

# S5612E SWITCH



Supports 8GE  
Ports and 12 10GE  
SFP+ 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

## Overview

BDCOM S5612E is a new generation of aggregation 10GE switch 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.

It supports 8 GE ports and 12 10GE ports.

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

S5612E 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 link function, the logic control plane, service control plane and service data plane are separated. Thus, the device can support 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.



# Highlights

## Carrier-level High Reliability

S5612E supports STP/RSTP/MSTP, VRRP protocol, Ethernet ring protection, dual master-slave uplink protection and LACP link aggregation;

S5612E supports ISSU (In-Service Software Upgrade); S5612E supports BFD mechanism;

S5612E supports Ethernet OAM mechanism, 802.3ah and 802.1ag ;

High Reliability (99.999%): The MTTR of the S5612EE Series is 50ms, satisfying the requirement for reliable delivery of carrier-level service.

## Varied Service Features

S5612E supports layer2 and layer3 multicast routing protocol, which enable the device can access to IPTV, HD video surveillance and HD video conference;

S5612E 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;

S5612E supports layer2 MPLS VPN.

## 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+.

S5612E series supports storm/multicast/unicast limits, ensuring normal running conditions of the equipment when deployed in harsh network conditions.

S5612E series supports perfect ring detection mechanisms, ensuring long-term network performance stability.

S5612E supports port isolation within the same VLAN, DHCP-Snooping, and IP + MAC + Port binding.

## Versatile IPv6 Solution

S5612E supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc;

S5612E supports Ping, Traceroute, Telnet, SSH, ACL based on IPv6;

S5612E supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc;

S5612E supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4 tunnel, ISATAP;

S5612E supports IPv4 transiting to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

## Innovative Energy-saving Design

Intelligent power management: The power system of S5612E supports real-time monitoring the device and the slow-start. It is also power-saving;

Intelligent fan management system: The fan system of S5612E supports automatic speed regulation, which efficiently slow the fan speed and mitigate the noise;

Comply with the international standard IEEE 802.3az

# Model Lists

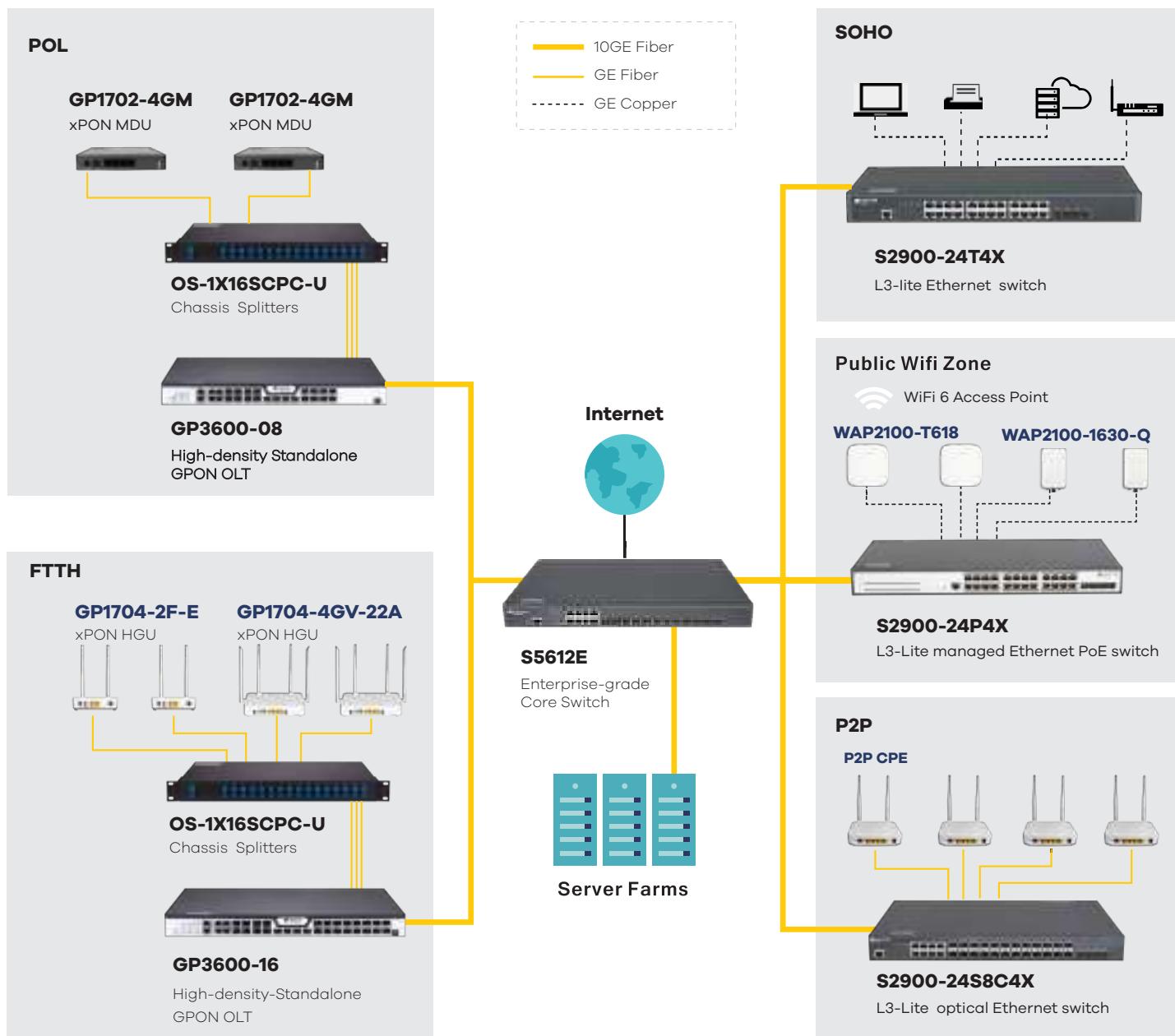
## S5612E

Full 10GE Ethernet Routing Switch



- 8-Port Gigabit RJ45
- 12-Port 10G/GE SFP+

## Application Diagram



# Product Specifications

Item	S5612E	
Interface	8-Port Gigabit RJ45, 12-Port 10G/GE SFP+	
Console	1-Port RJ45	
Backplane	176Gbps	
Forwarding rate	132 Mpps	
Chassis	Dimensions(WxDxH)(mm)	440x280x44
Package	Weight(KG)(empty)	3.6
	Dimensions(WxDxH)(mm)	576x448x94
Power consumption	Weight(KG)	4.8
no-load		< 35W
Power supply	full-load	50W
	AC: 100V-240V, 50Hz±10%	Single AC (optional for Dual Power)
Total output BTU (1000BTU/H=293W)		170.65
Fan number		2
Noise@25°C (dBA)		57
MTBF(H)		>100,000
Forwarding mode		Store-forward
Flash (MB)		16
DRAM (MB)		1024
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, Private VLAN, 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+
- Anti-attack from DDoS, TCP's SYN Flood, UDP Flood, etc.
- Broadcast/multicast/unknown unicast storm-control
- MD5, SHA-256, RSA-1024, AES256, etc.

- 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 sticky
- DHCP Snooping and option 82, DAI & IP source guard, PPPoE+, IEEE 802.1x, Radius and BDTacacs+
- L2/L3/L4 ACL flow identification and filtration
- Anti-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

### 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
<b>S5612E switches</b>	
S5612E	12-Port 10G SFP+ 8-Port Gigabit RJ45 L3 Stackable Managed Switch (single AC-220V power supply, the cooling fan, 1U, 19-inch rack-mounted installation)
S5612E-2AC	12-Port 10G SFP+ 8-Port Gigabit RJ45 L3 Stackable Managed Switch (dual AC-220V power supply, the cooling fan, 1U, 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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