N 802.11n

4-port Gigabit Switch

300 Mbps data rate

3x Wireless coverage of 802.11g

BILLION™

▲ BiPAC 7800

▲ BiPAC 7800N

Wireless speed up to 300Mbps and 3X the coverage of standard 802.11g

BiPAC 7800(N)

(802.11n) ADSL2+/Broadband Firewall Router with Gigabit Ethernet Switch

Experience super fast broadband connectivity with the ADSL2+ and FTTH multi-service gateway!

The BiPAC 7800(N) series is an all-in-one ADSL2+/Broadband Router that offers users the flexibility of multiple Internet connections and expanded wireless coverage. All this is offered while maintaining high-speed broadband access via ADSL2+ or through an Ethernet WAN. The integrated draft 802.11n Wireless Access Point ensures the 7800N offers faster wireless speeds (up to 300Mbps) while two built-in antennae effectively search for wireless signals. The BiPAC 7800(N) automatically adopts the optimal connection to deliver smooth, constant signal reception even if obstacles are present. The BiPAC 7800(N) series is equipped with a second Ethernet WAN interface, which can be used to connect to an external broadband modem. This unique feature frees users to add fiber-to-the-home (FTTH) services when they become available. Users can easily enjoy high-bandwidth applications such as High Definition IPTV services without changing their home network. A robust Firewall is also built in to provide protection against hacker attacks while the Quality of Service feature prioritizes queues and traffic for applications such as music downloads, online gaming, video streaming and file sharing.

The Second Ethernet WAN
The BiPAC 7800(N) series uses a Dual-WAN approach with an ADSL2+ port and a separate RJ-45 WAN port that offers another broadband connectivity option for connecting to Cable, VDSL or Fiber modems.

Express Internet Access
The BiPAC 7800(N) series is compliant with worldwide ADSL standards, and supports download rates of up to 12/24Mbps using ADSL2/2+, 8Mbps using ADSL and an upload rate of up to 1Mbps. The integrated Annex M standard supports ADSL2/2+ for higher uploads by doubling the upload data rate. The 4-port Gigabit Switch incorporated into the BiPAC 7800(N) enables users to connect to multiple computers or wired-Ethernet devices easily and enjoy blistering LAN transmission for multimedia applications such as interactive gaming, IPTV video streaming and real-time audio.

Smooth, Responsive Net Connection[*5]
Quality of Service (QoS) gives users full control over outgoing data traffic. Priority can be assigned by the router to ensure that important transmissions like gaming packets, VoIP calls or IPTV/streaming content passes through the router at lightning speed, even when there is heavy Internet traffic. The speed of different types of outgoing data passing through the router is also controlled to ensure that users do not saturate bandwidth with their browsing activities.

Robust Firewall Security
The NAT default firewall has advanced anti-hacker pattern-filtering protection features that automatically detect and block Denial of Service (DoS) attacks. In addition, Packet Filtering provides high-level security for access control. Built with Stateful Packet Inspection (SPI), the router enables users to determine whether or not a data packet is allowed to pass through the firewall to the private LAN.

Optimal Wireless Speeds and Coverage (BiPAC 7800N)
With an integrated Draft-802.11n Wireless Access Point, the router delivers up to 6 times the speed and 3 times the wireless coverage of an 802.11b/g network device. It supports a data rates up to 300Mbps and is also compatible with 802.11b/g equipment. The Wireless Protected Access (WPA-PSK/WPA2-PSK) and Wireless Encryption Protocol (WEP) features enhance the level of transmission security and access control over Wireless LAN. The router also supports the Wi-Fi Protected Setup (WPS) standard, allowing users to establish a secure wireless network by simply pushing a button. 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.

- Dual-WAN approach - ADSL2+ or Ethernet WAN for Broadband Connectivity
- 4-port Gigabit Switch
- Supports Draft-802.11n Wireless Access Point with WPA-PSK / WPA2-PSK (BiPAC 7800N)
- High-speed Internet Access via ADSL2/2+; Backwards Compatible with ADSL
- WPS (Wi-Fi Protected Setup)[*5] for Easy Setup (BiPAC 7800N)
- Wireless Speed up to 300Mbps and 3 Times the Coverage of Standard 802.11b/g (BiPAC 7800N)
- Quality of Service Control[*5] for Traffic Prioritization and Bandwidth Management
- SOHO Firewall Security with DoS Prevention and Packet Filtering
- Universal Plug and Play (UPnP) Compliance
- Dynamic Domain Name System (DDNS)
- Available Syslog monitoring
- Ease of Use with Quick Installation Wizard and Auto-scan ADSL settings[*5]
- Supports IPTV Applications[*2]

Powering communications with **Security**
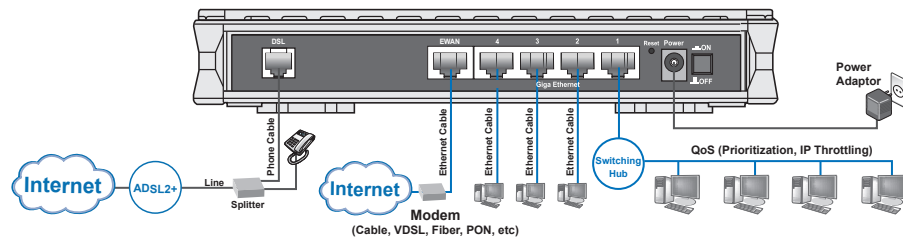
▲ **BiPAC 7800** Dual WAN ADSL2+/Broadband Firewall Router
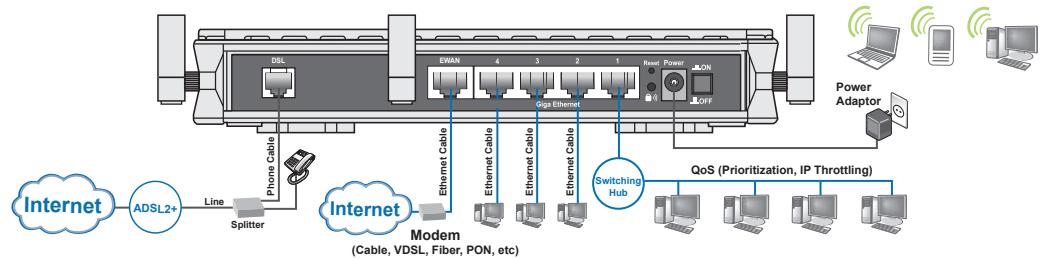
▲ **BiPAC 7800N** 802.11n Dual WAN ADSL2+/Broadband Firewall Router

Features & Specifications

ADSL Compliance
- Compliant with ADSL Standard
  - Full-rate ANSI T1.413 Issue 2
  - G.dmt (ITU G.992.1)
  - G.lite (ITU G.992.2)
  - G.hs (ITU G.994.1)
  - ADSL over ISDN / U-R2
- Compliant with ADSL2 Standard
  - G.dmt.bis (ITU G.992.3)
  - ADSL2 Annex M (ITU G.992.3 Annex M) (BiPAC 7800(N)A only)
- Compliant with ADSL2+ Standard
  - G.dmt.bis plus (ITU G.992.5)
  - ADSL2+ Annex M (ITU G.992.5 Annex M) (BiPAC 7800(N)A only)

Network Protocols and Features
- NAT, static routing and RIP-1 / 2
- Universal Plug and Play (UPnP) Compliant
- Dynamic Domain Name System (DDNS)
- Virtual Server and DMZ
- SNTP, DNS relay and IGMP Proxy
- IGMP snooping for video service

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
- Packet and URL filtering*5
- Password protection for system management
- VPN pass-through

Quality of Service Control*5
- Supports the DiffServ approach
- Traffic prioritization and bandwidth management based-on IP protocol, port number and address

ATM and PPP Protocols
- ATM Adaptation Layer Type 5 (AAL5)
- Multiple Protocol over AAL5 (RFC 2684, formerly RFC 1483)
- Bridged or routed Ethernet encapsulation
- VC and LLC based multiplexing
- PPP over Ethernet (PPPoE)
- PPP over ATM (RFC 2364)
- Classical IP over ATM (RFC 1577)
- MAC Encapsulated Routing (RFC 1483 MER)
- OAM F4 / F5

IPTV Applications*2
- IGMP Snooping
- Virtual LAN (VLAN)
- Quality of Service (QoS)*5

Wireless LAN (BiPAC 7800N)
- Compliant with IEEE 802.11n draft 2.0, 802.11g and 802.11b standards
- 2.4 GHz – 2.484 GHz frequency range
- Up to 300Mbps wireless operation rate
- 64/128 bits WEP supported for encryption
- WPS (Wi-Fi Protected Setup) for easy setup*5
- Wireless Security with WPA-PSK / WPA2-PSK support
- WDS repeater function support

Management
- Quick Installation Wizard and Auto-scan ADSL settings*5
- Web-based GUI for remote and local management
- Firmware upgrade and configuration data upload and download via web-based GUI
- Embedded Telnet server for remote and local management
- Available Syslog monitoring
- Supports DHCP server / client / relay
- TR-069*3 supports remote management

Hardware Specifications
Physical Interface
- WLAN: 3 x 2 dbi detachable antennas (BiPAC 7800NA only)
- DSL: ADSL port
- EWAN: RJ-45 Ethernet port for connecting to ADSL / Cable / FTTH / VDSL device
- Ethernet: 4-port 10/100/1000M auto-crossover (MDI / MDI-X) Switch
- Factory default reset button
- WPS push button (BiPAC 7800NA only) (future release)
- Power jack
- Power switch
Physical Specifications
- Dimensions: 9.04" x 6.10" x 1.46" (229.5mm x 155mm x 37mm)
Power Requirements
- Input: 12V DC, 1.5A

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

Models & Supported Standards
- BiPAC 7800(N)A: Annex A and Annex M (Annex A and Annex M: ADSL over POTS)
- BiPAC 7800(N)U: U-R2 and Annex B (Annex B and U-R2: ADSL over ISDN)

Notes:
1. The router may require firmware modification for certain ADSL2 / 2+ / Annex M DSLAMs.
2. IPTV application may require subscribing to IPTV services from a Telco / ISP.
3. Only upon request for Telco/ISP tender projects.
4. Specifications in this datasheet are subject to change without prior notice.
5. Future release

V.122408

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