

**BiPAC 7401VP/VGP****VoIP/(802.11g) ADSL2+ Firewall Router**

Billion's BiPAC 7401V(G)P is a small compact pack of VoIP router series with powerful functionalities designed for home and SOHO users to enjoy rich security, mobility, high-speed Internet access and economical VoIP calls. This router series supports a single FXS port allowing you to make VoIP calls simply by connecting to your telephone set. Integrated with one FXO port, this series can also let you keep your PSTN Fixed-line while sharing a high-speed Internet access, even faster with advanced ADSL2/2+ standard. Rich Firewall security features such as SPI, DoS attack prevention, and URL Content Filtering are integrated to provide users unparalleled protection. The Quality of Service feature ensures a smooth net connection for inbound and outbound data with minimum traffic congestion.

- Voice over IP compliant with SIP standard
- One FXS ports for connecting to regular telephones
- One FXO port for voice calls via PSTN Fixed-line
- High speed Internet Access with ADSL2/2+, backward compatible to ADSL
- 802.11g Wireless AP with WPA-PSK/WPA2-PSK Support (BiPAC 7401VGP)
- SOHO Firewall Security with DoS Prevention and SPI
- Traffic Prioritization and Bandwidth Management for QoS Control
- Ease of Use with Quick Installation Wizard and Auto-scan ADSL Settings
- Ideal for Home and SOHO Users

▲ **BiPAC 7401VGP**▲ **BiPAC 7401VP****Benefits****Economical VoIP Call**

The BiPAC 7401V(G)P complies with the most popular industrial standard, SIP protocol, to ensure the interoperability with SIP devices and major VoIP Gateways. By connecting the router to the existing telephone line, users can make cost-saving, toll-quality VoIP calls via ADSL Internet connection. The router also supports telephony features including call waiting, silence suppression, voice activity detection (VAD), comfort noise generation (CNG), line echo cancellation, caller ID (Bell 202,V23) and so on.

**PSTN Fixed-line Support**

The router integrates RJ-11 FXO port for inbound and outbound calls transmitted through PSTN Fixed-line. Users can receive phone calls from PSTN while enjoying VoIP call service at the same time. In addition, outgoing calls will be redirected to PSTN automatically when the Internet or VoIP service is not available.

**Express Internet Access**

The router complies with ADSL worldwide standards. It supports downstream rate up to 12/24 Mbps with ADSL2/2+, 8Mbps with ADSL and upstream rate up to 1 Mbps. Users enjoy not only high-speed ADSL services but also broadband multimedia applications such as interactive gaming, video streaming and real-time audio much easier and faster than ever. Particularly, the Annex A+M model also supports the latest ADSL2/2+ Annex M technology for higher upload speeds by doubling the upstream data rate.

**Mobility and Protection (BiPAC 7401VGP)**

With integrated 802.11g Wireless Access Point in the router, the device offers a quick and easy access and mobility to the users among wired network, wireless network, broadband connection (ADSL). In addition to 54 Mbps 802.11g data rate, it is also backward compatible with existing 802.11b equipment. The Wireless Protected Access (WPA-PSK/WPA2-PSK) and Wireless Encryption Protocol (WEP) supported features enhance the security level of data protection and access control via Wireless LAN. If your network requires wider coverage, the built-in Wireless Distribution System (WDS) repeater function allows you to expand the wireless network without using wires at all.

**Smooth and Responsive Net Connection**

The Quality of Service (QoS) feature helps users manage the bandwidth and prioritize the traffic of data effectively. It gives you full control over the traffic of any type of data. It ensures latency-sensitive and bandwidth-consuming applications like P2P sharing program, VoIP call, gaming packets or customer information can move through the router at lightning speed, even under heavy load. You can control the speed for inbound and outbound data passed through the router to ensure users do not saturate the bandwidth and browsing activities.



# Feature & Specification

## ADSL Compliance

- Compliant with ADSL Standard
  - Full-rate ANSI T1.413 Issue 2
  - G.dmt (ITU G.992.1)
  - 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) (Available for Annex A+M model only)
- Compliant with ADSL2+ Standard
  - G.dmt.bisplus (ITU G.992.5)
  - ADSL2+ Annex M (ITU G.992.5 Annex M) (Available for Annex A+M model 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
- POP3 (email account checking)
- IGMP Snooping for video service

## Firewall

- Built-in NAT firewall
- Stateful Packet Inspection (SPI)
- Prevent DoS attacks including IP Spoofing, Land Attack, Smurf Attack, Ping of Death, TCP SYN Flooding, etc.
- Packet Filtering - port, source IP address, destination IP address, MAC address
- URL Content Filtering - string or domain name detection in URL string

## VoIP

- One RJ-11 FXS ports for connecting to regular telephones
- One RJ-11 FXO port for PSTN Fixed-line
- Compliant with SIP standard (RFC3261)
- Supports G.711 A/\_law, 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)
- Voice over data, QoS control to ensure higher voice quality
- Automatic fallback to PSTN Fixed-line when the Internet or VoIP service is not available.

## Wireless 802.11g (BiPAC 7401VGP)

- Compliant with IEEE 802.11g and 802.11b standards
- 2.4 GHz - 2.484G Hz frequency range
- Up to 54 Mbps wireless operation rate
- 64/128 bits WEP supported for encryption
- Wireless security with WPA-PSK/WPA2-PSK support
- WDS repeater function support

## Quality of Service Control

- Support 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

## Models & Standards Support

- BiPAC 7401VP/VGP Annex A
- BiPAC 7401VP/VGP Annex A+M
- BiPAC 7401VP/VGP Annex B/U-R2

## Management

- Quick Installation Wizard and Auto-scan ADSL settings
- 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
- SNMP v3, MIB-I and MIB-II support
- Support DHCP server/client/relay

## Hardware Specification

### Physical Interface

- WLAN: antenna (BiPAC 7401VGP)
- WAN: ADSL port
- Telephone: 1-port FXS  
1-port FXO (For PSTN Fixed-line support)
- LAN: 4-port 10/100M auto-crossover (MDI/MDI-X) Switch
- Console: the Ethernet Port # 4 can be also connected to console
- Factory default reset button
- Power jack
- Power switch

### Physical Specification

- Dimensions: 7.09" x 4.72" x 1.57"  
(180mm x 120mm x 40mm)

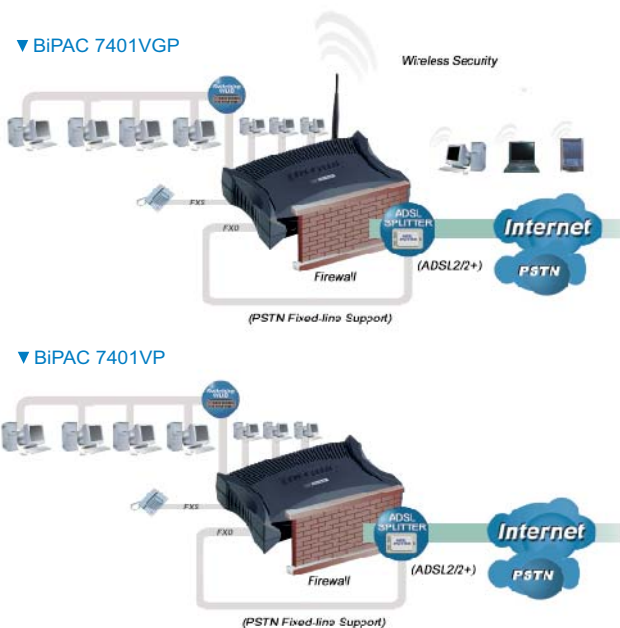
### Power Requirement

- Input: 12V DC, 1A

## Operating Environment

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

## Application Diagram



© The router may require firmware modification for certain ADSL2/2+ Annex M DSLAMs.

All the specifications are subject to changes without prior notice.

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