



BDCOM BSR2800-20&22&24E Series Multicore Multi-service Routers

BDCOM BSR2800-20L & BSR2800-24L Series

Next-Generation Multicore Multi-service Routers

Product Overview

BDCOM BSR2800-20 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.



BSR2800-20



BSR2800-22



BSR2800-24E

BDCOM BSR2800-20 includes models such as BSR2800-20 and BSR2800-22, 24E. Each model has at least 2 Gigabit TX/SFP combo ports, 4 Gigabit TX ports. BSR2800-24E has also integrated the fully-functional switching card of BSR2800-24FE. BSR2800-20 supports a dozen of expanded modules and interfaces of different densities such as Ethernet, E1, T1, Serial, Async, 3G, FXS and FXO, which provide diversified options for the user.

BDCOM BSR2800-20 series is equipped with BDROS operating system, of which BDCOM has the independent intellectual property right. BDCOM BSR2800 series builds a real multiservice broadband platform by providing rich software functions such as routing, switching, safety, VPN, audio and WiFi.

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 BSR2800-20 series is driven by the 64-bit multi-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**

BSR2800-20 series adopt the next-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 BSR2800-20 series is also equipped with the environment friendly maglev mute fan.

➤ **Varied Protocols**

BSR2800-20 series supports Layer 2 link protocols including HDLC, PPP, static routers; policy routers; and dynamic routers such as RIP, OSPF, BGP and BEIGRP. These routing protocols are well compatible with the devices manufactured by the mainstream vendors in the industry. Besides, BSR2800-20 series supports integration of multiple services such as routing, switching, voice, safety and wireless, which meets the requirement of complicated network construction.

➤ **New Services**

BSR2800-20 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; BSR2800-20 also supports the IPv4/IPv6

protocol stack and the interconnection technology, which makes the existing networks smoothly upgrade to IPv6.

➤ **Secure Service Access**

BSR2800-20 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**

BSR2800-20 supports varied queues including FIFO, PQ, CQ, CBWFQ, LLQ, WFQ, DSCP, IP Precedence, RTS, RSVP and CAR.

BDCOM BSR2800-20 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**

BSR2800-20 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; BSR2800-08 series also support Chinese -English interface.

Hardware Specifications

Model		BSR2800-20	BSR2800-22	BSR2800-24E
Chassis	Console	1	1	1
	USB2.0	1	1	1
	GE-Combo	2	2	2
	GE-TX	4	4	4
	LAN	/	8*GE	24*FE
Expansibility	HIC	2	3	1*HIC+1*3G
	3G	HIC/USB	HIC/USB	HIC/USB
	Encryption engine	built-in	built-in	built-in
	PPS	2Mpps	2Mpps	2Mpps
	Flash	32MB	32MB	32MB

	DRAM	512MB	512MB	512MB
Performance Capacity	Voltage	100~240VAC	100~240VAC	
	Power consumption	≤30W	≤30W	
Peripherals	Dimensions mm (WxDxH)	310×300×44	443×300×44	
	Operating temperature	0°C-50°C	0°C-50°C	
	Operating humidity	5%-95% non-condensing	5%-95% non-condensing	

Software Characteristic

Model		BSR2800-20	BSR2800-22	BSR2800-24E
Link Protocols	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		

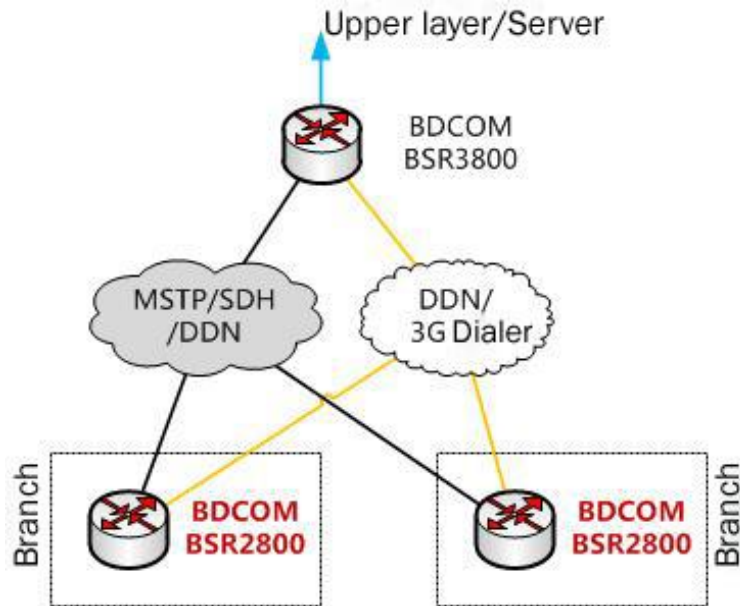
		<p>Ping, Trace Route, Nslookup</p> <p>IP ACL, IMP filter, Fast-Access</p> <p>DHCP Client/Serv/Relay</p> <p>DNS, DNS host, DNS Proxy, DDNS (Peanut Hull/Dyn DNS/CTC)</p> <p>Helper-Address, UDP Helper</p> <p>IP unnumber, DDR</p> <p>Keep alive, PDP (compatible with CISCO)</p> <p>Net Flow, IP Accounting</p> <p>TFTP Client/Serv, FTP Client</p> <p>SNTP, job/schedule</p> <p>PNP</p> <p>ALIAS</p> <p>Verse telnet, VTY binding</p>
	MPLS	<p>AToM, VPLS, MP-BGP, VRF</p> <p>L2VPN, L3VPN</p> <p>MPLS TE</p>
	IPv6	<p>IPv6 ND, IPv6 PMTU, IPv6 FIB, IPv6 ACL, IPv6 (approved by IPv6 Phase II)</p> <p>IPv6 QoS</p> <p>IPv6 transition: NAT-PT, IPv6 tunnel</p> <p>IPv6 tunnel: IPSec v6, GRE, 6to4, ISATAP</p> <p>IPv6 route: IPv6 static routing, RIPng, OSPFv3, BGP4+</p>
Reliability	Backup	<p>Interface backup</p> <p>Floating route backup</p> <p>E-Backup, Keep alive Ethernet remote monitoring</p> <p>VRRP, HSRP</p> <p>bandwidth based load sharing and backup</p> <p>traffic based load balancing and backup</p>

	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, Layer7 filter	
	Flow classification	ACL IP Precedence DSCP MAC 802.1P	
Switching	Switching	802.1p CoS, 802.1Q VLAN, 802.1x STP, RSTP, PVST Keep alive, 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	Supported mode	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 private network access for government, financial institutions, operators

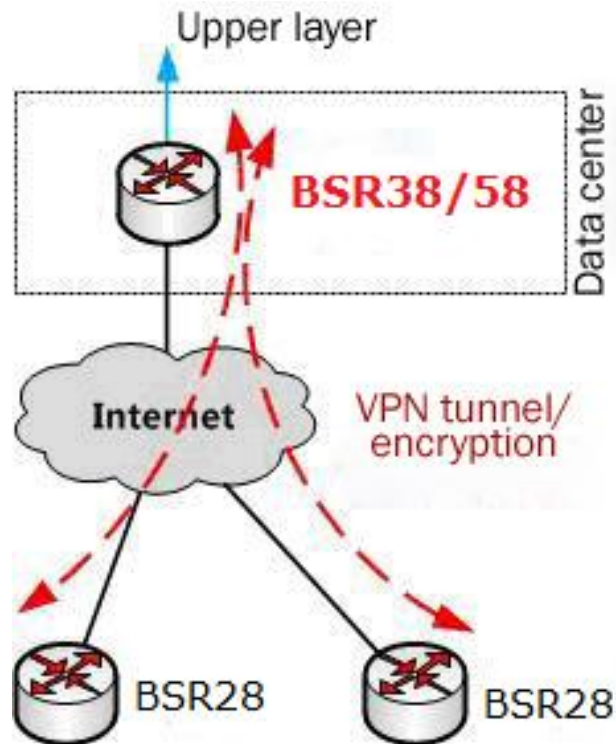


Each BSR2800 router has two standard GE ports, which can fully fulfill the connection of the website server and LAN; through flexible module configuration, you can access BSR2800 routers to the backbone networks such as MSTP and SDH; also through making DDN, E1 or 3G dial (USB expansion) as the backup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

2) 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

Model	Description
BDCOM BSR2800-22	BSR2800-22 Modularized multi-service router (1 CON, 1 USB2.0, 2 GE-Combo ports, 4 GE-TX Ethernet ports; 8

	GE-LAN; built-in encryption engine; 3 HIC slots)
BDCOM BSR2800-24E	BSR2800-24E Modularized multi-service router (1 CON, 1 USB2.0, 2 GE-Combo, 4 GE-TX Ethernet ports, 24 FE-LANs; built-in encryption engine; 1 HIC and built-in 3G slots)
BDCOM BSR2800-20	BSR2800-20 Modularized multi-service router (1 CON, 1 USB2.0, 2 GE-Combo ports, 4 GE-TX Ethernet ports; built-in encryption engine; 2 HIC slots)
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 100/1000M Ethernet interface card(RJ45+SFP)
HIC-3G-WCDMA	1-port WCDMA 3G access module, Unicom only

For More Information

For more information about **BDCOM BSR2800-20,22,24E Series**, please contact your local BDCOM account representative.

Shanghai Baud Data Communication Co., LTD.

No.123, Juli Road,
 Pudong Zhangjiang High-Tech Park,
 Shanghai 201203, P.R.China
www.bdc.com.cn

Tel: +86-21-50800666



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