



BiPAC 4500VNOZ / BiPAC 4500VNPZ

4G LTE VoIP Wireless-N VPN Broadband Router

This router is a compact and advanced broadband router that offers flexible and multiple Internet connection options, embedded 4G LTE and Gigabit EWAN interfaces, for home, SOHO, and office users to enjoy high-speed, high-level security Internet connection via cellular wireless and/or Ethernet WAN. With an integrated 802.11n wireless access point and 3-port Gigabit Ethernet LAN, this router enables faster wireless speed of up to 300Mbps and LAN connection 10 times faster than regular 10/100Mbps Ethernet LAN. The BiPAC 4500VNOZ / BiPAC 4500VNPZ provides a status page enabling users to monitor 4G LTE signal strength, network mode, network band and many more. Users can choose the most economical rate of VoIP calls provided by different providers. The device integrates two FXS ports which allows for simultaneous VoIP calls.

4G LTE Mobility

With 4G LTE-based Internet connection (4G LTE embedded module, requires an additional SIM card), you can access to the Internet through 4G LTE whether you are seated at your desk or taking a cross-country trip. LTE status page visually displays its current 4G LTE signal status and more.

Wireless Mobility and Security

With an integrated 802.11n Wireless Access Point, this 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 4500VNOZ 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.

True Cost Savings

Making VoIP calls is extremely simple; just connect the router with your existing analog telephones. Billion BiPAC 4500VNOZ complies with the most popularly adopted VoIP standard and SIP protocol to ensure interoperability with SIP devices and major VoIP gateways. This router also supports a wider range of telephony features, such as Call Waiting, Conference, Speed Dial, Return Call, and Redial, etc.

Secure VPN Connections

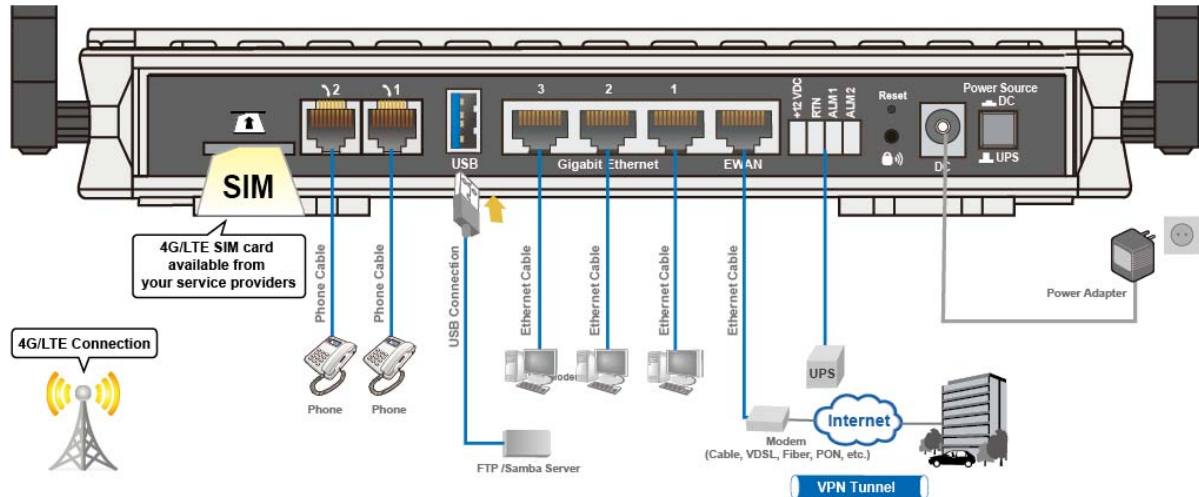
The BiPAC 4500VNOZ supports comprehensive and robust IPSec VPN (Virtual Private Network) protocols for business users to establish private encrypted tunnels over the public Internet to secure data transmission between headquarters and branch offices. It also supports VPN dial in from smart phones for secure remote Internet connection via your home broadband. With a built-in DES/3DES VPN accelerator, the router enhances IPSec VPN performance significantly.

IPv6 Ready - Pathway to the Future

Internet Protocol version 6 (IPv6) is a version of the Internet Protocol that is designed to succeed IPv4. IPv6 has a vastly larger address space than IPv4. The router is already supporting IPv6, you can use it in IPv6 environment no need to change device. The dual-stack protocol implementation in an operating system is a fundamental IPv4-to-IPv6 transition technology. It implements IPv4 and IPv6 protocol stacks either independently or in a hybrid form. The hybrid form is commonly implemented in modern operating systems supporting IPv6.



- Dual-WAN ports - 4G LTE and Gigabit Ethernet WAN (EWAN) for broadband connectivity
- 4G LTE embedded with a built-in SIM card slot
- Gigabit WAN and LAN
- Fibre (FTTC/FTTP/FTTH) ready with high WAN throughput
- Embedded IPSec, PPTP and L2TP VPN endpoint/server with powerful encryption (BiPAC 4500VNOZ only)
- IPv6 ready (IPv4/IPv6 dual stack)
- DS-Lite and 6RD^{*1}
- USB port for storage/NAS - SAMBA server, FTP server
- Voice over IP compliant with SIP standard
- SIP gateway- least cost routing for VoIP calls
- QoS for traffic prioritization
- Multiple wireless SSIDs with wireless guest access
- Supports IPTV applications^{*2}
- Ideal for SOHO, office, and home users



Features & Specifications

High-speed Mobile Wireless Communication

- Embedded 4G LTE module
- High performance external antenna

Embedded 4G LTE (fallback to 3G)

- Supported frequency bands:
 LTE: B1 (2100MHz), B3 (1800MHz), B7 (2600MHz), B8 (900MHz), B20 (800MHz)
 WCDMA: B1 (2100MHz), B2 (1900MHz), B5 (850MHz), B8 (900MHz)
- Peak Downlink/Uplink Rate: 100 Mbps/50 Mbps (Depends on carrier network support)

Network Protocols and Features

- IPv4, IPv6, IPv4/IPv6 dual stack
- DS-Lite and 6RD
- NAT, Static Routing and RIP v1/v2
- Virtual Server and DMZ
- SNTP, DNS proxy
- Universal Plug and Play (UPnP) compliant
- Dynamic Domain Name System (DDNS)

VoIP

- Compliant with SIP standard (RFC3261)
- Codec: G.729, G.726, G.711 A-Law, G.711 u-Law
- DTMF method: Inband, RFC 2833, SIP Info
- Caller ID generation: DTMF, FSK
- Silence Suppression (VAD), Echo Cancellation
- Call Waiting, Conference Call
- Speed Dial, Return Call, Redial
- Don't Disturb Function

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 management based on IP protocol, port number and address

Notes:

1. Future release and only upon request for Telco/ISP tender projects.
2. IPTV application may require subscription 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.

Virtual Private Network (BiPAC 4500VNOZ only)

- IPsec
- PPTP
- L2TP

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
- Wireless Client Isolation
- Supports WDS repeater function

USB Applications Server

- Storage/NAS: FTP server, SAMBA server

IPTV Applications^{*2}

- IGMP Proxy and IGMP Snooping
- MLD Proxy and MLD Snooping
- Virtual LAN (VLAN)
- Quality of Service (QoS)

Management

- Quick installation wizard
- Web-based GUI for remote and local management
- Web-based GUI multi user access level
- Firmware upgrades and configuration data upload and download via Web-based GUI
- Supports DHCP server/client/relay (WAN port)
- TR-069^{*3} (CWMP) supports remote management
- Supports SNMP

Hardware Specifications

Physical Interface

- 4G LTE wireless: 2x detachable high performance antennas
- EWAN: RJ-45 Gigabit Ethernet port for connecting to ADSL/Cable/VDSL/Fibre modem device
- Wireless LAN: 2x internal PIFA antennas
- Ethernet LAN: 3-port 10/100/1000Mbps auto-crossover (MDI/MDI-X) switch
- USB: 1x USB 2.0 host type A
- Telephone: 2x FXS ports
- SIM slot (for the SIM card from Telco/ISP)
- Factory default reset button
- Wireless on/off and WPS push button
- UPS (BBU) socket for UPS power supply
- Power jack for DC input
- Power switch (DC/UPS)

Physical Specifications

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

Power Requirements

- Input: 15V DC, 1.6A

Operating Environment

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