



**3G/4G LTE Embedded with Dual-SIM Slots  
ADSL2+ Wireless-N VPN Firewall Router**



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Wireless-N VPN Firewall Router**

# BiPAC 7820NZ

The BiPAC 7820NZ, triple-WAN 3G/4G LTE/ADSL2+ firewall router is integrated with the 802.11n Wireless Access Point and 4-port switch. It is a cutting-edge networking product for SOHO and office users. Its uniquely embedded dual-SIM card slot enables users to enjoy constant and seamless Internet experience by simply plugging 3G/4G LTE SIM cards into its built-in SIM slots without the needs of additional 3G/4G LTE USB modems. One SIM card is active and the other is backup. It is perfectly suitable for machine-to-machine (M2M) applications in industries ranging from automotive, agriculture, construction, healthcare, logistics, retail services, public safety, and transportation.

### 3G/4G LTE Mobility and Always-On Connection

The BiPAC 7820NZ router allows you to insert 3G/4G LTE SIM card to its built-in SIM slots, enabling you to use a 3G/4G LTE Internet connection, which makes downstream rates of up to 100Mbps\*3 possible. With the increasing popularity of the 3G/4G LTE standard, communication via the BiPAC 7820NZ is becoming more convenient and widely available - allowing you to watch movies, download music on the road, or access e-mail no matter where you are. You can even share your Internet connection with others, no matter if you're in a meeting, or speeding across the country on a train. The BiPAC 7820NZ will then automatically reconnect to the ADSL connection when it's restored, reducing connection costs. These features are perfect for office situations where constant connection is paramount.

### Secure VPN Connections

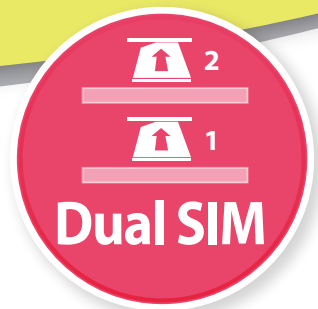
The BiPAC 7820NZ supports embedded IPSec VPN (Virtual Private Network) protocols, allowing users to establish encrypted private connections of up to 16 simultaneous tunnels over the Internet. You can access your corporate Intranet and transmit sensitive data between branch offices and remote sites anytime; even when you are out of office, thus enhancing productivity.

### Smooth, Responsive Net Connection

Quality of Service (QoS) gives user 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.

### Optimal Wireless Speeds and Coverage

With an integrated 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 data rates of up to 300Mbps. It is also backward compatible with 802.11b/g equipments. The Wi-Fi Protected Access (WPA-PSK/WPA2-PSK) and Wired Equivalent Privacy (WEP) features enhance the level of transmission security and access control over Wireless LAN. The router also supports 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.



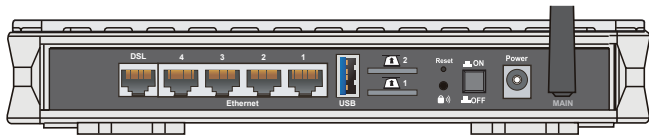
- IPv6 ready (IPv4/IPv6 dual stacks)
- Triple-WAN approach - ADSL2+, 3G/4G LTE or Ethernet WAN for broadband connectivity
- 3G/4G LTE embedded with dual-SIM card slots
- High-speed Internet access via ADSL2/2+; backward compatible with ADSL
- Ethernet port #4 can be configured as a WAN interface for broadband connectivity
- Auto failover feature to ensure an always-on connection
- 16 IPSec VPN tunnels supported
- Secure VPN with powerful DES/3DES/AES
- Wireless speed of up to 300Mbps
- 802.11n Wireless Access Point with Wi-Fi Protected Setup (WPS), Wi-Fi Protected Access (WPA-PSK/WPA2-PSK) and Wired Equivalent Privacy (WEP)
- Quality of Service control for traffic prioritization and bandwidth management
- SOHO firewall security with DoS prevention and packet filtering
- Supports IPTV applications\*1

### Ideal for

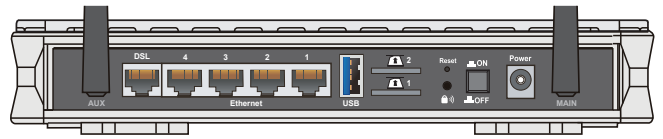
- SOHO and office users
- Event or meeting organizers
- M2M monitoring and control applications



# Features & Specifications



• BiPAC 7820NZ (3G) Rear Panel



• BiPAC 7820NZ (3G/4G LTE) Rear Panel

# 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)
- Compliant with ADSL2+ standard
  - G.dmt.bis plus (ITU G.992.5)
  - ADSL2+ Annex M (ITU G.992.5 Annex M)

## 3G/4G LTE<sup>3</sup>

- LTE: peak downlink speed of up to 100Mbps and peak uplink speed of up to 50Mbps
  - Supports LTE: 2100(B1), 1800(B3), 2600(B7), 900(B8), 800(B20), 1900(B2), AWS(B4), 850(B5), 700(B13), 700(B17), 1900(B25)
  - Supports WCDMA: 2100(B1), 1900(B2), 850(B5), 900(B8), AWS 1700/2100(B4)
- 3G/HSPA+: peak downlink speed of up to 14.4Mbps and peak uplink speed of up to 5.76Mbps
  - Supports WCDMA: 800MHz, 850MHz, 900MHz, 1900MHz, 2100MHz
  - Supports Quad-band EDGE/GPRS/GSM: 850MHz, 900MHz, 1800MHz, 1900MHz
- Web-based GUI for configuration and management

## Network Protocols and Features

- IPv4 or IPv4/IPv6 dual stacks
- 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 and 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 port-based and tag-based Interface Grouping (VLAN)

## Virtual Private Network (VPN)

- 16 IPsec VPN tunnels
- IKE key management
- DES, 3DES and AES encryption for IPsec
- IPsec pass-through
- GRE (Generic Routing Encapsulation) tunnel
- Supports L2TP, PPTP, OpenVPN

## USB Application Server

- Storage/NAS: FTP server, SAMBA server
- Print server
- Supports DLNA

## IPTV Applications<sup>4</sup>

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

## Firewall

- Built-in NAT Firewall
- Stateful Packet Inspection (SPI)
- Prevents DoS attacks including Land Attack, Ping of Death, etc.
- Supports web (http/ssh/ftp/telnet/snmp)
- Packet filtering (v4/v6) - port, source IP address, destination IP address
- URL content filtering - string or domain name detection in URL string
- MAC filtering
- Password protection for system management

## Quality of Service Control

- 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-based 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

## Wireless LAN

- Compliant with IEEE 802.11n, 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
- Supports WPS v2
- Wireless security with WPA-PSK/WPA2-PSK
- Multiple wireless SSIDs with wireless guest access and client isolation
- WDS repeater function
- 802.1x radius supported

## Management

- Easy Sign-On (EZSO)
- Web-based GUI for remote and local management (IPv4/IPv6)
- Firmware upgrades and configuration data upload and download via web-based GUI
- Embedded Telnet server for remote and local management
- SNMP v1, v2, MIB-I and MIB-II supported
- Supports DHCP server/client/relay
- TR-069<sup>2</sup> supports remote management
- Available Syslog
- E-Mail alert for WAN IP changing
- Wake On LAN
- Auto failover and fallback
- Push service

## Hardware Specifications

### Physical Interface

- 3G wireless: 3G antenna x 1 PCS<sup>3</sup> (only for 3G mode)
- 4G LTE antenna x 2 PCS<sup>3</sup> (only for 4G LTE mode)
- WLAN: Internal antenna
- Power jack
- Power switch
- Factory default reset button
- WPS push button
- Dual SIM card slots (for the SIM card from Telco/ISP)
- Ethernet: 4-port 10/100Mbps auto-crossover (MDI/MDI-X) switch
- EWAN: Ethernet port #4 can be configured as a WAN interface for broadband connectivity
- DSL: ADSL port
- USB: USB 2.0 type A port support storage service and print server

### Physical Specifications

- Dimensions: 9.04" x 6.10" x 1.69" (229.5mm x 155mm x 43mm)

### Power Requirements

- Input: 12V DC, 1.2A

### Operating Environment

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

## \*Notes:

1. IPTV application may require subscribing to IPTV services from a Telco/ISP.
2. Only upon request for Telco/ISP tender projects.
3. The 3G/4G LTE data rate is dependent on your local service provider and your 3G/4G LTE card. The 3G model comes with 1 antenna and 4G LTE model comes with 2 antennas.
4. Specifications in this datasheet are subject to change without prior notice