

# ZyXEL



## All-in-One ADSL2+ VoIP IAD



- IEEE 802.11g Wireless Connectivity
- Support ADSL2/2+
- Support 8 SIP Accounts
- Media Bandwidth Management (MBM) QoS
- PSTN Lifeline Support

### Benefits

#### Voice over IP

The P-2608HWL Series is an IEEE 802.11g Wireless ADSL2+ router that complies with the SIP (RFC 3261) standard for Internet phone services. Users can still use the 8 phone ports simultaneously even when your ITSP provides you with only one SIP number. This convenient feature allows service providers to generate more revenue for the added advantage.

#### Supports Multiple SIP Numbers (up to 8) with Automatic Number Assignment Mechanism

The SIP (RFC3261) standard allows service providers to offer value-added services such as enterprise-class security and integrated toll-quality voice/data service.

#### Effective Network Bandwidth Management

On the P-2608HWL Series comes with effective bandwidth management feature that allow network administrators to allocate network resources while guaranteeing Quality of Service (QoS). This feature increases productivity and efficiency by tailoring a system to specific demands such as time-sensitive VoIP and multimedia applications.

#### Robust Firewall and Secured VPN Connectivity

The ICSA certified ZyNOS operating system ensures state-of-the-art Firewall protection base on SPI and DoS. It provides the first line of defense against hackers, network intruders, and other hazardous threats. The IPsec VPN feature allows telecommuters to establish secured VPN connections to remote sites without expensive lease lines.

#### Easy Installation and Auto-provisioning

Auto-provisioning capabilities allow service providers to easily maintain and configure the P-2608HWL Series remotely. This reduces CPE deployment complexity and cost to users.

#### Lifeline Support

In case of an unexpected power failure, users can still make regular PSTN phone calls with Lifeline PSTN Backup support through the FXO port.



802.11g Wireless ADSL2+ VoIP IAD

P-2608HWL  
SERIES

VOIP



## Specifications

### DSL Features

- Support Multi-Mode standard (ANSI T1.413, Issue 2; G.dmt (G.992.1); G.lite (G.992.2))
- ADSL2 G.dmt.bis (G.992.3)
- ADSL2 G.lite.bis (G.992.4)
- ADSL2+ (G.992.5)
- Reach Extended ADSL (RE ADSL)
- ADSL physical connection ATM AAL5 (ATM Adaptation Layer type 5)
- Support PPP over ATM AAL5 (RFC2364)
- PPP over Ethernet (RFC 2516)
- Support VC-based and LLC-based multiplexing
- Support up to 8 PVCs
- F4/F5 OAM

### Router Features

- NAT (includes multi-to-multi NAT)/SUA, 512 NAT sessions
- NAT Server (Port Forwarding)
- TCP/IP
- PPPoE Client
- DHCP Client/Server
- RIP I/RIP II Supported
- IP Multicasting, IGMP v1 and v2
- Dynamic DNS Support
- IP Alias

### Voice Functionality

- SIP (RFC 3261) v2
- SDP (RFC 2327)
- RTP (RFC 1889)
- RTCP (RFC 1890)
- Echo Cancellation: G.168
- VAD (Voice Activity Detection)
- Silence Suppression
- CNG (Comfort Noise Generation)
- Support TOS & Diffserv Tagging
- VLAN Tag Support
- Codec: G.711 (PCM A-law or  $\mu$ -law selectable), G.729a/b
- Option: G.726, G.723

- DTMF Detection
- Multiple SIP Number Supports
- Multiple Channel Supports
- Modem and Fax Tone Detection
- T.38 Fax Relay

### Phone Features

- CW (Call Waiting)
- Call Waiting w/Caller ID
- Call Forwarding (Unconditional/Busy/No Answer)
- Call Transferring
- Three Way Conference w/local mixing
- CLIP (Calling Line Identification Presentation)
- CLIR (Calling Line Identification Restriction)
- Call Hold/Call Retrieve
- Incoming Call Policy (Call Accept/Call Forward/Call Block)
- Second Call
- Internal Call
- Early Media
- Flash Hook Timer
- Music on Hold
- MWI (Message Waiting Indicator (RFC 3842))
- IVR (Interactive Voice Response)
- Speed Dial (Phone Book)
- T.38 real-time fax relay
- Quick dialing phone book
- Flexible SIP account assign and mapping
- Caller ID
- Country code selection

### Network Functionality

- Friendly Web-based Configuration Tool
- Remote FTP/TFTP Firmware Upgrade and Configuration Backup/restore
- TFTP and HTTP Auto-provisioning
- IVR for IP address and FW upgrade
- HTTPs auto-provisioning (by project)

- 2-tier Web and Management: Admin & Guest access authority
- NAT Traversal
- Simple Traversal of UDP over NAT (STUN, RFC3489)
- Outbound proxy

### Lifeline Support

- Send Emergency Call to PSTN
- Make a PSTN Call by Dialing Pre-fix Number
- PSTN Relay when Device Power Down
- PSTN Relay when VoIP Service is NOT available
- Receive incoming PSTN Phone Call

### Management

- SNMP v1 & v2 with MIB II
- Embedded FTP/TFTP Server for f/w upgrade and romfile backup and restore
- Telnet for remote management
- Remote Management Control: Telnet, FTP, Web
- UPnP support
- TR-069/TR-104\*

### Firewall Security

- ICSA certified firewall with Stateful Packet Inspection
- Prevent DoS Attack
- Access Control of Service
- Content Filtering: URL blocking such as ActiveX, Java, Cookies and Web
- IP & Generic Packet Filtering
- Real-time Attack Alert and Log

### Virtual Private Network

- 20 IPSec VPN Tunnels (2 concurrent VPN tunnels)
- IKE and Manual Key Management
- AH and ESP Protocol
- DES/3DES and AES Encryption (S/W)

- SHA-1 and MD5 Authentication
- Tunnel and Transport Mode Encapsulation
- IPSec NAT Traversal
- NETBIOS pass-through for IPSec

### Hardware Specifications

- RJ45 DSL Port for ADSL AnnexA and Lifeline
- RJ45 DSL Port for ADSL AnnexB and Lifeline
- 4-port auto MDI/MDI-X 10/100M Ethernet ports
- Embedded 802.11g wireless LAN
- One external dipole antenna, non-detachable
- Restore Factory defaults button
- 8 FXS POTS interface

### Environmental Specifications

- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -30°C ~ 60°C
- Operating Humidity: 20% ~ 95% RH
- Storage Humidity: 20% ~ 95% RH

### Physical Specifications

- Dimensions: 245 (W) x 163 (D) x 37 (H) mm
- Weight: 605 g

\* Firmware upgradeable for future enhancement

## Product Description

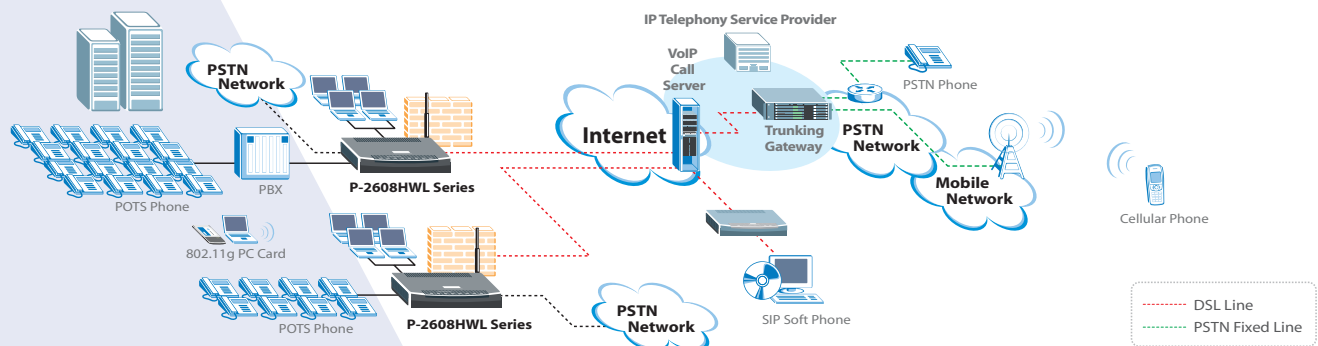
### P-2608HWL-D1

802.11g Wireless ADSL2+ VoIP IAD over POTS

### P-2608HWL-D3

802.11g Wireless ADSL2+ VoIP IAD over ISDN

## Application Diagram



For more product information, visit us on the web [www.ZyXEL.com](http://www.ZyXEL.com)

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