
Zhan Tao Technology Building