



# BDCOM

## 3G Next-Generation Multiservice Routers

— BDCOM BSR2800-20+ Series

## BDCOM BSR2800-20+ Series

### Product Overview

BDCOM BSR2800-20 series is the next-generation multiservice switching router platform developed by BDCOM (Shanghai Baud Data Communication Co., Ltd). 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 BSR2800-20**



**BSR2800-24L**

BDCOM BSR2800-20+ includes models such as BSR2800-20, BSR2800-24L. 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, 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 BSR2800-20+ 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 meet requirements of the government, financial institutions, the defense system, operators and enterprises in network construction.

### Main Characteristics

#### ➤ High Performance

BDCOM BSR2800-20+ 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, BSR2800-20+ 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 BSR2800-20+'s expansibility has far surpassed that of the traditional modularized router.

#### ➤ **Energy-saving Advantage**

BSR2800-20+ 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 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. 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 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, series also support Chinese -English Telnet, SSH and SNMP; BSR2800-08 interface.

## Technical Parameters

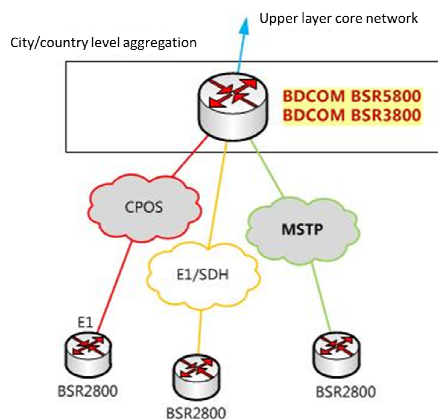
Model		BSR2800-20	BSR2800-24L
Chassis	Console	1	1
	USB2.0	1	1
	GE-Combo	2	2
	GE-TX	4	4
	FE-LAN	/	24
Expansibility	HIC	2	1
	Encryption engine	built-in	built-in
	WiFi	/	/
	3G	HIC	HIC, onboard
	Encryption	Optional	Optional
Performance/ Capacity	PPS	1Mpps	1Mpps
	BootROM	512K	512K
	Flash	32MB	32MB
	SDRAM	512MB	512MB
Peripherals	Fan	Fanless	Fanless
	Voltage	100~240VAC power supply, -36~-72VDC power supply (optional)	
	Power	≤30W	≤30W
	Dimensions mm (W×D×H)	Compact chassis,1U	19-inch, 1U
Temperature/ Humidity	Operating	0℃-40℃; 10%-85% non-condensation	
	Storage	-20℃-65℃; 5%-95% non-condensation	
Link interconnection	LAN	ARP, ARP proxy, Gratuitous ARP	
	WAN	PPP, Multilink-PPP, PPPoE (Client/Serv)	
		HDLC	
VPN	Unicast	static route, direct route, default route	
		RIPv1/v2, OSPFv2, BGPv4	
		PBR	
		FastSwitch, Load-Balance	
	Multicast	IGMP	
		PIM-DM, PIM-SM	
	IP	ICMP, TCP, UDP	
		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
		reverse telnet, VTY
	MPLS	MP-BGP, VRF
		L2VPN, L3VPN
	IPv6	IPv6 ND, IPv6 PMTU, IPv6 FIB, IPv6 ACL, IPv6 (approved by 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+
Reliability	Backup function	Interface backup
		Floating route backup
		E-Backup, Keepalive Ethernet remote monitoring
		VRRP
		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
IP Precedence		
DSCP		
MAC		
		802.1P
Switching function(for BSR2800-24L)	Switching	802.1p CoS, 802.1Q VLAN, 802.1x
		STP, RSTP
		Keepalive, port mirror, broadcast/multicast storm control

Network safety	AAA	Authentication, Authorization, Accounting
		enable, local, Radius, Tacacs+
		PAP, CHAP, MS-CHAP
	Firewall	ACL, NAT
		ASPF state detection
		SYN flood, UDP flood or ICMP flood
		ARP attack protection, ARP-SCAN
		Prevention of Ping of Death, Tear-drop, Land-Based, WinNuke, PingSweep, ARP attack and IP-Spoofing
	VPN	IKE, IPSec, EZVPN
L2TP, PPTP, GRE		
VPN nesting		
3G wireless	Type	WCDMA, CDMA2000, TD-SCDMA
Management and maintenance	Network management	SNMP, MIB, SYSLOG, RMON, HTTP management
	Local management	CLI management and file system management
	Log-on	Console/Telnet/VTY/SSH log-on mode

## Typical Application

- **Typical application for small or medium WAN aggregation:**



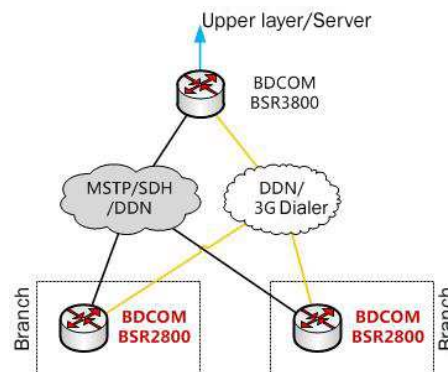
BDCOM BSR3800/BSR5800 routers are recommended to apply in private network aggregation of governments, financial institutions and operators.

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.

- **Typical private network access for government, financial institutions, operators**

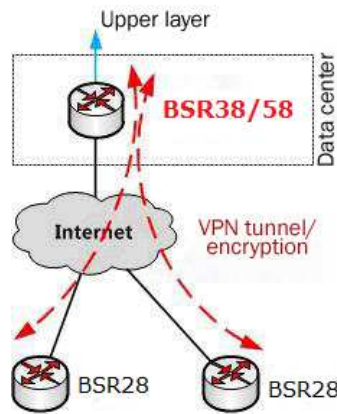


Each BSR2800 router has two standard GE ports, which can fully fulfill the connection of the website server and LAN; through flexible module configuration, you can access BSR2800 routers to the backbone networks such as MSTP and SDH; also through making DDN, E1 or 3G dial (USB expansion) as the backup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

- **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 BSR2800-20	Modularized multi-service router BSR2800-20 (1 CON, 1 USB2.0, 2 GE-Combo ports, 4 GE-TX Ethernet ports; built-in encryption engine; 2 HIC slots)
BDCOM BSR2800-24L	Modularized multi-service router BSR2800-24E (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)
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)
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-3G-WCDMA	WCDMA mode 3G card, Unicom only
HIC-3G-CDMA2000	CDMA2000 mode 3G card, telecom only
HIC-3G-TDSCDMA	TD-SCDMA mode 3G card, CMCC only
HIC-4G-TDD	TD-LTE mode 4G card, CMCC only

### For More Information

For more information about the [BDCOM BSR2800-20+ Series](#), please contact your local BDCOM account representative.

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