BDCOM

S3700 SERIES

Supports Maximum 48 GE Ports and 8 10GE SFP+ Uplink Ports

Advanced Hardware Architecture and Industry-leading Port Density

Carrier-Level High Reliability Full Layer-3 Functions

Varied Service Characteristics Versatile IPv6 Solution Complete Security Mechanism

Product Overview

BDCOM S3700 Series is a new generation of aggregation 10GE switches introduced by Shanghai Baud Data Communication Co., LTD. It is targeted at the IP MAN (metropolitan area network), campus networks and enterprise networks. It is developed on the basis of high performance hardware and BDROS - a software platform with BDCOM own independent intellectual property rights. It supports multiple services like IPv6, MPLS, VPN and network security based on L2/L3/L4 wire-speed switching service. It also supports nonstop upgrade, continuous forwarding, graceful restarting and redundancy protection.

BDCOM S3700 Series has 6 models: S3740, S3740F, S3756, S3756F, S3756P and S3756M.

It supports maximum 48 gigabit ports and 8 10GE ports.

Carrier-Level Aggregation Layer-3 Ethernet Switch Innovative BVSS (BDCOM Virtual Switch System):

S3700 Series virtualize multiple physical devices into one. The performance, reliability and management capabilities of the virtual system combine to outperform that of individual physical devices;

Improved Performance:

BVSS makes full use of each link in the physical device cluster, which avoids STP blocking on links and protects the original link to the maximum;

High Reliability:

Based on the advanced distribution mechanism and efficient cross-physical link aggregation function, the logic control plane, service control plane and service data plane are separated. Thus, S3700 Series supports continuous layer3 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 costs.
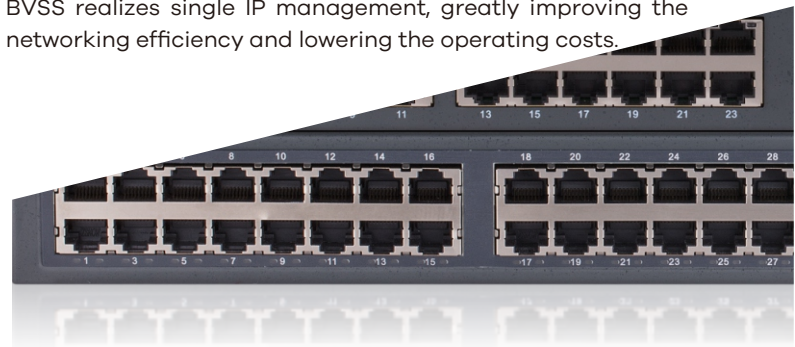
Product Characteristics

Carrier-level High Reliability

Based on HPS (Hitless Protection System), the key components of S3700 Series, such as the power module, support dual back-up, hot-swap, seamless switching in the downtime without manual intervention;

S3700 Series supports STP/RSTP/MSTP, VRRP protocol, Ethernet ring protection, dual master-slave uplink protection and LACP link aggregation;

S3700 Series supports ISSU (In-Service Software Upgrade);

S3700 Series supports BFD mechanism;

S3700 Series supports Ethernet OAM mechanism, 802.3ah, 802.1ag and ITU-Y.1731;

High reliability (99.999%): The MTTR of the S3700 Series is 50ms, satisfying the requirement for reliable delivery of carrier-level service.

Varied Service Features

S3700 Series supports layer2 and layer3 multicast routing protocol, which enable the device can access to IPTV, HD video surveillance and HD video conference;

S3700 Series supports layer3 routing protocol and super-large routing table capacity, which enables the device is available in large campus networks, enterprise networks and industry networks;

S3700 Series supports layer2 and layer3 MPLS VPN.

Innovative Energy-saving Design

Intelligent power management: The power system of S3700 Series supports real-time monitoring the device and the slow-start. It is also power-saving;

Intelligent fan management system: The fan system of S3700 Series supports automatic speed regulation, which efficiently slow the fan speed and mitigate the noise;

Comply with the international standard IEEE 802.3az.

Versatile IPv6 Solution

S3700 Series supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc;

S3700 Series supports Ping, Traceroute, Telnet, SSH, ACL based on Ipv6;

S3700 Series supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc;

S3700 Series supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4 tunnel, ISATAP;

S3700 Series supports IPv4 transiting to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

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+.

S3700 series supports storm/multicast/unicast limits, ensuring normal running conditions of the equipment when deployed in harsh network conditions.

S3700 series supports perfect ring detection mechanisms, ensuring long-term network performance stability.

S3700 Series supports port isolation within the same VLAN, DHCP-Snooping, and IP + MAC + Port binding.

Model lists

S3740

- 32 GE TX ports
- 8 10GE/GE SFP+ ports

S3740F

- 24 GE SFP ports
- 8 GE TX ports
- 8 10GE/GE SFP+ ports

S3756

- 48 GE TX ports
- 8 10GE/GE SFP+ ports

S3756F

- 44 GE SFP ports
- 4 GE TX/SFP combo ports
- 8 10GE/GE SFP+ ports

S3756M

- 24 GE SFP ports
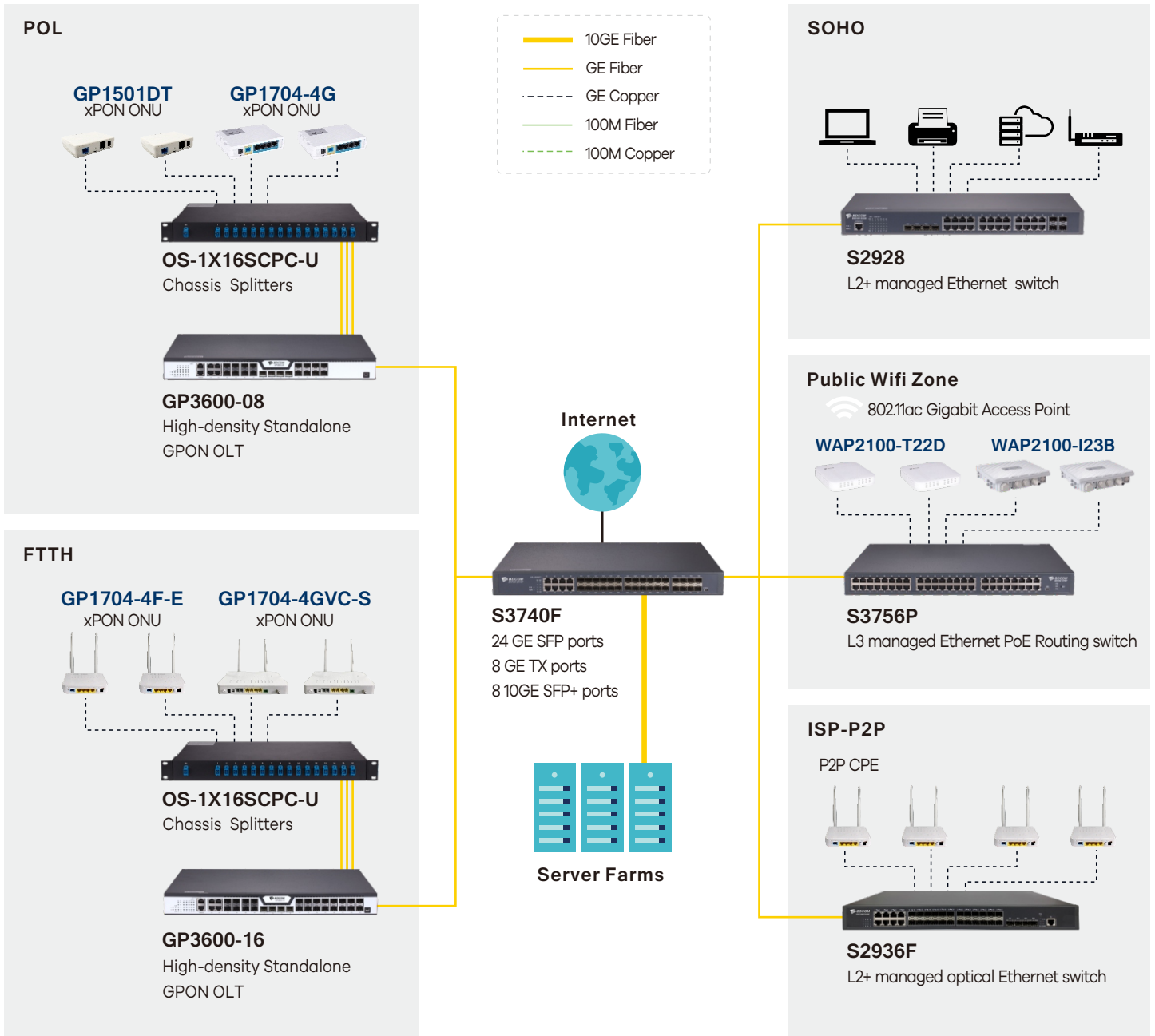- 24 GE TX ports
- 8 10GE/GE SFP+ ports

S3756P

- 48 GE POE ports
- 8 10GE/GE SFP+ ports

S3700 SERIES

BDCOM S3700 Series

Application Diagram

POL

GP1501DT
xPON ONU

GP1704-4G
xPON ONU

OS-1X16SCPC-U
Chassis Splitters

GP3600-08
High-density Standalone
GPON OLT

FTTH

GP1704-4F-E
xPON ONU

GP1704-4GVC-S
xPON ONU

OS-1X16SCPC-U
Chassis Splitters

GP3600-16
High-density Standalone
GPON OLT

Legend
— 10GE Fiber
— GE Fiber
-- GE Copper
— 100M Fiber
-- 100M Copper

Internet

S3740F
24 GE SFP ports
8 GE TX ports
8 10GE SFP+ ports

Server Farms

SOHO

S2928
L2+ managed Ethernet switch

Public Wifi Zone

802.11ac Gigabit Access Point

WAP2100-T22D

WAP2100-I23B

S3756P
L3 managed Ethernet PoE Routing switch

ISP-P2P

P2P CPE

S2936F
L2+ managed optical Ethernet switch

Specifications

Item		S3740	S3740F	S3756	S3756F	S3756M	S3756P
GE interface	TX	32	8	48	/	24	48 POE
	SFP	/	24	/	44	24	/
	Combo	/	/	/	4	/	/
10GE interface SFP+		8 10GE/GE					
Console		1 Mini USB port					
Backplane		176 Gbps					
Forwarding rate		132 Mpps					
Physical Specifications							
Chassis	**Dimensions** (WxDxH mm)	440x330x44			440x350x44		
	Weight (kg)(empty)	5.3	5.5	6	6	6.2	5.5
Package	**Dimensions** (WxDxH mm)	576x448x94					
	Weight (kg)(empty)	6.5	6.7	7.2	7.6	7.4	6.7
Power							
Power consumption	no-load	< 32W	< 32W	< 33W	< 38W	< 53W	< 38W
	full-load	58W	64W	64W	69W	78W	1520W
Power supply (hot-swap)	AC: 100V-240V 50Hz±10%	75W	75W	75W	150W	150W	/
Total output BTU (1000BTU/H=293W)		255.97	255.97	255.97	511.94	511.94	750.85
Fan number		2	2	2	3	3	3
Noise@25°C(dBA)		45					
MTBF(H)		>100,000					
Forwarding mode		Store-forward					
Flash (MB)		16					
DRAM (MB)		512					
MAC		32K					
Buffer size(MB)		3					
Jumbo frame		9K					
Routing table	IPv4	32K					
	IPv6	8K					
ARP table	IPv4	10K					
	IPv6	5K					
Total SVI		1K					

Features

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

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

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

IPv4
- Static routing, RIP v1/v2, OSPF, BGP, PBR, ECMP
- BFD for OSPF, BGP

IPv6
- ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
- IPv6 neighbor discovery, Path MTU discovery

- MLD V1/V2, MLD snooping
- IPv6 Static Routing, RIPng, OSPFv3, BGP4+
- Manual tunnel, ISATAP tunnel, 6 to 4 tunnel

MPLS
- LDP protocol, Multi-VRF,
- MPLS L2 VPN

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 stickyDHCP 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
- BVSS virtual-stacking
- EAPS and ERPS
- URPF, LLDP
- ISSU
- VRRP
- 1+1 power backup

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

Accessories
- Power cord, rackmount kits, console cable

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

Certification
- CE, FCC, ROHS

Ordering Information

Item	Description
S3700 series switch	
S3740	Ethernet routing switch with 32 GE ports and 8 10GE ports (1 Mini USB console port, 32 GE TX ports, 8 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
S3740F	Ethernet routing switch with 32 GE ports and 8 10GE ports (1 Mini USB console port, 24 100M/1000M SFP ports, 8 GE TX ports, 8 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
S3756	Ethernet routing switch with 48 GE ports and 8 10GE ports (1 Mini USB console port, 48 GE TX ports, 8 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
S3756F	Ethernet routing switch with 48 GE ports and 8 10GE ports (1 Mini USB console port, 44 100M/1000M SFP ports, 4 GE TX/SFP combo ports, 8 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
S3756M	Ethernet routing switch with 48 GE ports and 8 10GE ports (1 Mini USB console port, 24 GE TX ports, 24 100M/1000M SFP ports, 8 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
S3756P	Ethernet routing switch with 48 GE ports and 8 10GE ports (1 Mini USB console port, 48 GE POE ports, 8 10GE/GE SFP+ ports; 2 power slots without power supply; the cooling fan, 1U, 19-inch rack-mounted installation)

Ordering Information

Item	Description
S3700 series power modules	
S3700 Series Non-POE Power Modules	
PWR-75-AC	Hot-swap AC Power for S3740/S3740F/S3756 (Max Power 75W, AC100~240V input)
PWR-75-DC	Hot-swap DC Power for S3740/S3740F/S3756 (Max Power 75W, DC-36V ~ -72V input)
PWR-150-AC	Hot-swap AC Power for S3756F/S3756M (Max Power 150W, AC100~240V input, the isolated cooling fan)
PWR-150-DC	Hot-swap DC Power for S3756F/S3756M (Max Power 150W, DC-36V ~ -72V input, the isolated cooling fan)
S3700 Series POE Power Modules	
POE-500-AC	S3700 Series POE Hot-swap AC Power (Max Power 500W, POE 370W, AC100~240V input, the isolated cooling fan)
POE-500-DC	S3700 Series POE Hot-swap DC Power (Max Power 500W, POE 370W, DC-36V ~ -72V input, the isolated cooling fan)
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	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)
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	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)

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