BDCOM

Shanghai Baud Data Communication Co., Ltd.

Switch Series

BDCOM S2500-48P4S-370

Full-Gigabit PoE Switch

Product Overview

The BDCOM S2500 series PoE switches are a new generation of intelligent switches launched by Shanghai Baud Data Communication Co., Ltd. for carrier IP metropolitan area networks, government and enterprise networks, internet cafes, and diskless working environments. Based on next-generation high-performance hardware and BDCOM's proprietary BDROS software platform, the S2500 supports powerful ACLs, flexible QinQ, 1:1 and N:1 VLAN switching, Ethernet OAM, carrier-grade QoS, industrial-grade 10 Gigabit Ethernet ring networks, and Layer 3 routing protocols. This allows the series to meet the application needs of various complex scenarios.

S2500-48P4S-370

Product Features

Advanced hardware architecture design, industry-leading port density

- This 1U box-type switch achieves an industry-leading port density of 48 Gigabit + 4 Gigabit ports and supports mixed power input for all scenarios. Equipped with a high-performance ASIC switching chip, it can meet the application needs of various complex scenarios.

Industrial-grade Ethernet ring network functionality, zero latency, zero packet loss.

- It supports industrial-grade Ethernet ring network protection protocols with a protection switching time of <50ms. It has been verified by BDCOM in the power, rail transportation, and military industries for many years and can achieve high reliability requirements with zero packet loss.

Carrier-grade Ethernet switches

- It supports carrier-grade Ethernet ring network protection protocols with a protection switching time of <50ms; it also supports STP/RSTP/MSTP protocols, dual uplink primary and backup link protection, LACP link aggregation, and other simple and efficient redundancy protection mechanisms to meet the high reliability requirements of carrier-grade systems.
- A robust Ethernet OAM mechanism enables rapid fault detection and location through real-time monitoring of network operation status.
- The powerful ACL function supports access and control based on L2 to L7 layer data such as physical port, VLAN, MAC, IP, and protocol port number, providing users with flexible and diverse policy control methods.
- It supports a wide range of Layer 2 multicast features, including IGMP-Snooping, user fast leave mechanism, and cross-VLAN multicast replication.

Carrier-grade QoS policies

- It supports the classification of complex flows based on VLAN, MAC, source address, destination address, IP protocol, priority, etc., and supports the remarking of priorities, providing users with a reliable and effective means to optimize services.
- It provides flexible bandwidth control policies, supports port-based or flow-based rate limiting, and ensures line-speed forwarding on each port, thereby effectively guaranteeing the quality of high-quality network services such as voice, video, and data.
- Each port hardware supports 8 priority queues.
- It supports multiple queue scheduling algorithms such as SP, WRR, or SP+WRR.

Comprehensive IPv6 solutions

- It fully supports the IPv6 protocol suite and IPv6 features such as IPv6 neighbor discovery, ICMPv6, and Path MTU discovery.
- Supports Ping based on IPv6, Traceroute, Telnet, SSH, ACL, etc.,It meets the needs of pure IPv6 network device management and service control.

A robust security mechanism

- Device-level security protection: Advanced hardware architecture design, hardware implementation of hierarchical scheduling and protection of packets, supports

protection against attacks on devices such as DoS, TCP SYN Flood, UDP Flood, broadcast storms, and large traffic; supports command-line hierarchical protection, with different levels of users having different management permissions;

- Comprehensive security authentication mechanism: supports IEEE 802.1x, Radius, Tacacs+ and other technologies can provide users with a complete security authentication mechanism.
- It supports the suppression of broadcast, multicast, and unknown unicast messages to ensure the normal operation of the device under harsh network conditions.
- A robust loop detection mechanism can ensure the stable operation of the network over a long period of time.
- It provides port isolation within the same VLAN, as well as security features such as DHCP-Snooping and IP+MAC+port binding, further ensuring user data security.

Complete PoE power supply function

- Supports 802.3AF/AT standards and has a built-in high-power power supply.
- PoE power supply remains uninterrupted during a hot restart of the entire device.
- When the power supply is insufficient, the power supply port priority can be configured, and the higher the priority port, the more power it will supply to ensure important services.

Flexible and convenient management and maintenance

- It supports multiple management methods such as Console, Telnet, and SSH.
- It supports web-based management, making it simpler, more efficient, and easier for engineering and maintenance personnel to install and debug.
- Supports file upload and download management via TFTP.
- Supporting the standard SNMP protocol, and working in conjunction with Boda's "NMS" intelligent network management platform, it can realize functions such as automatic device discovery, network topology management, device configuration management, performance data statistical analysis, and fault management, simplifying network management and providing users with a brand-new user experience.

Product Specifications

Model	**S2500-48P4S-370**
Backplane	104 Gbps
Packet forwarding rate	78Mpps
MAC capacity	32K
Port Description	48 Gigabit PoE ports 4 Gigabit Optical ports
Chassis size	440*280*44
Full load power consumption	<400W
POE power	370W
Operating temperature	-10~50°C
Storage temperature	-40~75°C
Humidity	Operating humidity: 10%-90% non-condensing Storage humidity: 5%-95% non-condensing
Power supply	AC: 100V-240V50Hz±10%
Mac Exchange	Supports static configuration and dynamic learning of MAC addresses. Supports viewing and clearing MAC addresses MAC address aging time is configurable Supported MAC address learning quantity limit Supports MAC address filtering function
VLAN	Supports 4K VLAN entries Support GVRP Supports QinQ functionality Support Private VLAN Supports voice VLAN
Ring network Protection	Supports 802.1D (STP), 802.1W (RSTP), and 802.1S (MSTP) standards. Supports BPDU protection, root protection, and loop protection. Supports EAPS (Automatic Protection Protocol for Ethernet Links)

	Supports ERPS Ethernet ring network protection protocol
Multicast	Supports IGMP v1/v2/v3 Supports IGMP Snooping Supports IGMP Fast Leave Supports multicast group policies and limits on the number of multicast groups. Supports cross-VLAN replication of multicast traffic
IP Router	Supports IPv4/IPv6 dual-stack protocol Supports static routing Supports RIP and OSPF dynamic routing Supports VRRP virtual routing
IPv6	Support ICMPv6, DHCPv6, ACLv6, IPv6 Telnet Supports IPv6 neighbor discovery Support Path MTU discovery Supports MLD v1/v2 Supports MLD Snooping
DHCP	Support DHCP Server Supports DHCP Relay Support DHCP Client Supports DHCP Snooping
ACL	Supports Layer 2, Layer 3, and Layer 4 ACLs Supports IPv4 and IPv6 ACLs Supports VLAN ACLs
QoS	Supports traffic classification based on various fields in the L2/L3/L4 protocol headers. Supports CAR traffic limiting Supports 802.1P/DSCP priority remarking Supports queue scheduling modes such as SP, WRR, and SP+WRR. Supports congestion avoidance mechanisms such as Tail-Drop and WRED. Supports traffic monitoring and traffic shaping
Safety Features	Supports L2/L3/L4-based ACL flow identification and filtering security mechanisms.

	Supports protection against DDoS attacks, TCP SYN Flood attacks, and UDP Flood attacks. Supports suppression of multicast, broadcast, and unknown unicast messages. Support port isolation Supports port security and IP+MAC+port binding. Supports DHCP sooping, DHCP option 82 Supports IEEE 802.1x certification Supports Radius and BDTacacs+ certifications Supports command-line hierarchical protection
Reliability	Supports static/LACP link aggregation Supports UDLD one-way link detection Supports Ethernet OAM
Management and Maintenance	Supports Console, Telnet, and SSH 2.0. Supports Zero Touch Provisioning (ZTP) Supports browser-based web management Supports SNMP v1/v2/v3 Supports file upload and download management via TFTP. Supports RMON event history
Standards	IEEE 802.1 Working Group IEEE 802.3 Working Group IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3z Gigabit 1000BASE-SX/LX IEEE 802.3ab Gigabit 1000BASE-T IEEE 802.3x flow control and back pressure IEEE 802.3ad port trunk with LACP IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1p Class of Service IEEE 802.1Q VLAN tagging IEEE 802.1ad Q-in-Q IEEE 802.1X port authentication network control

	IEEE 802.1ab LLDP and LLDP-MED IEEE 802.3ah OAM IEEE 802.3az EEE(Energy Efficient Ethernet) RFC 768 UDP RFC 793 TFTP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP RFC 1112 IGMP v1 RFC 2236 IGMP v2 RFC 3376 IGMP v3 RFC 2710 MLD v1 RFC 2328 OSPF v2 RFC 1058 RIP v1 RFC 2453 RIP v2

Ordering Information

Product	Descriptions
S2500 series	
S2500-48P4S-370	48-port Gigabit Ethernet, 4-port Gigabit Fiber Ethernet PoE switch (1 CLI control port, 48 Gigabit PoE ports, 4 Gigabit SFP fiber ports; standard AC220V power supply, 370W PoE power, fan cooling, 1U height, standard 19-inch rack mount).

For More Information

For more information about BDCOM Switch series, please contact your local BDCOM account representative.

Shanghai Baud Data Communication Co., LTD.

No.123, Juli Road,

Pudong Zhangjiang High-Tech Park,

Shanghai 201203, China

www.bdcom.cn

Tel: +86-21-50800666