SHDSL.bis

Back-to-back connectivity

IPv6 Support

BiPAC 8501 *R3* / 8521 *R3*

5.7 / 11.4Mbps SHDSL.bis Firewall Bridge / Router

Higher symmetric data rates power office productivity!

Small businesses often can maintain competitiveness by using a cost-effective networking solution instead of expensive leased lines for an online presence. As a substitute for a local leased line, Billion's BiPAC 8501 *R3*/ 8521 *R3* offers a perfect solution with symmetric transmission so SOHO and SME users can enjoy high-speed SHDSL.bis broadband services. Users can also access bandwidth-consuming applications such as video conferencing with greater ease and speed than previously. The device supports the latest SHDSL.bis technology with a higher symmetric upstream and downstream data rate of up to 5.7Mbps or 11.4Mbps. The Rate Adaptive feature allows the BiPAC 8501 *R3*/ 8521 *R3* to adjust the data rate automatically according to the quality of the wire connection. The Quality of Service feature ensures a smooth net connection for inbound and outbound data with minimal traffic congestion. Rich Firewall security features such as SPI, DoS attack prevention and URL Content Filtering are also integrated, providing users with unparalleled access protection.

High-speed Internet Access with 2 / 4-wire SHDSL.bis

The BiPAC 8501 *R3*/ 8521 *R3* complies with the latest SHDSL.bis technology standards for worldwide deployment and supports a symmetric data rate of up to 5.7Mbps / 11.4Mbps. With SHDSL.bis technology, the BiPAC 8501 *R3*/ 8521 *R3* allows office users to enjoy high-speed symmetric bandwidth and access multimedia applications such as FTP sharing, video conferencing and real-time audio with greater ease and speed than ever before.

Flexible and Varied Connections

The BiPAC 8501 *R3*/ 8521 *R3* support Back-to-back connectivity. User can make a direct connection between two SHDSL devices that one is set to be CPE and the other CO by using a standard RJ-11 telephone cable. It is easy to connect two separated networks together and communicate with each other.

Firewall Security and Smooth Traffic

With the built-in NAT default firewall, the advanced anti-hacker pattern-filtering protection features automatically detect and block Denial of Service (DoS) attacks. In addition, packet filtering provides high-level security for access control. Quality of Service control prioritizes the traffic and allows users to enjoy smooth traffic while running applications such as IPTV, VoIP calls or interactive game through the Internet.

Easy Network Management

The Web-based user interface of the BiPAC 8501 *R3*/ 8521 *R3* makes it extremely easy for users to install and manage the network. The router supports both DHCP client and server, enabling system administrators to easily integrate this router into existing network environments, as well as manage IP assignment without having to reconfigure other stations.

IPv6 Ready - Pathway to the Future

The BiPAC 8501 *R3*/ 8521 *R3* supports IPv6 (Internet Protocol Version 6), launched as the current IPv4 range is filling up, and IPv6 is gradually becoming the indispensable addressing system for savvy cloud computing users. [1]
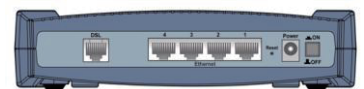
▲ **BiPAC 8501 *R3* Real Panel**
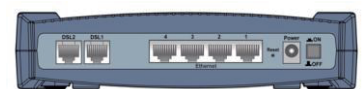
▲ **BiPAC 8521 *R3* Real Panel**

- High-speed Internet Access with SHDSL.bis, backward compatible with SHDSL
- Supports Symmetric Data Transfer up to 5.7Mbps / 11.4Mbps (* BiPAC 8521 R3 only)
- 4-port 10/100Mpbs Fast Ethernet switch
- Supports Level 2 (ATM) and EFM frame type
- Support Back-to-back Connectivity
- Supports 4-wired (Standard mode, Enhanced mode and EFM Bonding) (* BiPAC 8521 R3 only)
- SOHO Firewall Security with DoS Prevention and SPI
- Quality of Service control for traffic prioritization
- Universal Plug and Play (UPnP) compliance
- Dynamic Domain Name System (DDNS)
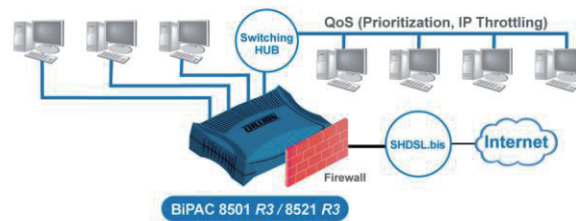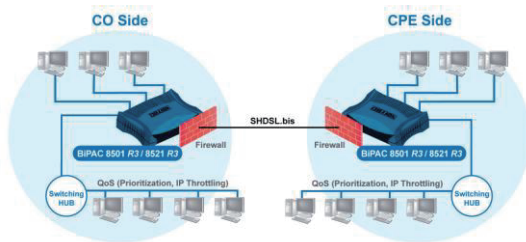- Ease of use with Quick Installation Wizard
  Supports IPv6 [1]

▲ BiPAC 8501 *R3* / 8521 *R3* application diagram

▲ Back-to-back Connectivity (BiPAC 8501 *R3*/ 8521 *R3*)

▲ 4-wired (Standard mode, Enhanced mode and EFM Bonding)
(* BiPAC 8521 R3 only)

Features & Specifications

SHDSL Compliance
- ITU-T G.991.2 (G.SHDSL.bis), including Annex A, B, F, G
- ITU-T G.994.1 (G.hs)
- IEEE 802.3ah-2004 (IEEE EFM)
- ANSI T1E1.4/2003-334R6 (ATM bonding) (* BiPAC 8521 R3 only)
- ITU G.998.1 (ATM bonding) (* BiPAC 8521 R3 only)
- ITU G.998.2 (EFM bonding) (* BiPAC 8521 R3 only)
- Symmetric data rate of up to 5.7Mbps on 2-wire; 11.4Mbps on 4-wire (* BiPAC 8521 R3 only)
- Rate Adaptive / Fixed Mode

Network Protocols and Features
- CPE & CO mode - Back-to-Back connectivity
- IPv4, IPv6[1]
- Multiple Protocols over AAL5 (RFC 2684, formerly RFC 1483)
- PPP over Ethernet (PPPoE), DHCP client, Static IP
- NAT, static routing and RIP v1/v2
- Universal Plug and Play (UPnP) compliant
- Virtual server and DMZ
- SNTP, DNS relay
- Dynamic Domain Name System (DDNS)
- IGMP proxy and IGMP snooping
- MLD proxy and MLD snooping

Firewall
- Built-in NAT Firewall
- Stateful Packet Inspection (SPI)
- Prevents DoS attacks including Land Attack, Ping of Death, etc.
- Packet Filtering - MAC address, IP address, Port number or Protocol
- URL Content Filtering - string or domain name detection in URL strings
- Password protection for system management

Quality of Service Control
- Traffic prioritization and bandwidth management based on IP protocol, IP address and port number

IPTV Applications[2]
- Quality of Service (QoS)
- IGMP proxy and snooping
- MLD proxy and snooping

Management
- Quick installation wizard
- Web-based GUI for remote and local management
- Firmware upgrades and configuration data upload and download via web-based GUI
- Supports DHCP server / relay / client(WAN port)
- Support SNMP
- Mail Alert

Hardware Specifications

Physical Interface
- WAN:
  - 1x SHDSL port (BiPAC 8501 R3)
  - 2x SHDSL ports (BiPAC 8521 R3)
- Ethernet LAN: 4-port 10/100Mbps auto-crossover (MDI/MDI-X) switch
- Factory default reset button
- Power jack
- Power switch

Physical Specifications
- Dimensions: 7.09" x 4.72" x 1.57" (180mm x 120mm x 40mm)

Power Requirements
- Input: 12V DC, 1.0A

Operating Environment
- Operating temperature: 0℃ - 40℃
- Storage temperature: -20℃ - 70℃
- Humidity: 20% - 95% non-condensing

Notes:
1. Only upon request for Telco/ISP tender projects.
2. IPTV application may require subscribing to IPTV services from a Telco/ISP.
3. Specifications in this datasheet are subject to change without prior notice.

V09032014

台灣區認證代理商

SIPRO 瑞虹科技股份有限公司 │ 電話：(02)2999–0857 │ 電郵：siprotech_sales@siprotech.com.tw
www.siprotech.com.tw │ 傳真：(02)2999–0852 │ 地址：新北市三重區光復路一段83巷1號3樓