



# BSR2900 Series Carrier Aggregation Router

## Product Overview

BDCOM BSR2900 Series is the next-generation multi-functional switching router developed by BDCOM. It adopts the 64-bit multi-core processor, high-speed switching engine. It is a well-adapted router.

BDCOM BSR2900 Series has 4 models such as BSR2900-10, BSR2900-12P, BSR2900-20B and BSR2900-40B. It supports the full switching function, USB2.0 expansion, service expansion and engineering maintenance.

BDCOM BSR2900 Series is equipped with BDROS operating system, of which BDCOM has the independent intellectual property right. BDCOM BSR2900 Series builds a real multiservice broadband platform by providing rich software functions such as routing, switching, safety, VPN and LTE. With its strong processing and expansion capability, rich software functions and hardware modules, BDCOM BSR Series meet requirements of the government, financial institutions, the defense system, operators and enterprises in network construction.

### Diversified options

- 4 GE WAN (copper and fiber) ports
- 8 GE LAN ports
- 1 USB2.0 port

### Multiservice platform

- RIP/OSPF/BGP
- PPTP/L2TP/GRE/IPSec
- GBSC flow-control
- VLAN
- ZTP
- IEEE 1588-v2

### BDROS operating system

- IPv4/v6 dual-stack
- High performance
- energy efficiency design

# Product Characteristics

## High Performance

BDCOM BSR2900 Series is driven by the 64-bit dual-core processor with specialized gigabit ASIC switching chip and FPGA components, which enables the whole hardware platform to run on the high-speed Ethernet frame. The innovative design endows BSR2900 with a super processing capability, providing a guarantee for upper-layer software functions.

## Strong Expansibility

Because built on the basis of switching core, BSR2900 Series can expand their external interfaces, slots and modules without any limitation from the total CPU resources. The switching chip guarantees that the whole BSR2900 router is provided with sufficient and broadband internal channels, making the expansibility of BSR2900 routers exceed that of traditional modularized routers.

## Energy-Saving Advantage

BSR2900 Series adopt the new-generation hardware chip in consideration of energy saving while guaranteeing its strong processing capacity. Compared with the mainstream devices in the industry, power consumption of the BSR router is reduced by 15% to 20%, which both reduces the device maintenance cost and accords with the low-carbon idea. BDCOM BSR2900 Series is also equipped with the environment friendly maglev mute fan.

## Varied Protocols

BSR2900 Series supports Layer 2 link protocols including PPP and dot1q; static routing; policy routing; and dynamic routing such as RIP, OSPF and BGP. These routing protocols are well compatible with the devices manufactured by the mainstream vendors in the industry. Besides, BSR2900 Series supports integration of multiple services such as routing, switching, voice, safety and wireless, which meets the requirement of complicated network construction.

## New Services

BSR2900 Series supports the MPLS characteristics and the MPLS-based layer-2/layer-3 VPN technology, which realize the transparent Ethernet transmission service and the flexible enterprise interconnection. BSR2900 Series supports IPv6 data forwarding, routing protocols and multicast routing protocols; BSR2900 Series also supports the IPv4/IPv6 protocol stack and the interconnection technology, which makes the existing networks smoothly upgrade to IPv6.

## Secure Service Access

BSR2900 Series supports selective ACL firewall filtration technology, NAT, VPNs such as IPSec/L2TP/PPTP/GRE, and security technologies such as AAA, Radius, PAP/CHAP.

## Traffic Management Policy

BSR2900 Series supports varied queues including FIFO, PQ, CQ, CBWFQ, LLQ, WFQ, DSCP, IP Precedence, RTS, RSVP and CAR.

BDCOM BSR2900 Series supports its self-developed traffic control and service management policy (GBSC), which can better real-time arrange and monitor your data traffic.

## Flexible Management and Maintenance

BSR2900 Series is convenient in managing and monitoring the network by using the in-band and out-band management tools such as Console, Telnet, SSH and SNMP;

## Complete Layer-2 Switching Capacity

BSR2900 Series supports Layer-2 switching with the built-in high performance switching chip. It supports layer-2 protocols including STP/RSTP/MSTP, MAC learning and filter, anti-attack based on the chip, storm control and port mirroring.

# Model lists



BSR2900 SERIES  
MULTI-SERVICE ROUTER

## BSR2900-10



- 1 Console
- 1 USB
- 2 GE TX
- 2 GE TX/SFP combo
- 8 GE TX

## BSR2900-12P



- 1 Console
- 1 USB
- 2 GE TX
- 2 GE SFP
- 8 GE POE

## BSR2900-20B



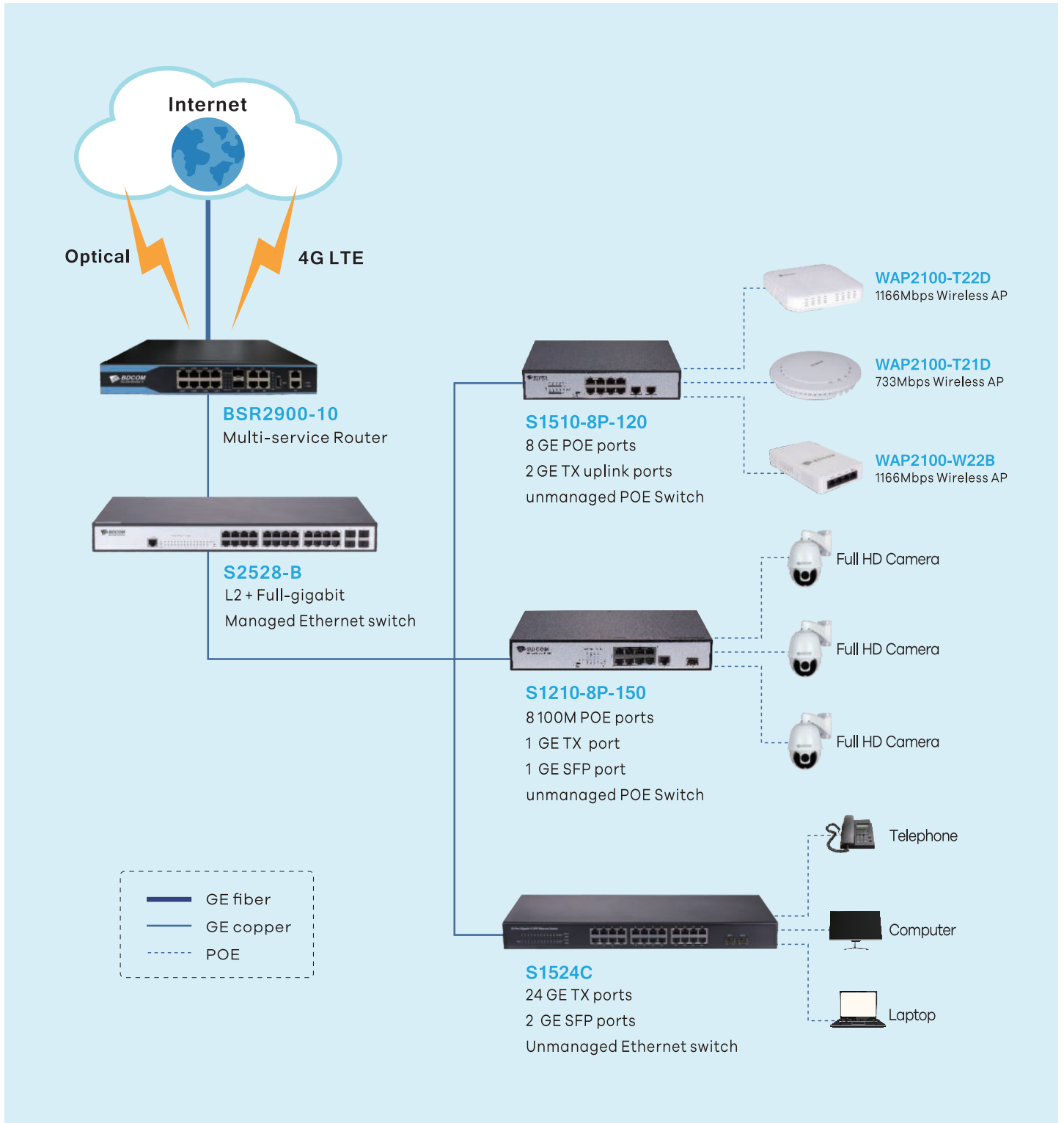
- 1 Console
- 1 USB
- 2 GE TX
- 2 GE TX/SFP combo

## BSR2900-40B



- 1 Console
- 1 USB
- 4 GE TX
- 4 GE SFP

# Application Diagram



# Software Characteristics

## Routing

### LAN

- ARP, ARP proxy, Gratuitous ARP

### WAN

- PPP, PPPoE (Client/Server)

### Routing

- Static route, default route
- RIPv1/v2, OSPFv2, BGPv4
- Fast Switch, Load-Balance
- PBR

### Multicast

- IGMP
- PIM-DM, PIM-SM

### IPv6

- IPv6 ND, IPv6 PMTU, IPv6 FIB, IPv6 ACL, IPv6 (authenticate through IPv6 Phasell)
- IPv6 QoS
- IPv6 transition: NAT-PT, IPv6 tunnel, 4over6
- IPv6 tunnel: IPsec v6, GRE, 6to4, ISATAP
- IPv6 route: IPv6 static route, RIPng, OSPFv3, BGP4+

## Switching

### Switching

- 802.1p CoS, 802.1Q VLAN
- STP, RSTP
- Keep alive, port mirror, broadcast/multicast storm control
- PTP, IEEE1588v2(BSR2900-12P)

## Network safety

### AAA

- Authentication, Authorization, Accounting
- Enable, local, Radius, Tacacs+
- PAP, CHAP, MS-CHAP

### MPLS

- VPLS, MP-BGP, VRF
- L2VPN, L3VPN

### IP service

- ICMP, TCP, UDP, IP Option
- NAT, PAT, Port-MAP, Private-Service, ALG
- Ping, Trace Route, Nslookup
- IP ACL, IMP filter, Fast-Access
- DHCP Client/Serv/Relay
- DNS, DNS host, DNS Proxy, DDNS (Peanut Hull/DynDNS/CTC)
- Helper-Address, UDP Helper
- IP unnumber, DDR
- Keep alive, PDP (compatible with CISCO)
- NetFlow, IP Accounting, IP SLA
- TFTP Client/Serv, FTP Client
- SNTP, job/schedule
- PNP
- ALIAS
- Reverse telnet, VTY binding

## Network Security

### Firewall

- ASPF state detection
- SYN flood, UDP flood or ICMP flood protection
- ARP attack protection, ARP-SCAN and DHCP-Snooping
- Prevention of Ping of Death, Tear-drop, Land-Based, Win Nuke, Ping Sweep, ARP attack and IP-Spoofing

### VPN

- IKE, IPsec, DMVPN, EZVPN
- L2TP, PPTP, GRE, EoGRE
- VPN stacking

## Reliability

### Backup function

- Interface backup
- Route backup
- E-Backup, Keep alive Ethernet remote monitoring
- VRRP, HSRP
- Bandwidth based load sharing and backup
- Traffic based load balancing and backup

### BFD

- BFD for RIP, OSPF, BGP, MPLS and VRRP

## QoS

### Congestion management

- FIFO, PQ, CQ, WFQ, CBWFQ

### Congestion avoidance

- WRED/RED

### Traffic shaping

- GTS (Generic Traffic Shaping)

### Others

- GBSC, Layer7filter

### Traffic classification

- ACL Flow Classification
- IP Precedence Flow Classification
- DSCP flow classification
- MAC address classification
- 802.1P classification

## 4G

- TD-LTE, FDD-LTE

## Management

- SNMP, MIB, SYSLOG, RMON
- Console/Telnet/VTY/SSH/HTTP

# Ordering Information

Model	Description
<b>BDCOM BSR2900-10</b>	BSR2900-10 Multi-service Router (1 Console, 1 USB2.0, 2 GE TX/SFP Combo WAN, 2 GE TX WAN, 8 GE TX LAN; built-in encryption engine, 220V power supply )
<b>BDCOM BSR2900-12P</b>	BSR2900-12P Multi-service Router (1 Console, 1 USB2.0, 2 GE SFP WAN, 2 GE TX WAN, 8 GE TX LAN, POE power supply, PTP and SyncE, 220VAC power input (Phoenix connection), -20-70°C working temperature)
<b>BDCOM BSR2900-20B</b>	BSR2900-20B Multi-service Router(1 Console, 1 USB2.0, 2 GE TX/SFP Combo, 2 GE TX, 2 HIC slots; built-in encryption engine, 220V power supply )
<b>BDCOM BSR2900-40B</b>	BSR2900-40B Multi-service Router (1 Console, 1 USB2.0, 4 GE TX, 4 GE SFP, 2 HIC slots; built-in encryption engine, 1+1 redundancy power supply, 220V power supply)

BDCOM BSR2900 Series

# Technical Parameters

Items	BSR2900-10	BSR2900-12P	BSR2900-20B	BSR2900-40B	
<b>Interface</b>					
Console	1	1	1	1	
USB	1	1	1	1	
WAN	2 GE TX 2 GE TX/SFP combo	2 GE TX 2 GE SFP	2 GE TX 2 GE TX/SFP combo	4 GE TX 4 GE SFP	
LAN	8 GE TX	8 GE POE			
POE	/	802.3af/at	/	/	
Slot	/	/	2 HIC	2 HIC	
RST	1	1	1	1	
Encryption engine	Built-in	Built-in	Built-in	Built-in	
<b>Performance</b>					
Throughput	2Mpps	2Mpps	2Mpps	2Mpps	
Flash	32MB	32MB	16MB	16MB	
DRAM	1GB	1GB	1GB	1GB	
NAT concurrent sessions	<300K	<300K	<350K	<400K	
Consumption	No-load	≤26W	≤14W	≤16W	
	Full-load	≤31W	≤19W	≤22W	
Total output BTU (note: 1000 BTU/hr = 293W)	105.8	64.85	47.78	75.09	
Fan	1	0	0	0	
Noise@25°C (dBA)	22	0	0	0	
Power supply	100-240V AC	100-240V AC 130W POE budget	100-240V AC	100-240V AC 1+1 power backup	
<b>Appearance</b>					
Chassis	Dimensions mm (WxDxH)	300x200x44	250x220x44	440x300x44	440x300x88
	Weight (kg,empty)	2.1	2.1	3.5	4.4
Package	Dimensions mm (WxDxH)	400x400x80	454x287x96	576x448x94	560x560x230
	Weight(kg)	3.1	3.1	4.5	6.8
<b>Environmental specifications</b>					
Operating	temperature	-10°C ~ 50°C	-20°C ~ 70°C	≤12W	≤16W
	humidity	10%~85% (non-condensing)	10%~85% (non-condensing)	10%~85% (non-condensing)	10%~85% (non-condensing)
Storage	temperature	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
	humidity	5%~95% (non-condensing)	5%~95% (non-condensing)	5%~95% (non-condensing)	5%~95% (non-condensing)
<b>Accessories</b>					
Parts	Console cable, power cord (BSR2900-12P without power cord), rackmount kits				



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\*Due to our continued effort to advanced technology, product specifications are subject to change without notice.

