



Shanghai Baud Data
Communication Co., Ltd.

S2928-P Switch

BDCOM S2928-P
10G Ethernet PoE/PoE+ Switch

BDCOM S2900 10G Ethernet PoE/PoE+ Switch

Product Overview

BDCOM S2928-P is a new-generation smart switch developed for enterprise networks. Based on the new high-performance hardware and the BDROS platform, S2928-P supports ACL, selective QinQ, 1:1 and N:1 VLAN switching, Ethernet OAM, carrier-level QoS, industry-level 10G Ethernet ring, etc.



Product Characteristics

Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

- The S2928-P supports industrial Ethernet ring network protection protocol. The protection switching time is less than 50ms. The solution has been applied in power industry, rail transportation industry and military projects for decades. It can achieve zero packet loss.

Carrier-class Ethernet Switches

- The S2928-P supports carrier Ethernet ring network protection protocol. The protection switching time is less than 50ms. It also supports simple and effective redundancy protection mechanism such as STP/RSTP/MSTP protocol and dual uplink standby link protection and LACP link aggregation. These functions meet the requirement of carrier grade high reliability.
- The solution has perfect Ethernet OAM, which can real time monitor the network operating state and rapidly detect and locate the malfunction.
- The solution supports strong ACL function. The solution supports L2~L7 data access and control based on the physical port, VLAN IDs, source MAC/IP addresses and protocol port, which provides flexible ways of policy control.
- The S2928-P supports ISSU (In-Service Software Upgrade), guaranteeing the user data non-stop forwarding when the system is upgrading.
- The S2928-P supports various L2 multicast function, including IGMP-Snooping, user fast-leave mechanism and cross VLAN multicast replication function.

Carrier QoS Policies

- The S2928-P supports complex traffic classification based on VLAN, source MAC/IP addresses, destination MAC/IP addresses, IP protocols, or priorities. It also supports priority remark. These functions provide an effective way for users to optimize their businesses.
- The S2928-P provides flexible bandwidth control policies and support a port base or flow-based Committed Access Rate (CAR) and guarantees Layer 3 line-speed forwarding.
- Every port supports 8 priority queues.
- The S2928-P also supports multiple queue grooming algorithms such as SP, WRR or SP+WRR.

Comprehensive IPv6 Solutions

- The S2928-P comprehensively supports IPv6 Neighbor Discovery, ICMPv6、 Path MTU Discovery.
- The S2928-P supports IPv6 based Ping, Traceroute, Telnet, SSH, ACL, meeting the need of IPv6 network equipment management and service control.

Comprehensive Security Mechanisms

- The S2928-P adopts advanced hardware architecture design, realizing the hierarchical scheduling and protection of the packet. It provides multiple security measures to defend against DOS or TCP attacks; and supports command line authority control based on user levels.
- Comprehensive Security Certification: The S2928-P complies with IEEE 802.1x, Radius, BDTacacs+.
- The S2928-P supports the suppression of broadcast, multicast and unknown unicast packet, ensuring the equipment can operate normally in harsh network conditions.
- The S2928-P has the perfect loop detection mechanism.
- The S2928-P supports the port isolation in a same VLAN and DHCP-Snooping、 IP+MAC+ port binding.

Convenient Management and Maintenance

- The S2928-P supports multiple management styles such as Console, Telnet, SSH.
- The S2928-P supports WEB based management. The management is simpler and more effective.
- The S2928-P supports upload and download of TFTP files.
- The S2928-P supports ISSU (In-Service Software Upgrade).
- The S2928-P supports SNMP. By cooperating with Baud's smart "NMS", functions including the equipment auto-discovery, the topology management, the equipment configuration management, the performance data analysis, and the fault management can be realized. In this way, the network management is simplified and the user gets a new product experience.

Intelligent PoE+

- S2928-P supports IEEE 802.3af/at PoE standard, and supports 370W PoE power budget.
- S2928-P supports PoE non-stop power supply. The PoE+ power is maintained during a switch reload.
- S2928-P supports manual and dynamic PoE power allocation;
- S2928-P supports up to 4KV thunder-proof of the PoE port and power supply.

Product Specifications

Item	S2928-P	
Switching capacity	128 Gbps	
Forwarding rate	96 Mpps	
Port	24-Port 10/100/100M PoE/PoE+, 4-Port 10GE/GE SFP+	
Dimension mm (W×D×H)	440×300×44	
Power consumption	No-load	25W
	Full-load	<410W
PoE power budget	370W AC, each port maximum 30W	
Cooling	2 Fans	
MTBF (H)	>200,000	
Indicator	Power, system, link/active, PoE	
Buffer size (MB)	1.5	
Power supply	AC: 100V-240V, 50/60Hz, DC: 36-72V	
Environment	Operating temperature/humidity: 0° C-50°C, 10%-90% non-condensing Storage temperature/humidity: -40° C-70°C, 5%-95% non-condensing 5%-95% (RH)	
Lightning protection	±6KV	
Communication 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 802.3ae 10Gb/s Ethernet 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 802.3af PoE	

	<p>IEEE 802.3at PoE+</p> <p>IEEE 802.3az EEE (Energy Efficient Ethernet)</p> <p>RFC 768 UDP</p> <p>RFC 793 TFTP</p> <p>RFC 791 IP</p> <p>RFC 792 ICMP</p> <p>RFC 2068 HTTP</p> <p>RFC 1112 IGMP v1</p> <p>RFC 2236 IGMP v2</p> <p>RFC 3376 IGMP v3</p> <p>RFC 2710 MLD v1</p> <p>RFC 2328 OSPF v2</p> <p>RFC 1058 RIP v1</p> <p>RFC 2453 RIP v2</p>
Certification	CE, FCC
MAC switching	<p>Static configuration and dynamic MAC learning (16K)</p> <p>MAC browsing and removal</p> <p>Configurable aging time of the MAC address</p> <p>Limited number of learnable MAC addresses</p> <p>MAC filtration</p> <p>Black-hole MAC list</p>
Jumbo Frame	9K
MAC	16K
VLAN	<p>4K VLAN IDs, 4094 active VLAN, 64 SVI</p> <p>GVRP</p> <p>1:1 and N:1 VLAN Mapping</p> <p>QinQ and selective QinQ, flexible QinQ</p> <p>Private VLAN</p> <p>Port-based VLAN</p> <p>MAC-based VLAN</p> <p>Protocol-based VLAN</p> <p>Subnet-based VLAN</p> <p>Voice-VLAN</p>
VLAN Interface	64
IPv4 Routes	512
Dynamic ARP	512
STP	<p>802.1d STP, 802.1w RSTP, 802.1s MSTP, MSTP</p> <p>BPDU protection, root protection and ring protection</p> <p>L2PT for BPDU</p>
ARP	<p>ARP source suppression, Dynamic ARP source detection, ARP anti-attack, ARP detection, ARP rate limit</p>
Multicast	<p>IGMP v1/v2/v3 (1024 groups)</p> <p>IGMP Snooping v1/v2/v3</p>

	<p>PIM Snooping</p> <p>IGMP Fast Leave</p> <p>Multicast group policy and multicast number limit</p> <p>Multicast filtering</p> <p>MVR</p> <p>Support for transparent passing of multicast traffic without IGMP snooping in certain port and VLAN</p>
IPv4 Routing	Static routing, RIP (v1/v2, OSPF (v1/v2), VRRP, PBR
IPv6	ICMPv6, Traceroute v6, Telnet v6, SSH2 v6, IPv6 Portal, DNS Client for IPv6, SNMP for IPv6, RIPNG and OSPFv3, IPv6 policy routing, MLD Snooping v1/v2, VRRP V3, DHCPv6, IPv6 port binding etc.
DHCP	DHCP server, client, relay, snooping
QoS	<p>802.1p/DSCP priority tag</p> <p>Packet filtering</p> <p>Port-based rate limit</p> <p>Traffic-based redirection</p> <p>Time range</p>
Security	<p>L2~L4 ingress/egress ACL (2174 IPv4 FP, 1024 IPv6 FP)</p> <p>Anti-DOS/IP spoofing/TCP/ping/SYN/ICMP flood attacks</p> <p>Broadcast/multicast/unknown-unicast storm-control</p> <p>Port isolation</p> <p>Port Security, MAC address limitation, IP+MAC+port binding</p> <p>DHCP Snooping, DHCP Option 82</p> <p>DAI (Dynamic ARP Inspection)</p> <p>IPSG (IP Source Guard)</p> <p>IEEE 802.1X certification</p> <p>MAC-based authentication</p> <p>AAA, Radius, TACACS+</p> <p>Multiple user privileges, multi-level user management and password protection</p> <p>IP Source Guard</p>
Reliability	<p>Static and LACP link aggregation, 64 groups, up to 8 ports in one group</p> <p>EAPS, ERPS</p> <p>ISSU</p> <p>IRF; VRRP; DLDP; LLDP; VCT</p>
Management	<p>Configure through CLI: Console, Telnet, SSHv1/2</p> <p>Web-GUI: HTTP, HTTPS/SSL</p> <p>SNMP v1/v2c/v3, RMON, SNMP alarm/inform/traps</p> <p>Upload and download of FTP/TFTP files</p> <p>Debugging</p> <p>Syslog for alarm/notification/command/debug</p>

	NTP SPAN, RSPAN (1:1 and N:1 mirror) LLDP, LLDP-MED HGMPv2 ZTP (Zero Touch Provisioning) Optical DDM Ethernet cable diagnosis
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Ordering Information

Item	Description
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Switch

S2928-P	24-Port Gigabit PoE+ 6-Port 10G SFP+ L3-lite Stackable Managed Switch (AC-220V and DC-72V power supply, 370W@AC PoE budget, with cooling fan; 1U; standard 19-inch rack-mounted installation)
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Optical module

GE optical module

GSFP-TX-B	GE SFP-to-RJ45 module
GSFP-SX-D	Gigabit SFP multi-mode (500m, 850nm, LC, DDM)
GSFP-LX-10-D	Gigabit SFP multi-mode (10Km, 1310nm, LC, DDM)
GSFP-LX-20-D	Gigabit SFP multi-mode (20Km, 1310nm, LC, DDM)
GSFP-LX-40-D	Gigabit SFP multi-mode (40Km, 1310nm, LC, DDM)
GSFP-ZX-80-D	Gigabit SFP multi-mode (80Km, 1550nm, LC, DDM)
GSFP-ZX-120-D	Gigabit SFP multi-mode (120Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI	Gigabit SFP multi-mode, single-core, bidirectional (10Km TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	Gigabit SFP multi-mode, single-core, bidirectional (10Km TX1510/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	Gigabit SFP multi-mode, single-core, bidirectional (20Km TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	Gigabit SFP multi-mode, single-core, bidirectional (20Km TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-40-BIDI	Gigabit SFP multi-mode, single-core, bidirectional (40Km TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-40-BIDI	Gigabit SFP multi-mode, single-core, bidirectional (40Km TX1550/RX1310, LC, DDM)
GSFP-LX-SM1490-80-BIDI	Gigabit SFP multi-mode, single-core, bidirectional (80Km TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-80-BIDI	Gigabit SFP multi-mode, single-core, bidirectional

	(80Km TX1550/RX1490, LC, DDM)
GSFP-LX-SM1490-120	Gigabit SFP multi-mode, single-core, bidirectional (120Km TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-120	Gigabit SFP multi-mode, single-core, bidirectional (120Km TX1550/RX1490, LC, DDM)

10GE optical module

SFP+ SX	10GE SFP+ multi-mode (300m, 850nm, LC)
SFP+ LX-10	10GE SFP+ single mode (10Km, 1310nm, LC, DDM)
SFP+ LX-20	10GE SFP+ single mode (20Km, 1310nm, LC, DDM)
SFP+ LX-40-1310	10GE SFP+ single mode (40Km, 1310nm, LC, DDM)
SFP+ LX-80	10GE SFP+ single mode (80Km, 1550nm, LC, DDM)
SFP+ LX-SM-1270-10	10GE SFP+ single mode, single-core, bidirectional (10Km, TX1270/RX1330, LC, DDM)
SFP+ LX-SM-1330-10	10GE SFP+ single mode, single-core, bidirectional (10Km, TX1330/RX1270, LC, DDM)
SFP+ LX-SM-1270-20	10GE SFP+ single mode, single-core, bidirectional (20Km, TX1270/RX1330, LC, DDM)
SFP+ LX-SM-1330-20	10GE SFP+ single mode, single-core, bidirectional (20Km, TX1330/RX1270, LC, DDM)
SFP+ LX-SM-1270-40	10GE SFP+ single mode, single-core, bidirectional (40Km, TX1270/RX1330, LC, DDM)
SFP+ LX-SM-1330-40	10GE SFP+ single mode, single-core, bidirectional (40Km, TX1330/RX1270, LC, DDM)

For More Information

For more information about [BDCOM S2928-P](#), please contact your local BDCOM account representative.

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