



Shanghai Baud Data
Communication Co., Ltd.

Switch Series

BDCOM S2500-48P4S-370
All-Gigabit L3-Lite PoE Switch

Overview

BDCOM S2500 Series Switches is the next-generation intelligent PoE switch designed for carrier IP MANs, government/enterprise networks, Internet cafés, and diskless/centralized-boot environments. Built on high-performance hardware and BDCOM's proprietary BDROS software platform, the S2500 series supports powerful ACLs, flexible QinQ, 1:1 and N:1 VLAN translation, Ethernet OAM, carrier-grade QoS, and 10G Ethernet ring capabilities for industrial applications, as well as Layer 3 routing protocols—enabling the series to meet the demands of diverse and complex deployment scenarios.

Features

➤ **Advanced Hardware Architecture · Industry-Leading Port Density**

- Achieves 48× GE PoE ports and 4× GE SFP ports on a 1U fixed-box switch, with hybrid power input for all deployment scenarios. Powered by a high-performance switching ASIC, meeting the needs of complex applications.

➤ **Industrial-grade Ethernet ring — zero-latency switchover, zero packet loss**

- Supports industrial-grade Ethernet ring protection with <50 ms protection switching. Field-proven by BDCOM across power utilities, rail transit, and defense sectors, achieving zero packet-loss high-reliability requirements.

➤ **Carrier-grade Ethernet switching**

- Supports carrier-grade Ethernet ring protection with <50 ms switching; also supports STP/RSTP/MSTP, dual-uplink primary/backup link protection, and LACP link aggregation—simple and efficient redundancy to meet carrier-class reliability.
- Comprehensive Ethernet OAM, enabling real-time monitoring for rapid fault detection and localization.
- Powerful ACLs supporting policy control across Layers 2–7, including matching by physical port, VLAN, MAC, IP, and protocol/port numbers, providing flexible, granular traffic governance.
- Rich Layer-2 multicast features, including IGMP Snooping, fast leave, and inter-VLAN multicast replication.

➤ **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, including per-port and per-flow rate limiting, ensuring line-rate forwarding and high-quality delivery of voice, video, and data services;
- Eight hardware priority queues per port;
- 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 BDTacacs+;
- 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.

➤ **Comprehensive PoE Power Supply Function**

- Supports 802.3AF/AT standards; built-in high-power supply.
- Ensures uninterrupted PoE power supply during hot restart of the device.
- When the power supply is insufficient, supports to configure the priority of power supply ports, with higher priority ports being supplied power first, ensuring critical business operations are maintained.

➤ **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 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	S2500-48P4S-370
Switching capacity	336Gbps/3.36Tbps
Forwarding rate	78Mpps
MAC capacity	32K
Ports	48-port Gigabit PoE 4-port Gigabit SFP
Dimensions (WxHxD)	440*208*44mm
Full-load power consumption	<400W
PoE budget	370W
Environment requirement	Operating temperature/humidity: -10°C-45°C, 10%-90% RH non-condensing Storage temperature/humidity: -40°C -75°C; 5%-95% RH non-condensing
Power supply	AC: 100V-240V, 50Hz±10%
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

	<p>QinQ</p> <p>Private VLAN</p> <p>voice vlan</p>
Ring Protection	<p>802.1D (STP), 802.1W (RSTP), 802.1S (MSTP)</p> <p>BPDU Guard, Root Guard, Loop Guard</p> <p>EAPS (Ethernet Automatic Protection Switching)</p> <p>ERPS (Ethernet Ring Protection Switching)</p>
Multicast	<p>IGMP v1/v2/v3</p> <p>IGMP Snooping</p> <p>IGMP Fast Leave</p> <p>Multicast group policies and group count limits</p> <p>MVR (Multicast VLAN Registration)</p>
IP routing	<p>ipv4/ipv6 dual stack</p> <p>Static routing</p> <p>RIP, OSPF</p> <p>VRRP</p>
IPv6	<p>ICMPv6, DHCPv6, ACLv6, IPv6 Telnet</p> <p>IPv6 Neighbor discovery</p> <p>Path MTU discovery</p> <p>MLD v1/v2</p> <p>MLD Snooping</p>
DHCP	<p>DHCP Server</p> <p>DHCP Relay</p> <p>DHCP Client</p> <p>DHCP Snooping</p>
ACL	<p>L2~4 ACL</p> <p>IPv4/v6 ACL</p> <p>VLAN ACL</p>
QoS	<p>Flow classification based on L2~4 protocols</p> <p>CAR rate limiting</p> <p>802.1P/DSCP priority re-labeling</p> <p>SP, WRR, and "SP+WRR" Queue scheduling</p> <p>Congestion avoidance mechanisms like Tail-Drop and WRED</p> <p>Flow monitoring and flow shaping</p>

Security Features	<p>L2/L3/L4 ACL-based flow identification & filtering</p> <p>Protection against DDoS, TCP SYN Flood, UDP Flood, etc.</p> <p>Suppression of multicast/broadcast/unknown unicast storms</p> <p>Port isolation</p> <p>Port security, IP+MAC+Port binding</p> <p>DHCP Snooping, DHCP Option 82</p> <p>IEEE 802.1X authentication</p> <p>RADIUS and BDTACACS+ authentication</p> <p>CLI privilege levels (command-line hierarchical protection)</p>
Reliability	<p>Link aggregation (Static / LACP)</p> <p>UDLD (Unidirectional Link Detection)</p> <p>Ethernet OAM</p>
Management & Maintenance	<p>Console, Telnet, SSH 2.0</p> <p>ZTP (Zero Touch Provisioning)</p> <p>Web-based management (HTTP/HTTPS)</p> <p>SNMP v1/v2c/v3</p> <p>TFTP file upload/download</p> <p>RMON events and history</p>

Order Information

Item	Description
S2500-48P4S-370	48-port Gigabit PoE + 4-port Gigabit SFP L3-lite PoE Switch (standard AC 220V power supply; 370W PoE budget, fan cooling, 1U, 19-inch rack-mounted installation)

For More Information

For more information about [BDCOM S2500 Series](#), please contact your local BDCOM account representative.

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