



## BDCOM BSR2800-41 & BSR2800-62 Series Next-generation Multi-core Multi-service Routers

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### Next-generation Multi-core Multi-service Routers

#### Product Overview

BDCOM BSR2800 series is the next-generation multiservice switching router platform developed by BDCOM. The router platform is of high performance by integrating a 64-bit multi-core processor, a gigabit switching chip and FPGA into one solution.



**BDCOM BSR2800-41**

BDCOM BSR2800-40+ includes models such as BSR2800-41, BSR2800-62. Each model has 2-4 Gigabit TX/SFP combo ports, 1 USB2.0, 4-6 HIC/HIM slots. BSR2800 supports a dozen of expanded modules and interfaces of different densities such as Ethernet, E1, T1, Serial, Async, 3G, FXS, FXO.

BDCOM BSR2800 series is equipped with BDROS operating system, of which BDCOM has the independent intellectual property right. BDCOM BSR2800 builds a real multiservice broadband platform by providing rich software functions such as routing, switching, safety and VPN.

With its strong processing and expansion capability, rich software functions and hardware modules, BDCOM BSR series meets requirements of the government, financial institutions, the defense system, operators and enterprises in network construction.

#### Product Characteristics

##### ➤ High Performance

BDCOM BSR2800 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 BSR with a super processing capability, providing a guarantee for upper-layer software functions.

##### ➤ Strong Expansibility

With the switching core, BSR2800 can expand its external interface, slot and module without subjecting to the total CPU resource. The switching chip provides sufficient internal channels of high-bandwidth for the BSR equipment, so BSR2800's expansibility has far surpassed that of the traditional modularized router.

➤ **Energy-saving Advantage**

BSR2800 series adopts 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 BSR2800 series is also equipped with the environment friendly maglev mute fan.

➤ **Varied Protocols**

BSR2800 series supports Layer 2 link protocols including HDLC, PPP and dot1q; static routers; policy routers; and dynamic routers such as RIP, OSPF, BGP, BEIGRP. These routing protocols are well compatible with the devices manufactured by the mainstream vendors in the industry. Besides, BSR2800 series supports integration of multiple services such as routing, switching, voice, safety and wireless, which meets the requirement of complicated network construction.

➤ **New Services**

BSR2800 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. BSR2800 supports IPv6 data forwarding, routing protocols and multicast routing protocols; BSR2800 also supports the IPv4/IPv6 protocol stack and the interconnection technology, which makes the existing networks smoothly upgrade to IPv6.

➤ **Secure Service Access**

BSR2800 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**

BSR2800 supports varied queues including FIFO, PQ, CQ, CBWFQ, LLQ, WFQ, DSCP, IP Precedence and CAR.

BDCOM BSR2800 series support 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

BSR2800 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; BSR2800 series also support Chinese -English interface.

## Hardware Specifications

Model		BSR2800-41	BSR2800-62
Interface	Con	1	1
	AUX	1	1
	USB	1	1
	GE-Combo	2	2
	GE-TX	/	1
Expansibility	HIC	4	4
	HIM	/	2
	Encryption	built-in	built-in
Performance/Capacity	PPS	2Mpps	2Mpps
	BootROM	512K	512K
	Flash	32MB	32MB
	DRAM	512MB	512MB
Peripherals	Fan	Floating	Floating
	Voltage	100~240VAC -36~-72VDC	100~240VAC -36~-72VDC
	Power	≤80W	≤80W
	Dimensions mm (WxDxH)	443×415×44	443×415×44
	Operating	0℃~50℃	0℃~50℃

	temperature		
	Storage humidity	5%-95% non-condensing	5%-95% non-condensing

## Software Characteristics

Model		BSR2800-41	BSR2800-62
Link Protocol	LAN	ARP, ARP proxy, free ARP	
	WAN	PPP, Multilink-PPP, PPPoE (Client/Serv) ISDN BRI/PRI,SLIP X.25, LAPB, X25-TCP, XOT, X.25 Switch, X.29 Frame Relay, FR Switch HDLC, LLC2, SDLC, DLSW-SSP	
Network Protocols	Routing	Static routing, direct routing, default routing RIPv1/v2, OSPFv2, BGPv4, BEIGRP (compatible with CISCO) PBR Fast Switch, Load-Balance	
	Multicast	IGMP PIM-DM, PIM-SM and DVMRP	
	IP service	ICMP, TCP, UDP, IP Option NAT, PAT, Port-MAP, Private-Service, ALG Ping, TraceRoute, Nslookup IP ACL, IMP filter, Fast-Access DHCP Client/Serv/Relay DNS, DNS host, DNS Proxy, DDNS (PeanutHull/DynDNS/CTC) Helper-Address, UDP Helper IP unnumber, DDR	

		Keepalive, PDP (compatible with CISCO) NetFlow, IP Accounting TFTP Client/Serv, FTP Client SNTP, job/schedule PNP ALIAS Verse telnet, VTY binding
	MPLS	AToM, VPLS, MP-BGP, VRF L2VPN, L3VPN MPLS TE
	IPv6	IPv6 ND, IPv6 PMTU, IPv6 FIB, IPv6 ACL, IPv6 (approved by IPv6 Phasell) IPv6 QoS IPv6 transition: NAT-PT, IPv6 tunnel IPv6 tunnel: IPSec v6, GRE, 6to4, ISATAP IPv6 route: IPv6 static routing, RIPng, OSPFv3, BGP4+
Reliability	Backup	Interface backup Floating route backup E-Backup, Keepalive 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

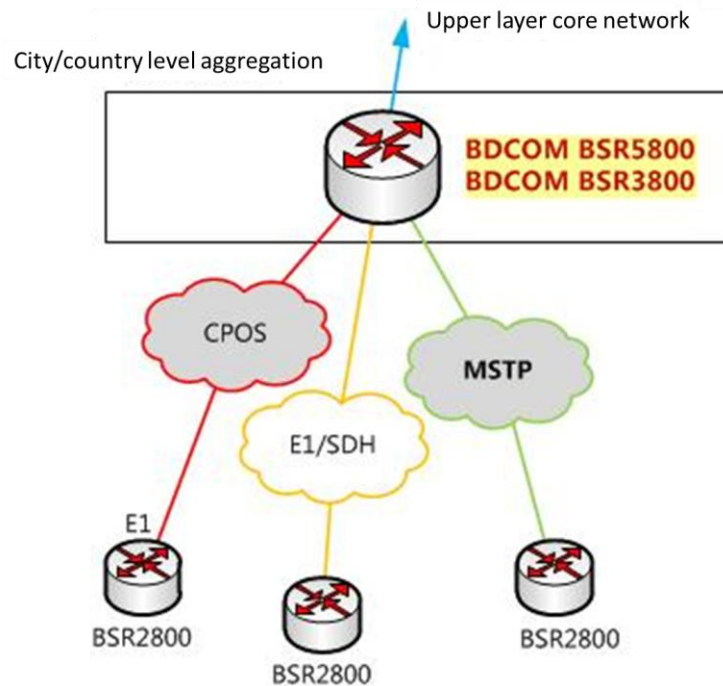
	Resource reservation	RSVP
	Features	GBSC, Layer7filter
	Flow classification	ACL IP Precedence DSCP MAC 802.1P
Switching	Switching	802.1p CoS, 802.1Q VLAN, 802.1x STP, RSTP, PVST Keepalive, port mirror, broadcast/multicast storm control
Security	AAA	Authentication, Authorization, Accounting enable, local, Radius, Tacacs+ PAP, CHAP, MS-CHAP
	Firewall	ASPF state detection SYN flood, UDP flood or ICMP flood 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, SSL VPN VPN nesting
VoIP	Interface	FXS/FXO/E&M
	Protocol stack	h.323, MGCP, SIP
	Codec	G.711A law, G.711U law, G.723R53, G.723R63, bG.729a and G.729R8
3G	System	WCDMA, CDMA2000, TD-SCDMA
Management	Network	SNMP, MIB, SYSLOG, RMON, HTTP management



	Local	CLI management and file system management
	Login	Console/Telnet/VTY/SSH log-on mode

## Networking and Applications

### 1) Typical application for small or medium WAN aggregation



BDCOM BSR3800/BSR5800 routers are recommended to apply in private network aggregation of governments, financial institutions and operators.

The CPOS optical interface can be used to trunk multiple low-level ports and branches for each CPOS optical interface can connect up to 63 websites. As to BDCOM BSR3800, it is recommended to use 4 CPOS optical interfaces to realize the aggregation of up to 250 branches. Additionally, users also can select the GE/E1 port to access the MSTP or E1/SDH hi-speed private network, realizing the aggregation.

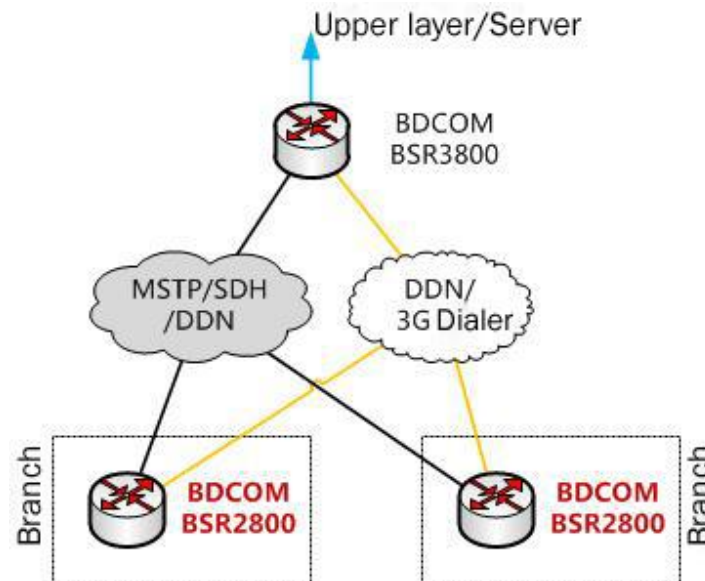
To obtain more bandwidth, the CPOS timeslot binding can be adopted at the aggregation of the upper-layer networks. Of course, the new-model MSTP access is also supported; 1 or 2 GE ports can be used to conduct the connection of the local service and the office data.

It is recommended to enable routing protocols such as OSPF and PBR to simplify



network management and interconnection; meanwhile if the QoS queue participates together, the result would be better; in real networking, you can introduce the hot-standby solutions such as dual-host VRRP according to actual needs to enhance the reliability of the whole router.

## 2) Typical private network access for government, financial institutions, operators

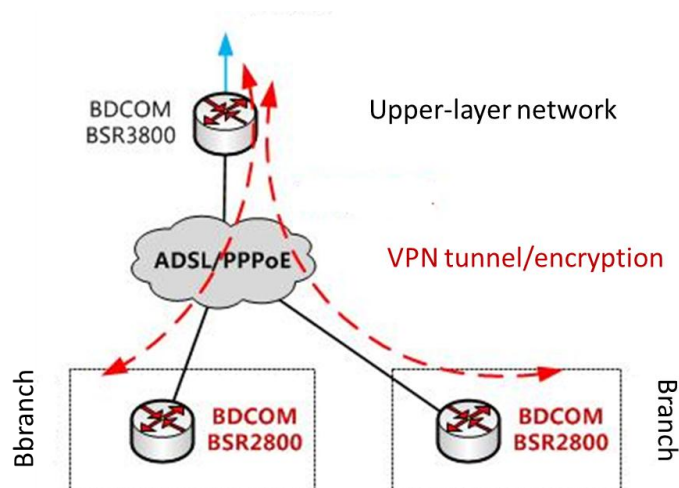


Each BSR2800 router has two standard GE ports, which can fully fulfill the connection of the website server and LAN; through flexible module configuration, you can access BSR2800 routers to the backbone networks such as MSTP and SDH; also through making DDN, E1 or 3G dial (USB expansion) as the backup line, you can improve the reliability of user networks and services.

Users can install 16 switch modules according to actual needs to realize the integration of switching and routing at the website, to save the cost of network construction and to effectively reduce the daily maintenance workload of hardware devices.

At actual network instruction, you are recommended to use the OSPF/RIP route, the QoS queue and so on to make the network and key services more efficient and orderly.

## 3) Typical VPN networking



At the deployment of the private network of government or financial institutions, the large number and the wide distribution of terminal networks make the cost of construction and maintenance much high. In this case, you are recommended to rent the ADSL line of the local operator to work together with VPN. BDCOM BSR2800 has more than two Ethernet interfaces to satisfy the access of LAN and ADSL.

BDCOM BSR series supports a lot of mainstream VPN protocols such as IPSec, GRE, L2TP and PPTP. The VPN cascading is supported, so the convenient and safe access network can be provided to users; the BSR series adopts the 64-bit multi-core processor and the built-in hardware encryption engine to guarantee the encryption of the whole data and at the same time to provide large flow.

Certainly, BSR2800 routers, in place of ADSL, can be applied on the recently emerging 3G data access or used as access backup.

## Ordering Information

### BSR chassis

BDCOM BSR2800-41	Modularized multi-service router (1 CON, 1 AUX, 1 USB2.0, 2 GE-Combo Ethernet ports, built-in encryption engine, 4 HIC slots)
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BDCOM BSR2800-62	BSR2800-62 Modularized multi-service router (1 CON, 1 USB2.0, 2 GE-Combo, 1 GE-TX, built-in encryption engine, 4 HIC, 2 HIM)
BSR private HIC modules	
HIC-1GE-TX	1-port 10/100/1000M Base-T electric interface card (RJ45)
HIC-1GE-TX/SFP	1-port 10/100/1000M TX/SFP combo interface card (RJ45/SFP)
HIC-2GE-TX+SFP	2-port 100/1000Me Ethernet interface card (RJ45+SFP)
DIC-8GES-TX	8-port 10/100/1000M Base-T Ethernet interface card (RJ45)
HIC-1E1B	1-port unchannelized E1-F interface card
HIC-2E1B	2-port unchannelized E1-F interface card
HIC-1T1	1-port T1 card
HIC-2T1	2-port T1 card
HIC-1TB	1-port synchronous serial interface card (V28/V35)
HIC-2TB	2-port synchronous serial interface card (V28/V35)
HIC-8ASY	8-port asynchronous serial interface card
HIC-2FXS	2-port FXS voice interface card slot (user interface)
HIC-2FXO	2-port FXO voice interface card slot (relay interface)
BSR Private HIM/DIM Module	
DIM-16FES-TX	16-port 10/100M Layer2 switching module(RJ45)
HIM-4T	4-port synchronous serial interface card (V28/V35)
HIM-4E1	4-port unchannelized E1-F interface card
HIM-4CE1	4-port channelized CE1/PRI interface card
HIM-8CE1	8-port channelized CE1/PRI interface card
HIM-16CE1	16-port channelized CE1/PRI interface card
HIM-4T1	4-port T1 interface card
HIM-4CT1	4-port channelized T1 interface card
HIM-8CT1	8-port channelized T1 interface card
HIM-16CT1	16-port channelized T1 interface card
HIM-1CE3	1-port E3 interface card
HIM-1CPOS-OC3-B	1-port channelized 155M CPOS module (SFP)

HIM-1POS-OC3-B	1-port unchannelized 155M POS module (SFP)
HIM-2POS-OC3-B	2-port unchannelized 155M POS module (SFP)

### For More Information

For more information about [BDCOM BSR2800-41 & BSR2800-62 Series](#), please contact your local BDCOM account representative.

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