

S3700 SERIES



Varied Service Characteristics
Versatile IPv6 Solution
Complete Security Mechanism



Carrier-Level High Reliability
Full Layer-3 Functions



Advanced Hardware Architecture and Industry-leading Port Density



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

Product Overview

BDCOM S3700 Series is a new generation of aggregation 10GE full-duplex 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. Its 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;

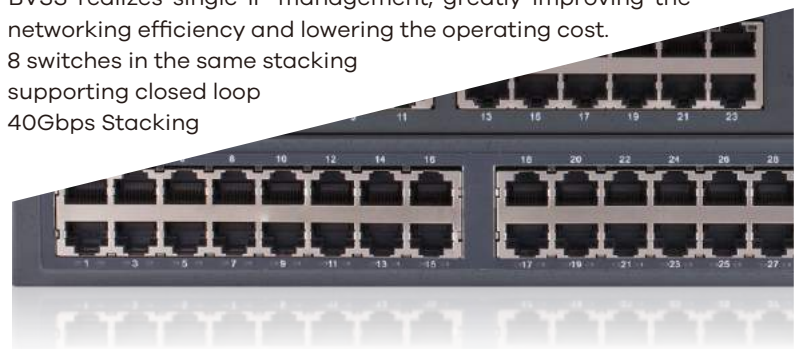
High Reliability:

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, 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 cost.

8 switches in the same stacking supporting closed loop 40Gbps Stacking



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%): MTTR of S3700 Series is 50ms, meeting the requirement of the 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+.

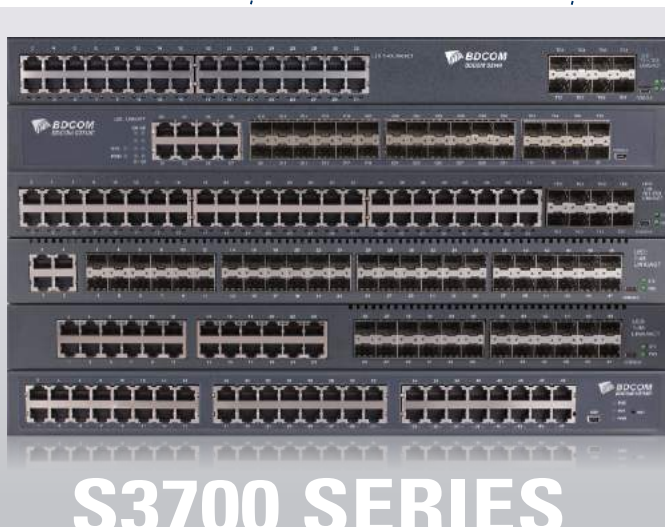
S3700 Series supports storm/multicast/unicast limit, ensuring the normal running of equipment in harsh network conditions.

S3700 Series supports perfect ring detection mechanism, ensuring the long-term stable running of network.

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

Link activity, Link PoE, link power
Power over ethernet 802.3af and 802.3at in all ports
MDI/MDIX auto in all ports

Model lists



S3740



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

S3756M



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

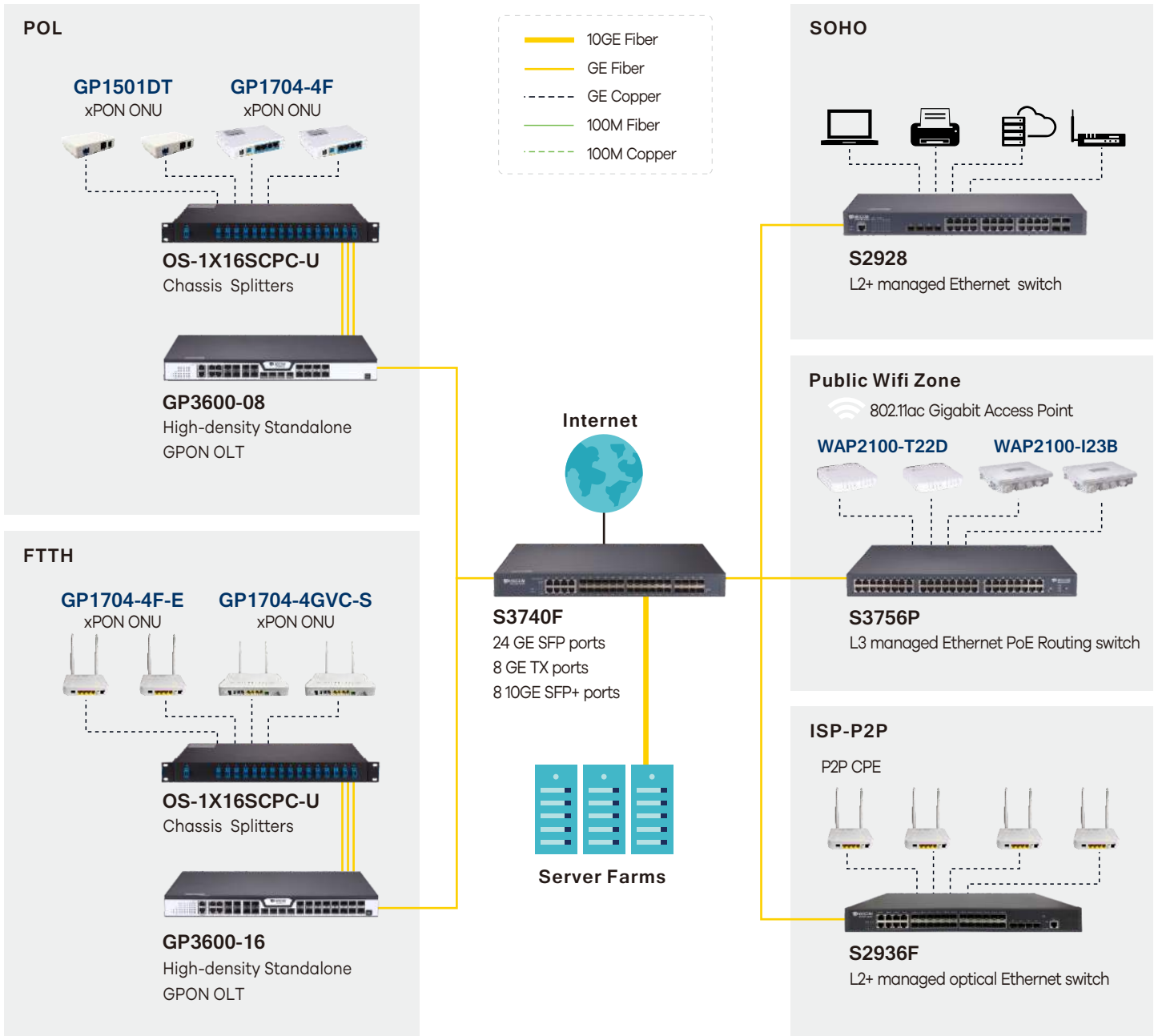
S3756P



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



Application Diagram



Specifications

Item	S3740	S3740F	S3756	S3756F	S3756M	S3756P	
Interface	32 ports 10/100/1000 Base-T Full duplex 8 10GE/GE SFP+ ports	24 GE SFP ports 8 GE TX ports 8 10GE/GE SFP+ ports	48 ports 10/100/1000 Base-T Full duplex 8 10GE/GE SFP+ ports	44 GE SFP ports 4 GE TX/SFP combo ports 8 10GE SFP+ ports	24 100/1000M SFP ports 24 GE TX ports 8 10GE/GE SFP+ ports	48 ports 10/100/1000 Base-T Full duplex 8 10GE/GE SFP+ ports	
Console	1 Mini USB port	1 Mini USB port	1 Mini USB port	1 Mini USB port	1 Mini USB port	1 Mini USB port	
Backplane	176 Gbps	176 Gbps	176 Gbps	176 Gbps	176 Gbps	176 Gbps	
Forwarding rate	132 Mpps	132 Mpps	132 Mpps	132 Mpps	132 Mpps	132 Mpps	
Physical Specifications							
Chassis	Dimensions (WxDxH mm) 440x350x44	440x350x44	440x350x44	440x350x44	440x350x44	440x350x44	
	Weight (kg)(empty) 5.3	5.5	6	6	6.2	5.5	
Package	Dimensions (WxDxH mm) 576x448x94	576x448x94	576x448x94	576x448x94	576x448x94	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 AC: 100V-240V (hot-swap) 50/60Hz	75W	75W	75W	150W	150W	/	
Item	S3740	S3740F	S3756	S3756F	S3756M	S3756P	
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	45	45	45	45	45	
MTBF(H)	>400,000	>400,000	>400,000	>400,000	>400,000	>400,000	
Forwarding mode	Store-forward	Store-forward	Store-forward	Store-forward	Store-forward	Store-forward	
Flash (MB)	512	512	512	512	512	512	
DRAM (MB)	1G	1G	1G	1G	1G	1G	
MAC	32K	32K	32K	32K	32K	32K	
Buffer size(MB)	4	4	4	4	4	4	
Jumbo frame	9K	9K	9K	9K	9K	9K	
Routing table	IPv4	32K	32K	32K	32K	32K	
	IPv6	8K	8K	8K	8K	8K	
ARP table	IPv4	10K	10K	10K	10K	10K	
	IPv6	5K	5K	5K	5K	5K	
Total SVI	1K	1K	1K	1K	1K	1K	
GROUP AGGREGATION: 8 8 PORTS in each group	-	8 priority queue	1.25K ACL	-	-	-	

Features

VLAN

- 4K Active VLAN,
- 4094 ID VLAN
- QinQ & Selective QinQ,
- MAC-Based VLAN
- GVRP,
- Voice-VLAN
- private 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
- MSDP

IPv4

- Static routing, RIP v1/v2, OSPF, BGP, PBR, ECMP
- BFD for OSPF, BGP
- DHCP RELAY/BOOTP
- Dual Stack IPv4 and IPv6
- dhcp server, IS-IS

IPv6

- ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
- Static routing IPv6
- IPv6 neighbor discovery, Path MTU discovery
- tracertv6, Telnetv6, TFTPv6, syslogv6, TFTPv6, SNMPv6, DHCPv6, RADIUS/Tacacs for IPv6.
- RFC 3513 IP Version 6 Addressing Architecture;
- RFC 1981 Path MTU Discovery for IPv6;
- RFC 4861 Neighbor Discovery;
- RFC 2463, ICMP for IPv6;
- Ping over IPv6 transport;
- Traceroute over IPv6 transport;
- IPv6 Stateless Address Auto configuration;
- IPv6 interface VLAN;
- RFC 2462 IPv6 Stateless Address Auto configuration;
- IS-IS V6

- 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
- layer 3 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
- Rate Limit

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+, guestvlan,AAA,portal security passthrough, dynamic arp, macff
- Mac authentication
- Multiple supplicant
- 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
- IEEE 802.3ad
- BVSS virtual-stacking
- LLDP, LLDP-MED
- EAPS and ERPS
- URPF, LLDP
- Auto provisioning
- ISSU
- VRRP
- 1+1 power backup
- UDLD

Management

- Console, Telnet, SSH v1/2, HTTP, HTTPS
- SNMP v1/v2/v3, RMON
- RMON: History, Statistics, Alarms e Events
- internal Syslog, Multiple external Syslog
- BDCOM NMS
- TFTP, FTP, SFTP
- NTP, SPAN, RSPAN
- sFlow
- loopback interface

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

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)

Item	Description
S3700 series power modules	
S3700 Series Non-POE Power Modules	
PWR-150-AC	S3700 Series Non-POE Hot-swap AC Power (Max Power 150W, AC100~240V input, the isolated cooling fan)
PWR-150-DC	S3700 Series Non-POE Hot-swap DC Power (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-1100-AC	S3700 Series POE Hot-swap AC Power (Max Power 1100W, POE 740W, AC100~240V input, the isolated cooling fan)

Ordering Information

Optical modules

10GE optical modules

SFP+AOC-1M	1 meter SFP+ direct attach cable "Stacking cable"
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)

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)

* Support IEEE 802.3z 1000BASE-LX, 1000BASE-EX, 1000BASE-ZX, 100BASE-BX, 100BASE-SX, or 100BASE-FX, 100BASE-LX, 10000BASE-R, 10GBASE-SR, 10GBASE-LR, 10GBASE-ER

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