

NEXT-GENERATION MULTI-FUNCTIONAL SWITCHING ROUTER



PD1-BSR21-9001 Carrier Aggregation Router

PRODUCT OVERVIEW

- PD1-BSR21-9001 is the next-generation multi-functional switching router developed by TERRABIT. It adopts the 64-bit multi-core processor, high-speed switching engine. It is a well-adapted router.
- PD1-BSR21-9001 supports the full switching function, USB2.0 expansion, service expansion and engineering maintenance.
- PD1-BSR21-9001 is equipped with TerOS operating system, of which TERRABIT has the independent intellectual property right.
- PD1-BSR21-9001 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.
- PD1-BSR21-9001 meet requirements of the government, financial institutions, the defense system, operators and enterprises in network construction.

PRODUCT CHARACTERISTICS

High Performance

PD1-BSR21-9001 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 PD1-BSR21-9001 with a super processing capability, providing a guarantee for upper-layer software functions.

Strong Expansibility

Because built on the basis of switching core, PD1-BSR21-9001 can expand their external interfaces, slots and modules without any limitation from the total CPU resources. The switching chip guarantees that PD1-BSR21-9001 router is provided with sufficient and broadband internal channels, making the expansibility of PD1-BSR21-9001 exceed that of traditional modularized router.

Energy-Saving Advantage

PD1-BSR21-9001 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 PD1-BSR router is reduced by 15% to 20%, which both reduces the device maintenance cost and accords with the low-carbon idea. PD1-BSR21-9001 is also equipped with the environment friendly maglev mute fan.

Varied Protocols

PD1-BSR21-9001 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, PD1-BSR21-9001 supports integration of multiple services such as routing, switching, voice, safety and wireless, which meets the requirement of complicated network construction.

New Services

PD1-BSR21-9001 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. PD1-BSR21-9001 supports IPv6 data forwarding, routing protocols and multicast routing protocols. PD1-BSR21-9001 also supports the IPv4/IPv6 protocol stack and the interconnection technology, which makes the existing networks smoothly upgrade to IPv6.

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Secure Service Access

PD1-BSR21-9001 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

PD1-BSR21-9001 supports varied queues including FIFO, PQ, CQ, CBWFQ, LLQ, WFQ, DSCP, IP Precedence, RTS, RSVP and CAR.

PD1-BSR21-9001 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

PD1-BSR21-9001 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

PD1-BSR21-9001 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.

TECHNICAL PARAMETERS

Item	PD1-BSR21-9001	
Interface		
Console		1
USB2.0		1
WAN, LAN		4 GE TX, 4 GE SFP
RST		1
Encryption engine		Built-in
Performance		
Throughput		2Mpps
Flash		16MB
DRAM		1GB
NAT concurrent sessions		400K
Consumption		≤ 16W no-load ≤ 22W full-load
Total output BTU (note: 1000 BTU/hr = 293W)		75.09
Fan		0
Noise@25°C (dBA)		0
Power supply		100-240VAC, 50 Hz, 1+1 power backup
Appearance		
Chassis	Dimensions(WxDxH)	440x300x88mm
	Weight(empty)	4.4Kg
Package	Dimensions(WxDxH)	560x560x230mm
	Weight(empty)	6.8Kg
Environmental specifications		
Operating	Temperature	-20°C ~ +70°C
	Humidity	10% ~ 85% (non-condensing)
Storage	Temperature	-40°C ~ +85°C
	Humidity	5% ~ 95% (non-condensing)
Accessories		
Parts		Console cable, power cord, rackmount kits

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PRODUCT SPECIFICATIONS

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.

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, DNSlookup.
 - IP ACL, MAC ACL, IMP filter, Fast-Access.
 - DHCP Client/Serv/Relay.
 - DNS, DNS host, DNS Proxy, DDNS (Peanut Hull/DynDNS/CTC).
 - Helper-Address, UDP Helper.
 - IP unnumbered, DDR.
 - Keep alive, PDP(compatible with CISCO), BFD.
 - 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, ACL, NAT.
 - 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.
 - Routing 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, LLQ.
- **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, HTTP management.
- Console/Telnet/VTY/SSH logon mode.
- TerOS.

ORDERING INFORMATION

Model	Description
PD1-BSR21-9001	PD1-BSR21-9001 Multi-service Router (1 Console, 1USB2.0, 4 GE TX, 4 GE SFP; built-in encryption engine, 1 +1 redundancy power supply, 220V power supply).

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