S2900 L3-lite Series



Supports Maximum 48 GE TX Ports and 4 10GE SFP+ Uplink Ports

Advanced Hardware Architecture and Industry-leading Port Density

Carrier-Level High Reliability
Layer-3 Routing Functions

Varied Service Characteristics Versatile
IPv6 Solution Complete
Security Mechanism

Product Overview

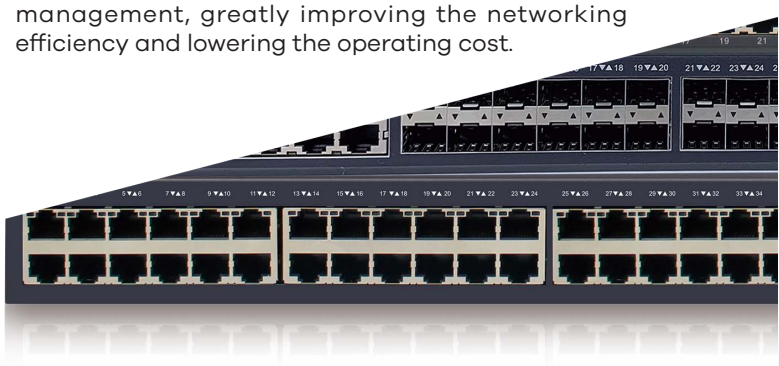
S2900 L3-lite Series is a next-generation aggregation 10GE switch introduced by BDCOM. It is targeted at the IP MAN (metropolitan area network), government and enterprise networks, Internet café and disk-less working environment. It is developed on the basis of high performance hardware and BDROS - a software platform with BDCOM own independent intellectual property rights. It supports functions such as powerful ACL, flexible QinQ, 1:1 or N:1 VLAN switching, Ethernet OAM, carrier-level QoS and industry-level 10GE Ether-ring, ensuring this switch series meets application requirements in all kinds of complicated sites. It also supports layer-3 routing protocol.

BDCOM S2900 L3-lite Series has 3 models: S2928E, S2928EF and S2954.

Product Characteristics

Innovative Virtual Cluster Switching Technique

Innovative BVSS (BDCOM Virtual Switch System): S2900 L3-lite Series virtualizes multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical ones.
Improved Performance: BVSS makes full use of each link in the physical devices, which avoids STP blocking the link and protects the original link to the maximum extent.
High Reliability: Based on the advanced distribution mechanism and efficient cross-physical link aggregation link function, the logic control plane, service control plane and service data plane are separated. Thus, S2900 L3-lite Series can support continuous layer-3 routing forwarding, avoiding service interruption as a result of a single point of failure.
Easy Management: BVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.



Product Characteristics

Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

Supports industry-level EAPS and their protection shift time is less than 50ms. Their high reliability is represented by the null packet loss, which has been proved by many years of application in the Grid, rail transportation and defense systems.

Telecom-Level Ethernet Switch

Supports the telecom-level Ethernet-ring protection protocol with a protection shift time of less than 50ms, STP/RSTP/MSTP, backup of active and standby uplinks and LACP link aggregation to cater to the requirements of high reliability of carriers.

Provides the perfect Ethernet OAM mechanism to monitor the network running status in real time for rapid trouble locating and detection.

Supports powerful ACL functions to access and control L2-L7 data based on physical port, VLAN, MAC, IP and protocol port ID, and providing 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 trans-vlan multicast copy.

Flexible and Convenient Management and Maintenance

Supports management modes such as the console port, Telnet, SSH, etc.

Supports the WEB management mode, which is easy and efficient so that it makes installation and debugging convenient.

Supports TFTP-patterned file 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

Carrier-Level QoS Policies

Supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority to better streamline carrier's services.

Supports provides flexible bandwidth control policies and supports port-/flow-based flow limit, and ensuring the line speed forwarding of each port to make sure the high quality of video, audio and data services.

Supports 8 priority queues by each port.

Supports multiple queue schedule algorithms such as SP, WRR, or "P plus WRR"

Versatile IPv6 Solutions

Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, etc.

Supports Ping, Traceroute, Telnet, SSH, ACL and so like on the basis of IPv6, meeting IPv6 networks' equipment management requirements 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.

Supports perfect security authentication mechanisms: IEEE 802.1x, Radius and BDTacacs+.

Supports storm/multicast/unicast limit to ensure the normal running of equipment in harsh network conditions.

Supports a perfect ring detection mechanism to ensure the long-term stable running of network.

Supports port isolation within the same VLAN, DHCP-Snooping, and IP plus MAC plus Port binding for ensuring user data security;

Model lists

S2928E



- 24 GE TX ports
- 4 10GE/GE SFP+ ports

S2928EF



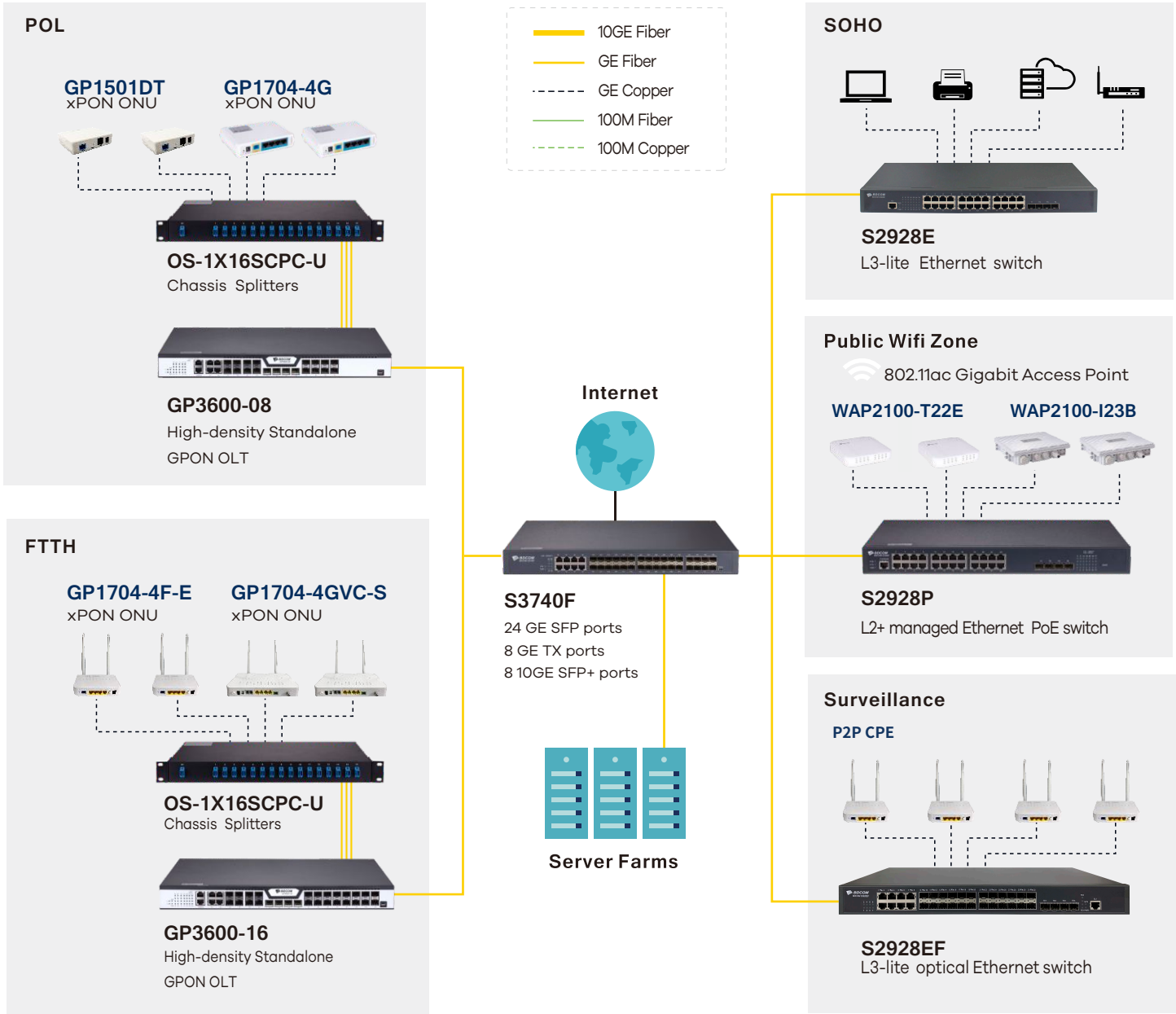
- 16 GE SFP ports,
- 8 GE SFP/TX combo ports
- 4 10GE/GE SFP+ ports

S2954



- 48 GE TX ports
- 6 10GE/GE SFP+ ports

Application Diagram



Product Specifications

Item		S2928E	S2928EF	S2954
Interface		24 GE TX 4 10GE/GE SFP+	16 100/1000M SFP 8 GE SFP/TX combo 4 10GE/GE SFP+	48 GE TX 6 10GE/GE SFP+
Console(RJ45)		1	1	1
Backplane(Gbps)		128	128	216
Forwarding rate(Mpps)		96	96	162
Chassis	Dimensions (WxDxH)(mm)	440x180x44	440x280x44	440x280x44
	Weight(KG)(empty)	2.6	4	4.3
Package	Dimensions (WxDxH)(mm)	500x320x80	576x448x94	576x448x94
	Weight(KG)	3.9	5.2	5.5
Power consumption	no-load	< 22W	< 18W	< 25W
	full-load	35W	< 38W	<40W
Power supply	AC: 100V-240V, 50Hz±10%	45W	45W	45W
Total output BTU (1000BTU/H=293W)		153.58	153.58	153.58
Fan number		/	2	2
Noise@25°C(dBA)		0	45	45
MTBF(H)		> 50,000	> 50,000	> 50,000
Forwarding mode		Store-forward	Store-forward	Store-forward
Flash (MB)		32	32	32
DRAM (MB)		256	256	256
MAC		16K	16K	16K
Buffer size(MB)		1.5	1.5	1.5
Jumbo frame		9K	9K	9K

Features

VLAN
- 4K Active VLAN, QinQ & Selective QinQ, GVRP, Private VLAN, Voice-VLAN

Spanning Tree
- 802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP)
- BPDU guard, root guard and loopback guard

Multicast
- IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter

IP
- Static route, RIP, OSPF
- IPv4/v6 dual stack

IPv6
- ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
- IPv6 neighbor discovery, Path MTU discovery
- MLD v1/2, MLD snooping

Certification
- CE, FCC, ROHS

QoS
- CAR, HQoS, MAC/IP/TCP/UDP/ VLAN/ COS/ DSCP/ TOS based QoS, 802.1P/ DSCP priority re-labeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring and traffic shaping

Security
- Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky DAI & IP source guard, PPPoE+,
- IEEE 802.1x, Radius and BDTacacs+
- L2/L3/L4 ACL flow identification and filtrationAnti-attack from DDoS, TCP's SYN Flood, UDP Flood, etc. Broadcast/multicast/unknown unicast storm-control
- MD5, SHA-256, RSA-1024, AES256, etc.

DHCP
- DHCP server/relay/client
- DHCP snooping/option82

Reliability
- Static/LACP link aggregation, Interface backup
- EAPS and ERPS
- ISSU uninterrupted system upgrade
- BVSS, ups to 16-units per stack
- VRRP
- UDLD

Management
- Console, Telnet, SSH v1/2, HTTP, HTTPS, SNMP v1/v2/v3, RMON
- TFTP, FTP, SFTP
- NTP
- ZTP
- SPAN, RSPAN
- Dying gasp*

Environment
- Operating temperature/humidity: 0°C -50°C ,10%-90% non-condensing
- Storage temperature/humidity: -20°C -70°C , 5%-95% non-condensing

Accessories
- Power cord, rackmount kits, console cable

Ordering Information

Item	Description
S2900 L3-lite series switch	
S2928E	Ethernet Layer-3 lite switch with 24 GE and 4 10GE ports (1 Console port, 24 GE TX ports, 4 10GE/GE SFP+ ports; AC 220V power supply, fanless, 1U, standard 19-inch rack-mounted installation)
S2928EF	Ethernet Layer-3 lite switch with 24 GE and 4 10GE ports (1 Console port, 16 100M/1000M SFP ports, 8 GE SFP/TX combo ports, 4 10GE/GE SFP+ ports; AC 220V power supply, the cooling fan, 1U, standard 19 inch rack-mounted installation)
S2954	Ethernet Layer-3 lite switch with 48 GE and 6 10GE/GE SFP+ ports (1 Console port, 48 GE TX ports, 6 10GE/GE SFP+ ports; AC 220V power supply, the cooling fan, 1U, standard 19 inch rack-mounted installation)
Optical modules	
10GE optical modules	
SFP+TX	10GE SFP+-to-RJ45 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	10GE SFP+ single-mode (40Km, 1310nm, LC, DDM)
SFP+LX-80	10GE SFP+ single-mode (80Km, 1550nm, LC, DDM)
SFP+LX-SM-1270-10 **SFP+LX-SM-1330-10**	10GE SFP+ single-mode, single-fiber (10Km, TX1270/RX1330, LC, DDM) 10GE SFP+ single-mode, single-fiber (10Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-20 **SFP+LX-SM-1330-20**	10GE SFP+ single-mode, single-fiber (20Km, TX1270/RX1330, LC, DDM) 10GE SFP+ single-mode, single-fiber (20Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-40 **SFP+LX-SM-1330-40**	10GE SFP+ single-mode, single-fiber (40Km, TX1270/RX1330, LC, DDM) 10GE SFP+ single-mode, single-fiber (40Km,TX1330/RX1270, LC, DDM)
GE Optical Modules	
GSFP-TX-B	GE SFP-to-RJ45 module
GSFP-SX-D	GE SFP multi-mode (500m, 850nm, LC, DDM)
GSFP-LX-10-D	GE SFP single-mode (10Km, 1310nm, LC, DDM)
GSFP-LX-20-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-LX-40-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-ZX-80-D	GE SFP single-mode (80Km, 1550nm, LC, DDM)
GSFP-ZX-120-D	GE SFP single-mode (120Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI **GSFP-LX-SM1550-10-BIDI**	GE SFP single-mode, single fiber (10Km, TX1310/RX1550, LC, DDM) GE SFP single-mode, single fiber (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI **GSFP-LX-SM1550-20-BIDI**	GE SFP single-mode, single fiber (20Km, TX1310/RX1550, LC, DDM) GE SFP single-mode, single fiber (20Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-40-BIDI **GSFP-LX-SM1550-40-BIDI**	GE SFP single-mode, single fiber (40Km, TX1310/RX1550, LC, DDM) GE SFP single-mode, single fiber (40Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1490-80-BIDI **GSFP-LX-SM1550-80-BIDI**	GE SFP single-mode, single fiber (80Km, TX1490/RX1550, LC, DDM) GE SFP single-mode, single fiber (80Km, TX1550/RX1490, LC, DDM)
GSFP-LX-SM1490-120 **GSFP-LX-SM1550-120**	GE SFP single-mode, single fiber (120Km, TX1490/RX1550, LC, DDM) GE SFP single-mode, single fiber (120Km, TX1550/RX1490, LC, DDM)

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