

# ZyXEL



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- Dual WAN to Simplify ISP Logistics
- 802.11n Technology with 2.4/5 GHz for Extreme Performance and Coverage
- Internet Access through 3G Networks\*
- Quality of Service (QoS)
- TR-069 Remote Management

**P-2612HNU Series**  
**802.11n ADSL2+ VoIP IAD**

## ADSL2+ IAD for Triple Play Services

### Benefits

#### Dual WAN to Simplify ISP Logistics

When ISP migrates the service from VDSL2 to PON, or WiMAX, subscribers can keep existing P-2612HNU Series for terminating the IP-connection but now via the Ethernet WAN, originally DSL WAN. The end-users can still experience in most cases from the original CPE, and which is better than the case that customer have to change current CPE due to the difference of physical connection.

#### 802.11n Technology for Extreme Performance and Coverage

The P-2612HNU Series features 802.11n technology that provides the ultimate solution for both speed and coverage. With wireless data rates of up to 300 Mbps, the P-2612HNU Series provides stable, reliable wireless connections for high speed data, multimedia usage, and allowing efficient video streaming via 5 GHz channel. It eliminates dead zones and extends coverage by using IEEE 802.11n technology while retaining backward compatibility with any IEEE 802.11a/b/g Wi-Fi certified device.

#### Internet Access through 3G Networks\*

The P-2612HNU Series with USB interface for 3G USB dongle provides convenient Internet access to 3G networks for eliminating limitations of wired networks and further extension to the last-mile connectivity. In Internet-challenged environments like rural or mountain areas, the 3G connectivity may be the only viable solution; it can also be used for providing temporary Internet access to places like exhibition booths as well. Furthermore, 3G access can be deployed as a WAN backup for high-availability Internet connection in office environments.

#### Quality of Service (QoS) Support

The P-2612HNU Series comes equipped with essential ATM and IP QoS features. Service providers can freely design their QoS policies and prioritize the mission-critical services such as IPTV and VoIP based on their service plan offerings. This increases network efficiency and productivity that enable service providers to offer real multi-play meeting the needs of residential users.

#### TR-069 Remote Management

With the P-2612HNU Series incorporating TR-069 standard management specifications, service providers can manage and configure these client devices remotely without any end-user intervention. This feature offers users a true "plug-and-play" experience while reducing deployment complexity, therefore helps saving the operational and maintenance costs for service providers.





### Specifications

#### System Specifications

##### ADSL Compliant

- ADSL compliance/ITU-T G.992.1/ITU-T G.992.2 Annex A, B (G.lite)/ITU-T G.994.1 (G.hs)
- ADSL2 compliance/ITU-T G.992.3 3 (G.dmt.bis)
- ADSL2+ compliance/ITU-T G.992.5
- Reach-Extended ADSL (RE ADSL)
- SRA (Seamless Rate Adaptation)
- Rate adaptation
- ADSL physical connection ATM AAL5 (ATM Adaptation Layer type 5)
- Support multi-protocol over AAL5 (RFC2684)
- PPP over ATM AAL5 (RFC2364)
- PPPoE (RFC 2516)
- MAC encapsulation routing
- Support VC-based and LLC-based multiplexing
- Support up to 8 PVCs
- I.610 F4/F5 OAM

##### Wireless

- IEEE 802.11n compliance
- Frequency: 2.4/5 GHz
- Data rate: 300 Mbps
- Backward compatible to 802.11a/b/g
- Static and dynamic WEP key (64/128 bit)
- WPA/WPA-PSK
- WPA2/WPA2-PSK
- MAC address filter (up to 32)
- Auto channel selection
- Multiple SSID (up to 4)
- Multicast traffic pass-through
- WPS (Wireless Protected Setup)

##### Voice Functionality

- SIP (RFC 3261) version 2
- SDP (RFC 2327)
- RTP (RFC 1889)
- RTCP (RFC 1890)
- Codec: G.711 (PCM A-law or  $\mu$ -law selectable), G.729a/b
- Echo cancellation: G.168, VAD, silence suppression, CNG, dynamic jitter buffer
- DTMF detection and generation
- DTMF: in-band and out-of-band (RFC 2833)
- Modem and fax tone detection and pass-through
- DNS SRV
- Flexible dial plan (RFC3525 section 7.1.14)
- Session timers (Draft-IETF-SIP-Session-Timer)
- Wideband voice (G.722)

##### Phone Features

- Message waiting indicator (RFC 3842)
- Caller ID
- T.38 fax relay
- FAX relay: transparent fax relay over G.711
- Call waiting

- Call hold
- Early media
- Flash hook timer
- Call transferring (blind and attended transfer)
- Call forwarding
- Three way conference
- Abbreviated dialing (speed dialing)
- Shuttle enquiry call (second call)
- CLIP (Calling LINE Identification Presentation)
- CLIR (Calling LINE Identification Restriction)
- Internal call
- Speed dial (phone book)

##### VLAN/QoS

- Support 802.1Q port/tag based VLAN
- Support 802.1P priority bit
- Support flexible traffic classification by LAN, Eth type, source IP, and...etc.
- Support 4 priority queue w/strict priority scheme
- Freely assign the classified traffic to queues, VLAN, or PVC
- Per VLAN IPPR (IP Policy Route)
- Per VLAN PPPoE
- FXS has given highest priority
- Application bind with dedicated PVC
- IP Layer QoS (media bandwidth management) for 3-play
- TOS/DiffServ
- VLAN on Ethernet WAN

##### Management

- Web
- CLI (Command Line Interpreter)
- SSH (Secure Shell function)
- Remote management for Web/Telnet/FTP
- Access control for remote management
- Firmware upgrade via Web/FTP/SCP/SFTP
- Text based configuration
- DSL forum TR-069
- DSL forum TR-064\*
- 802.1ag (connectivity fault management)\*

#### Hardware Specifications

- WAN:
  - one RJ-11 connector for P-2612HNU-F1 over POTS (one RJ-45 connector for P-2612HNU-F3 over ISDN)
  - one RJ-45 connector for Giga-Ethernet WAN port
- LAN: four 10/100/1000M Auto MDI/MDI-X RJ-45 interfaces
- Wireless: two external 2 dBi antenna
- WLAN/WPS button: one physical button for WLAN on-off and WPS configuration
- Button: reset, WPS/WLAN on/off
- A hardware switch for DSL/Ethernet WAN
- 2 FXS POTS interface

- 2 USB 2.0 host interface (for file sharing/3G backup\*/printer server\*)
- Status LEDs indicators: POWER, ETHERNET, DSL, INTERNET, WLAN, WAN, USB, Phone
- Power: 12 V DC 1.5 A

#### Physical Specifications

- Item weight: 459 g (1.01 lb)
- Item dimensions: 265 (W) x 145 (D) x 42 (H) mm (10.43 (W) x 5.71 (D) x 1.65 (H) inches)
- Item and package weight: 930 g (2.06 lb)
- Package dimensions: 277 (W) x 263 (D) x 77 (H) mm (10.9 (W) x 10.35 (D) x 3.03 (H) inches)

#### Environmental Specifications

##### Operating Environment

- Temperature: 0°C ~ 40°C
- Humidity: 20% ~ 85% RH (non-condensing)

##### Storage Environment

- Temperature: -20°C ~ 60°C
- Humidity: 20% ~ 90% RH (non-condensing)

#### Certification

##### EMC

- EN55022 Class B
- EN61000-3-2:2000
- EN61000-3-3:1995 + A1:2001

##### Safety

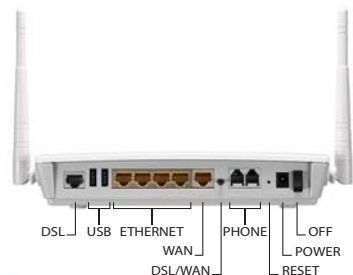
- EN 60950-1:2006 + A11:2009
- IEC 60950-1:2005

\* Firmware upgradeable for future enhancement.

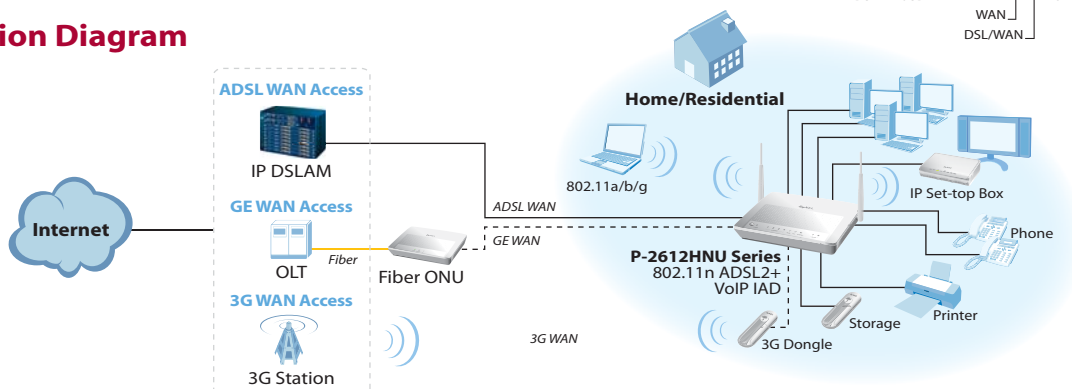
### Product Description

- P-2612HNU-F1  
802.11n ADSL2+ VoIP IAD over POTS
- P-2612HNU-F3  
802.11n ADSL2+ VoIP IAD over ISDN

### Rear Panel



### Application Diagram



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

