



## BiPAC 9800VNX(L)-PD

### Wireless-N 3G/4G LTE VoIP (VPN) PoE-powered Fibre Router

The BiPAC 9800VNX(L)-PD is a point-to-point (Active Ethernet) Fibre Optical Gateway with unique Small Form Factor Pluggable (SFP) interface that can support 100/1000Base auto-sensed connectivity in a box. With WAN throughput in excess of 900Mbps and one USB port on the rear of the router will support 3G/4G LTE services from selected dongles for high-speed mobile connectivity. Failover between fixed line and mobile connectivity also quickly and smoothly ensures maximum Internet uptime. The BiPAC 9800VNX(L)-PD is designed for home and office environment extending reliable, high-speed, and long-reach last-mile connectivity to people living and working building.

The BiPAC 9800VNX(L)-PD integrates with 4-port Gigabit LAN switch and port #4 can obtain power via 802.3at PoE (Power over Ethernet). It provides both data and power connections in one cable and enables ordinary Ethernet network cables to function as power cords. Easy Installation is realized with integrated IEEE 802.3at PoE support, eliminating the need for separated power and data cables. With an integrated 802.11n wireless access point and 4-port Gigabit Ethernet LAN ports, the gateway enables faster wireless speeds of up to 300Mbps and LAN connection 10 times faster than regular 10/100Mbps Ethernet LAN. The BiPAC 9800VNX(L)-PD provides a unique Management Center, enabling users to monitor 3G/4G LTE signal strength, bandwidth, download speed, and much more.

Furthermore, the BiPAC 9800VNX(L)-PD supports remote management which facilitate FTTH service provider deliver more efficient management. The gateway leverages the extraordinary bandwidth to deliver high-speed Internet applications to home and office users. The full-featured fibre router providing is an ideal solution for FTTH deployments.

#### FTTH Applications

The BiPAC 9800VNX(L)-PD can be used for a point-to-point fibre access network. Since the Fibre WAN interface allows faster rates over even longer distances, it can support Telecom operators or ISPs to provide high quality and reliable Internet broadband services to either business users or home users. The 4-port Gigabit Switch incorporated into the BiPAC 9800VNX(L)-PD enables blistering LAN transfer rates for multimedia applications such as interactive gaming, IPTV video streaming and real-time audio.

#### 3G/4G Mobility and Always-On Connectivity

With the BiPAC 9800VNX(L)-PD you can connect a 3G/4G LTE USB modem to built-in USB port. The auto failover feature ensures maximum connectivity and minimum interruption by quickly and smoothly connecting to a 3G/4G LTE network in the event that your fixed line fails. The BiPAC 9800VNX(L)-PD will then automatically reconnect to the fixed line connection when it's restored, ideal for office situations where a constant and uninterrupted connection is critical.

#### Wireless Mobility and Security

With an integrated 802.11n Wireless Access Point, the router delivers up to 3 times the wireless coverage of a 802.11b/g network device, so that wireless access is available everywhere in the house or office. If your network requires wider coverage, the built-in Wireless Distribution System (WDS) allows you to expand your wireless network without additional wires or cables. The BiPAC 9800VNX(L)-PD also supports the Wi-Fi Protected Setup (WPS) standard and allows users to establish a secure wireless network just by pressing a button. Multiple SSIDs allow users to access different networks through a single access point. Network managers can assign different policies and functions for each SSID, increasing the flexibility and efficiency of the network infrastructure.

#### IPv6 Ready - Pathway to the Future

The BiPAC 9800VNX(L)-PD fully 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. Dual stack means the router is capable of running IPv4 and IPv6 in parallel during the transition period. 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.\*1



- WAN interface supports up to 1000 Mbps downstream and upstream wire-speed (over 900Mbps) rates
- SFP interface supports 100/1000Base [auto-sensed](#) Fibre connectivity
- Extra RJ-45 Ethernet WAN (EWAM) port for connecting to ADSL/VDSL/Cable/Fibre modem device
- Supports 802.3at PoE or power adapter 12V DC-in
- Embedded IPsec and PPTP VPN endpoint /server with powerful encryption (BiPAC 9800VNX-PD)
- USB port supports 3G/4G LTE for broadband connectivity
- Auto failover feature to ensure an always-on connectivity
- 802.11n wireless AP with high-speed wireless connection up to 300Mbps data rate
- Supports Wi-Fi Protected Setup (WPS) and WPA-PSK/WPA2-PSK
- 4-port Gigabit LAN switch
- IPv6 ready (IPv4/IPv6 dual stack)
- Voice over IP compliant with SIP standards
- Two FXS ports for connecting to regular telephones
- QoS for traffic prioritization and bandwidth management
- Supports IPTV Applications\*3

## Features & Specifications

### Network Protocols and Features

- IPv4, IPv6, IPv4/IPv6 dual stack
- Dual-Stack Lite and 6RD (IPv6 rapid deployment)<sup>\*2</sup>
- NAT, static routing and RIP v1/v2
- Dual WAN failover and fallback
- Virtual server and DMZ
- SNTP, DNS proxy
- Universal Plug and Play (UPnP) compliant
- Dynamic Domain Name System (DDNS)
- IGMP proxy and IGMP snooping
- MLD proxy and MLD snooping

### WAN Protocol

- DHCP Client
- Static IP
- PPPoE

### Firewall

- Built-in NAT Firewall
- Stateful Packet Inspection (SPI)
- Prevents DoS attacks including Land Attack, Ping of Death, etc.
- Access control
- IP filtering, MAC filtering, URL filtering
- Password protection for system management
- VPN pass-through

### Quality of Service Control

- Traffic prioritization and bandwidth management based-on IP protocol, port number and address

### USB Applications Server

- 3G/4G LTE USB modem
- Storage/NAS: FTP server, SAMBA server

### Virtual Private Network (BiPAC 9800VNX-PD)

- 8 IPSec VPN tunnels (up to 30 tunnels<sup>\*1</sup>)
- 4 L2TP VPN tunnels
- 4 PPTP VPN tunnels

### IPTV Applications<sup>\*3</sup>

- IGMP proxy and IGMP snooping
- MLD proxy and MLD snooping
- Virtual LAN (VLAN)
- Quality of Service (QoS)

### Wireless LAN

- Compliant with IEEE 802.11n, 802.11g and 802.11b standards
- 2.4GHz - 2.484GHz frequency range
- Up to 300Mbps 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
- Multiple wireless SSIDs with wireless guest access and client isolation
- Supports WDS repeater function

### VoIP

- Compliant with SIP standard: RFC3261
- Two RJ-11 FXS ports for connecting to regular telephones
- Supports two SIP accounts for connecting to Internet Telephony Service Provider (ITSP)
- Supports G.711 A /  $\mu$  law, and G.729\*3 Audio CODEC standards
- Supports FAX Transmission: T.38 fax relay, G.711 pass-through
- Supports Telephony Features: silence suppression, Voice Activity Detection (VAD), Comfort Noise Generation (CNG), G.168 echo cancellation, packet loss concealment
- Adaptive jitter buffer support
- DTMF: In-band / out-of-band (RFC2833) / SIP INFO

### Management

- Easy Sign-On (EZSO)
- 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/client/relay (WAN port)
- TR-069<sup>\*4</sup> (CWMP) supports remote management
- Supports SNMP

### Hardware Specifications

#### Physical Interface

- WAN: 100/1000BASE SFP cage
- EWAN: RJ-45 Gigabit Ethernet port for connecting to ADSL/Cable/VDSL/Fibre modem device
- Ethernet LAN: 4-port 10/100/1000Mbps auto-crossover (MDI/MDI-X) switch
- PoE: Ethernet port #4 can obtain power via 802.3at PoE switch or power injector
- USB: USB 2.0 type A ports support storage service or 3G/4G LTE USB modem
- WLAN: 2 detachable antennas
- Factory default reset button
- Wireless on/off and WPS push button
- Power jack
- Power switch

#### Physical Specifications

- Dimensions: 9.04" x 6.10" x 1.46"  
(229.5 mm x 155 mm x 37 mm)

#### Power Requirements

- Input: 12V DC, 1.5A

#### Operating Environment

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

#### Notes:

1. Future release
2. Future release and only upon request for Telco/ISP tender projects.
3. IPTV application may require subscription to IPTV services from a Telco/ISP.
4. Only upon request for Telco/ISP tender projects.
4. Specifications in this datasheet are subject to change without prior notice.