



## BiPAC 8700VAXL-1600

### Triple-WAN Wireless 1600Mbps 3G/4G LTE VoIP VDSL2/ADSL2+ Firewall Router

The BiPAC 8700VAXL-1600 is an economic wireless 1600Mbps VDSL2/ADSL2+ VoIP router that allows users to have the wireless connection, VoIP calls and high speed Internet connection. With an integrated 802.11ac (1300Mbps) and 11n (300Mbps) Access Point, the BiPAC 8700VAXL-1600 can automatically adopt an optimal connection to deliver smooth, constant signal reception even if obstacles are present. Robust firewall security is featured to protect Internet access against hacker attacks. The Quality of Service and VLAN enables intelligent steaming for HD video or multiple applications such as music downloads, online gaming, video streaming and file sharing simultaneously. As well as being IPv6-capable, the BiPAC 8700VAXL-1600 could expand the path to IPv6 network world.

#### Optimal Wireless Speeds and Coverage

Utilizing the benefits of dual band Wireless (802.11ac and 802.11n) technology, BiPAC 8700VAXL-1600 performs faster file transfers and farther coverage enabling greater wireless signals across your home. If the network requires wider coverage, the built-in Wireless Distribution System (WDS) repeater function allows users to expand the wireless network without the need for any external wires or cables. Upgrading your home network to Wireless-N provides an excellent solution for experiencing better wireless performance while sharing a broadband Internet connection with multiple computers over a secure wireless network.

#### Built-in QoS Engine Enhances Internet Experience

Quality of Service (QoS) gives full control over outgoing data traffic. The priority can be assigned by the router to ensure that important transmissions like gaming packets, VoIP calls or IPTV/streaming contents can pass through the router at the lightning speed, even when there is heavy Internet traffic. The VLAN support is also capable of establishing reliable high-speed transmissions for wide bandwidth applications such as IPTV, VoD, or online gaming without consuming bandwidth.

#### True Cost Saving with the "Least Cost Routing" Feature

Making a VoIP call is extremely simple. You just need to connect your existing telephones to one or both phone ports. The BiPAC 8700VAXL-1600 complies with the most popularly adopted VoIP industrial standard, SIP protocol, ensuring interoperability with other SIP devices and major VoIP gateways. The Gateway feature called "Least Cost Routing" offers the choice of the most economical rates offered by different service providers.

#### Pathway to the IPv6 future

The BiPAC 8700VAXL-1600 fully support IPv4 and IPv6 dual stack. Dual Stack means the router is capable of running IPv4 and IPv6. With Billion IPv6 enabled devices, three major transition mechanisms such as Dual-Stack, Dual-Stack Lite, and 6RD (IPv6 rapid deployment) are supported to be adapted easily into service provider's IPv4/IPv6 network.

Ideal for  
Home,  
and SOHO  
Users

- Triple-WAN ports for 3G/4G LTE, VDSL2/ADSL2+, ADSL2+, Gigabit Ethernet WAN (EWAN) for broadband connectivity
- High-speed Internet Access via VDSL2 and fallback to ADSL2+
- 4-port Giga Ethernet switch integrated
- 5th RJ-45 Giga Ethernet port can be configured as a WAN interface for broadband connectivity
- Wireless Access Point with Wi-Fi Protected Setup (WPS), Wi-Fi Protected Access (WPA-PSK/ WPA2-PSK) and Wired Equivalent Privacy (WEP) supported
- Simultaneous dual-band Wireless 1300Mbps (5GHz) and 300Mbps (2.4GHz)
- NBN (National Broadband Network) ready<sup>1</sup>
- Quality of Service control for traffic prioritization management
- Supports IPv4/IPv6 dual stack
- SOHO firewall security with DoS prevention and packet filtering
- Universal Plug and Play (UPnP)
- Dynamic Domain Name System (DDNS)
- Available Syslog
- Monitoring of individual LAN ports
- SIP gateway – least cost routing for VoIP calls.
- Supports telephony features: call waiting, caller ID, three-way conference, and etc.
- Supports IPTV application<sup>2</sup>

## Features & Specifications

### VDSL2/ADSL2+ Compliance

- Compliant with xDSL standard
  - ITU-T G.993.1(VDSL)
  - ITU-T G.993.2 (VDSL2)
  - ITU-T G.998.4 (G.inp)
  - ITU-T G.993.5 (G.vector)
  - ITU-T G.992.5 (G.dmt.bis plus, Annex M)
  - ITU-T G.992.4 (G.lite.bis)
  - ITU-T G.992.3 (G.dmt.bis, Annex M and Annex L)
  - Full-rate ANSI T1.413 Issue 2
  - ITU-T G.992.1 (G.dmt)
  - ITU-T G.992.2 (G.lite)
  - ITU-T G.994.1 (G.hs)
- Supports VDSL2 profiles: 8a, 8b, 8c, 8d, 12a, 12b, and 17a
- ADSL2/2+ fallback modes

### Network Protocols and Features

- IPv4 or IPv4/IPv6 dual stack
- NAT, static (v4/v6) routing and RIP-1/2
- IPv6 stateless/stateful address auto-configuration
- IPv6 router advertisement
- IPv6 over PPP
- DHCPv6
- IP tunnel IPv6 in IPv4 (6RD)
- IP tunnel IPv4 in IPv6 (DS-Lite)
- Universal Plug and Play (UPnP) compliant
- Dynamic Domain Name System (DDNS)
- Virtual server and DMZ
- SNTP, DNS relay, IGMP proxy and IGMP snooping for video service
- MLD proxy and MLD snooping for video service
- Management based on IP protocol, port number and address
- SMTP client with SSL/TLS
- Supports Interface Grouping (VLAN)

### Firewall

- Built-in NAT firewall
- Stateful Packet Inspection (SPI)
- Prevents DoS attacks including Land Attack, Ping of Death, etc
- Remote access control for web base access
- IP filtering incoming/IP filtering outgoing (v4/v6) - port, source IP address, destination IP address
- URL filtering (v4/v6) - string or domain name detection in URL string
- Password protection for system management
- IP filtering incoming/IP filtering outgoing - port, source IP address, destination IP address
- MAC filtering
- URL filtering
- Password protection for system management
- VPN pass-through

### USB Application Server

- 3G/4G LTE modem
- FTP server/Media server

### Quality of Service Control

- Supports the DiffServ approach
- Traffic prioritization management based on IP protocol, port number and address

### ATM and PPP Protocols

- ATM Adaptation Layer Type 5 (AAL5)
- Classical IP over ATM (IPoA) (RFC 2225/RFC 1577)
- VC-based and LLC-based multiplexing
- PPP over Ethernet (PPPoE)
- PPP over ATM (RFC 2364)
- Multiple protocol over AAL5 (RFC 2684, formerly RFC 1483)
- Bridged or routed Ethernet encapsulation
- MAC Encapsulated Routing (RFC 1483 MER)
- OAM F4/F5
- AIS and RDI OAM cells
- Supports 16 PVCs

### IPTV Applications<sup>\*2</sup>

- IGMP snooping and IGMP proxy
- MLD snooping and MLD proxy
- Supports Interface Grouping (VLAN)
- Quality of Service (QoS)

### Wireless LAN

- Compliant with IEEE 802.11a/b/g/n/ac standards
- 2.4 GHz and 5 GHz frequency range
- Up to 1600Mbps wireless operation rate
- 64/128 bits WEP supported for encryption
- WPS (Wi-Fi Protected Setup) for easy setup
- Wireless security with WPA-PSK/WPA2-PSK/TKIP/AES
- WDS repeater function
- Multi-SSID
- Client Isolation
- 802.1x radius supported
- Disable WMF Advertise
- Enable Wireless Multicast Forwarding(WMF)
- MAC Filter

### VoIP

- Two RJ-11 FXS port for connecting to regular telephones
- Compliant with SIP standard (RFC 3261)/SDP (RFC 2327)/RTP (RFC 1889)/RTCP (RFC 1890)
- Supports G.711 A/μ law, G.722, G.722.2, G.723.1, G.726, and G.729 Audio Codec standards
- Supports telephony features: call waiting, silence suppression, voice activity detection (VAD), comfort noise generation (CNG), G.168 line echo cancellation, caller ID (Bell 202, V23), and three-way conference
- Dialing rules for individual use of Internet
- DND (Do Not Disturb)/CNG (Comfort Noise Generation)/DTMF Detection and Generation/Silence Suppression
- Multiple SIP

### Management

- Web-based GUI for remote and local management
- Firmware upgrades and configuration data upload and download via web-based GUI
- Embedded Telnet server for remote and local management
- Available syslog
- Supports DHCP server/client/relay
- TR-069<sup>\*3</sup> supports remote management
- SNMP v1/v2 supports remote and local management
- Supports Remote Access Control

### Hardware Specifications

#### Physical Interface

- WLAN: 3 external and 2 internal antennas
- DSL: VDSL/ADSL port
- USB: 1 USB 2.0 ports
- Ethernet: 5-port Giga ports auto-crossover (MDI/MDI-X) switch
- EWAN: 5th RJ-45 Giga Ethernet port can be configured as a WAN interface for broadband connectivity
- Telephone: 2 FXS ports
- Factory default reset button
- WPS push button
- WLAN on/off push button
- Power jack
- Power switch

#### Physical Specifications

- Dimensions: 8.27" x 7.13" x 2.83"  
(210 mm x 181 mm x 72 mm)

#### Power Requirements

- Input: 12V DC, 2.0A

#### Operating Environment

- Operating temperature: 0 - 40°C
- Storage temperature: -20 - 70°C
- Humidity: 20 - 95% non-condensing

#### Notes:

- This is only applicable for Australia and New Zealand
- IPTV application may require subscribing to IPTV services from a Telco / ISP.
- Only upon request for Telco/ISP tender projects.
- Specifications in this datasheet are subject to change without prior notice.