

# S2900 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

BDCOM S2900 Series is a new-generation intelligent 10GE aggregation level switch designed for carrier's IP MAN and enterprise networks. Based on the new-generation high-performance hardware and BDROS platform, it supports functions such as ACL, QinQ and QoS. Its simple management mode and flexible installation can meet the requirement of any complicated scenarios.

BDCOM S2900 Series has 4 models: S2928, S2928P, S2936F and S2952C.

## Product Characteristics

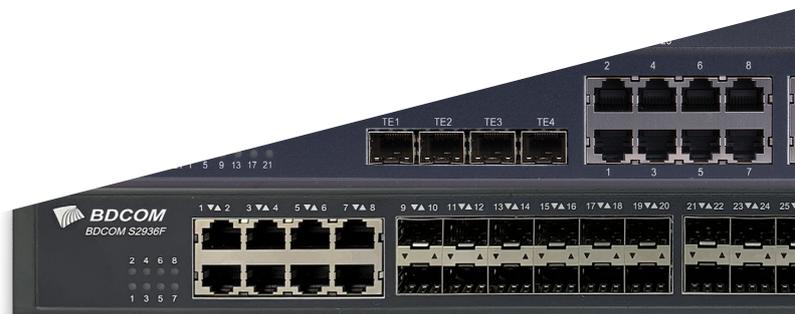
### Carrier-Level Ethernet Access Switch

S2900 Series supports the carrier-level Ethernet protection protocol with less than 50ms recovery time, STP/RSTP/MSTP, backup uplink ports, and LACP link aggregation to cater to the requirements of high reliability of carriers;

S2900 Series has powerful ACL functions to access and control L2-L7 data based on physical port, providing carriers flexible and various policy control methods;

S2900 Series supports In-Service Software Upgrade (ISSU) to ensure the unremitting data forwarding during system upgrade;

S2900 Series supports various L2 multicast functions such as IGMP-snooping, fast-leave and MVR to fully meet the operation requirements of carrier's IPTV.



# Product Characteristics

## Comprehensive IPv6 Solutions

S2900 Series supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6 and Path MTU discovery.

S2900 Series supports Ping, Traceroute, Telnet, SSH and ACL on the basis of IPv6, meeting IPv6 networks' equipment management requirements and service control requirements;

## Enhanced QoS

S2900 series supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority, better streamlining carrier's services.

S2900 series provides flexible bandwidth control policies, supporting port-/flow-based flow limit, ensuring the line speed forwarding of each port.

S2900 series supports multiple queue schedule algorithms such as SP, WRR and "SP + WRR".

## Security+

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+.

S2900 Series supports storm/multicast/unicast limit, ensuring the normal running of equipment in harsh network conditions.

S2900 Series supports perfect ring detection mechanism, ensuring the long-term stable running of network.

S2900 Series supports port isolation within the same VLAN, DHCP-Snooping, and IP + MAC + Port binding.

## Easy Management and Maintenance

S2900 Series supports many management modes such as the CLI, Telnet, SSH, SSL and SNMP.

S2900 Series supports the WEB management mode, which is easy and efficient for installing and debugging the device.

S2900 Series supports FTP,TFTP and SFTP.

S2900 Series supports ISSU (In-Service Software Upgrade).

S2900 series supports SNMP and BDCOM NMS smart network management platform. The combination realizes automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management.

S2936F supports Zero Touch Provisioning(ZTP) function to minimize manual operator intervention and helps reduce customers' initial deployment costs.

# Model Lists

## S2928



- 20 GE TX ports
- 4 GE TX/SFP combo ports
- 4 10GE SFP+ ports

## S2928P



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

## S2936F



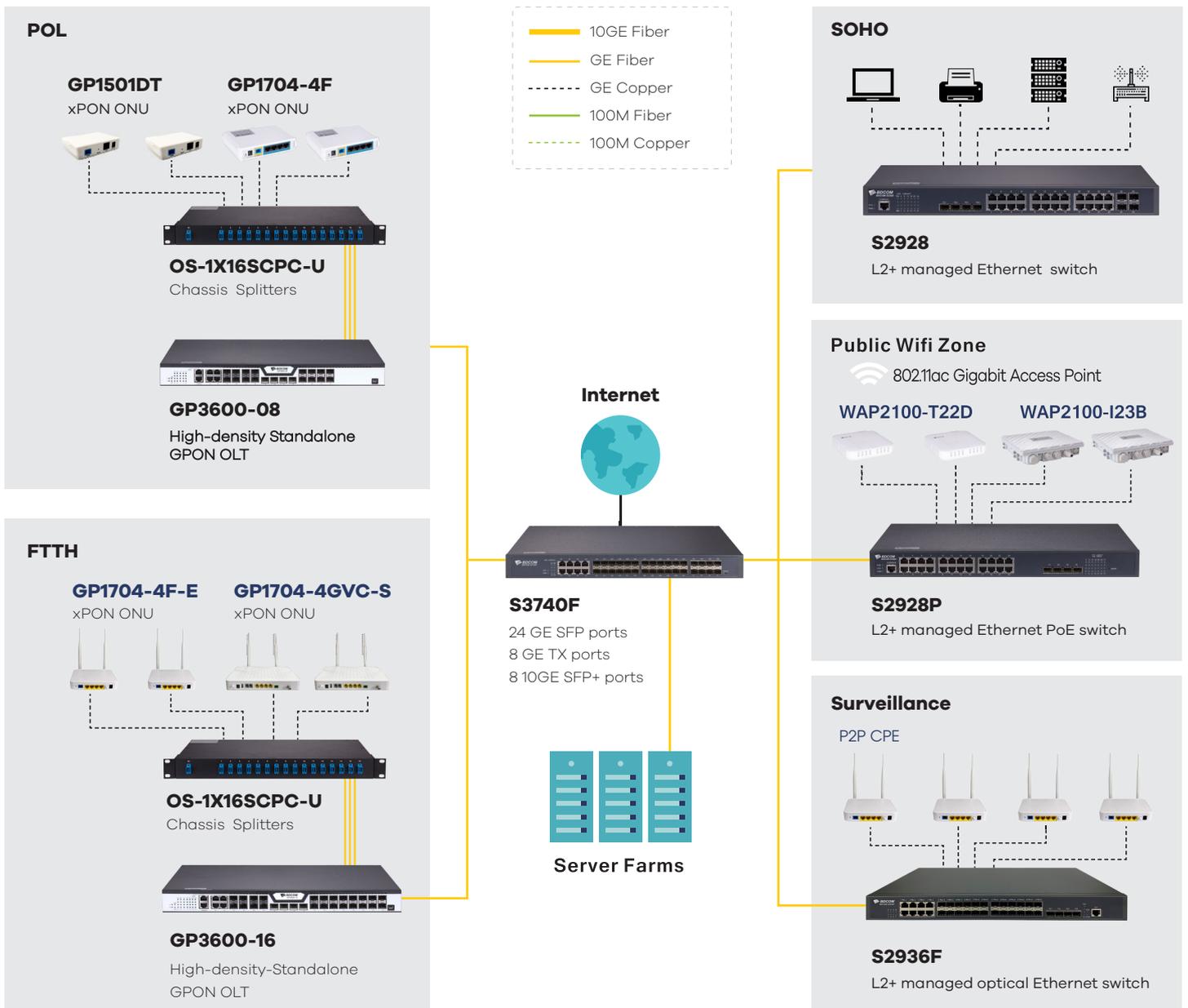
- 8 GE TX ports
- 24 100/1000M SFP ports
- 4 10GE/GE SFP+ ports

## S2952C



- 48 GE TX ports,
- 4 10GE/GE SFP+ ports

# Application Diagram



# Product Specifications

Item		S2928	S2928P	S2936F	S2952C
Interface		20 GE TX ports, 4 GE TX/SFP combo ports, 4 10GE SFP+ ports	24 GE POE ports, 4 10GE/GE SFP+ ports	8 GE TX ports, 24 100/1000M SFP ports, 4 10GE/GE SFP+ ports	48 GE TX ports, 4 10GE/GE SFP+ ports
Console		1 RJ45 port	1 RJ45 port	1 RJ45 port	1 RJ45 port
Backplane		128 Gbps	128 Gbps	144 Gbps	176Gbps
Forwarding rate		96 Mpps	96 Mpps	108 Mpps	132Mpps
Chassis	Dimensions (WxDxH)(mm)	440x180x44	440x280x44	440x280x44	440x280x44
	Weight (KG)(empty)	2.6	5	4	3.8
Package	Dimensions (WxDxH)(mm)	500x320x80	576x448x94	576x448x94	576x448x94
	Weight(KG)	3.9	6.2	5.2	5
Power consumption	no-load	< 22W	< 30W	< 20W	< 22W
	full-load	35W	391.7W	< 38W	< 40W
Power supply	AC: 100V-240V, 50Hz±10%	45W	400W	48W	48W
POE power budget		N/A	370 W	N/A	N/A
Total output BTU (1000BTU/H=293W)		153.58	1365.19	255.97	255.97
Fan number		2	2	2	2
Noise@25°C (dBA)		45	45	45	45
MTBF(H)		>50,000	>50,000	>50,000	>50,000
Forwarding mode		Store-forward	Store-forward	Store-forward	Store-forward
Flash (MB)		16	32	16	16
DRAM (MB)		128	128	256	256
MAC		16K	16K	32K	32K
Buffer size(MB)		1.5	1.5	4	4
Jumbo frame		9K	9K	9K	9K
Total SVI		128	128	10	10

## 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, IPv4/v6 dual stack

### Accessories

- Power cord, rackmount kits, console cable

### 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
- DHCP Snooping and option 82, 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.

### Reliability

- Static/LACP link aggregation, Interface backup
- EAPS and ERPS
- ISSU uninterrupted system upgrade

### Management

- Console, Telnet, SSH v1/2, HTTP, HTTPS
- SNMP v1/v2/v3, RMON
- TFTP, FTP, SFTP
- NTP
- ZTP(Zero Touch Provisioning) (S2936F)
- SPAN, RSPAN

### Environment

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

# Ordering Information

Item	Description
<b>S2900 Series switch</b>	
S2928	Ethernet switch with 24 GE ports and 4 10GE ports(1 console port, 20 GE TX ports, 4 GE TX/SFP combo ports, 4 10GE/GE SFP+ ports; 1 standard AC220V power supply, the cooling fan, 1U, standard 19-inch rack-mounted installation)
S2928P	Ethernet switch with 24 GE POE ports and 4 10GE ports (1 console port, 24 GE POE ports, 4 10GE/GE SFP+ ports; 1 standard AC220V power supply, 400W power, the cooling fan, 1U, standard 19-inch rack-mounted installation)
S2928P-800	Ethernet switch with 24 GE ports and 4 10GE ports (1 console port, 24 GE POE ports, 4 10GE/GE SFP+ ports; 1 standard AC220V power supply, 800W power, the cooling fan, 1U, standard 19-inch rack-mounted installation)
S2936F	Ethernet switch with 32 GE ports and 4 10GE ports(1 console port, 24 100/1000M SFP ports, 8 GE TX ports, 4 10GE/GE SFP+ ports,1 standard AC220V power supply, the cooling fan, 1U, standard 19-inch rack-mounted installation)
S2952C	Ethernet switch with 48 GE ports and 4 10GE ports(1 console port, 48 GE TX ports, 4 10GE/GE SFP+ ports; 1 standard AC220V power supply, the cooling fan, 1U, standard 19-inch rack-mounted installation)
<b>Optical modules</b>	
<b>10GE optical modules</b>	
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, 1550nm, LC, DDM)
SFP+LX-80	10GE SFP+ single-mode (80Km, 1550nm, LC, DDM)
SFP+LX-SM-1270-10	10GE SFP+ single-mode, single-fiber (10Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-10	10GE SFP+ single-mode, single-fiber (10Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-20	10GE SFP+ single-mode, single-fiber (20Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-20	10GE SFP+ single-mode, single-fiber (20Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-40	10GE SFP+ single-mode, single-fiber (40Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-40	10GE SFP+ single-mode, single-fiber (40Km,TX1330/RX1270, LC, DDM)
<b>GE Optical Modules</b>	
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	GE SFP single-mode, single fiber (10Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	GE SFP single-mode, single fiber (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	GE SFP single-mode, single fiber (20Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	GE SFP single-mode, single fiber (20Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-40-BIDI	GE SFP single-mode, single fiber (40Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-40-BIDI	GE SFP single-mode, single fiber (40Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1490-80-BIDI	GE SFP single-mode, single fiber (80Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-80-BIDI	GE SFP single-mode, single fiber (80Km, TX1550/RX1490, LC, DDM)
GSFP-LX-SM1490-120	GE SFP single-mode, single fiber (120Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-120	GE SFP single-mode, single fiber (120Km, TX1550/RX1490, LC, DDM)

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