

ZyXEL



Feature-rich Design to Take Advantage of Voice/Data Network Convergence

- **High Speed Internet Access: ADSL2+ (24Mbps)**
- **Flexible SIP account assignment per phone port**
- **Comprehensive QoS mechanism**
- **Open SIP standard compliance (RFC3261)**
- **Secured auto provisioning for plug and play experience**



Benefits

ADSL2+ High Speed Internet Access

The P-2602R/RL-DxA Series supports high-speed Internet access with ADSL, ADSL2 and ADSL2+ over existing copper lines. With speeds of up to 12Mbps (ADSL2) or 24Mbps (ADSL2+), the P-2602R/RL-DxA Series offers higher data transfer rates and better bandwidth than traditional ADSL enabled gateways. The P-2602R/RL Series also supports RE ADSL (Reach Extended ADSL) for better performance at greater distances. The P-2602RL-DxA Series offers the key link between today's communications services and tomorrow's converged services.

VoIP Capability Based on Standard

With VoIP SIP standard (RFC3261), It enables service providers to increase service revenue by providing features such as business-class security and integrated toll-quality voice/data service. With intelligent SIP call server availability detection, the P-2602R/RL-DxA Series allows you to place calls to the specified destination IP address using the Point to Point communication mechanism. The P-2602RL-DxA Series also comes with two POTS ports (FXS interface).

Carrier Grade QoS Solutions

The P-2602R/RL-DxA Series enables network administrators to allocate network resources while guaranteeing Quality of Service (QoS). QoS Management increases productivity and efficiency by tailoring a system to specific demands such as time-sensitive VoIP and multimedia applications.

Flexible SIP Account Assignment

The P-2602R/RL-DxA Series supports ZyXEL's proprietary Multiple SIP and Multiple channel technology that allows you to easily assign a SIP number to each phone port even when you have just one SIP account.

Lifeline Support (P-2602RL-DxA)

In case of an unexpected power failure, you can still make regular phone calls with Lifeline support. This feature also kicks into work when the VoIP service becomes unavailable. Phone calls are placed through the PSTN phone system.

ADSL2+ VoIP IAD

P-2602R/RL-DxA
SERIES



VOIP



Specifications

DSL Features

- Support Multi-Mode standard (ANSI T1.413, Issue 2; G.dmt (G.992.1); G.lite (G992.2))
- EOC specified in ITU-T G.992.1
- ADSL2 (G.992.3)
- ADSL2 G.lite.bis (G.992.4)
- ADSL2+ (G.992.5)
- SRA (Seamless Rate Adaptation)
- Auto-negotiating rate adaptation
- ADSL physical connection ATM AAL5 (ATM Adaptation Layer type 5)
- Support multi-protocol over AAL5 (RFC1483)
- Support PPP over ATM AAL5 (RFC2364)
- PPP over Ethernet support for DSL connection (RFC 2516)
- Support VC-based and LLC-based multiplexing
- Support up to 8 PVCs
- F4/F5 OAM
- Zero configuration

Router

- NAT (includes multi-to-multi NAT)/SUA, 512 NAT Sessions
- NAT Server (Port Forwarding)
- VPN (IPSec, PPTP, & L2TP) pass through support NAT
- Protocol and Generic Packet Filter
- DNS Proxy
- Dynamic DNS (www.dyndns.org)
- IP Alias
- DHCP client/server/relay
- RIP I/RIP II supported
- Support 16 IP Static route
- IP Multicasting, IGMP v1 and v2
- IP Policy Routing
- UPnP support
- Centralized log

Management

- SNMP v1 & v2c 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
- Support ZyXEL SPTGEN-based HTTP/HTTPS/TFTP Auto provisioning with secured provisioning file by 3DES encryption

- Remote firmware upgrade
- TR-069/TR-104 support* (option)

Firewall Security

- Stateful Packet inspection (SPI) firewall
- Prevent DoS Attack
- Access control
- Attack alter and logs
- Packet filtering
- Major Application Layer Gateways (ALGs) support (H323, Netmeeting, SIP, SeeUSeeme)
- Content filtering (Java/Active/Cookie/Keyword blocking)

Other Features

- SPTGEN
- Debug tool
- Support H.323 pass through
- Support IGMP proxy
- Voice prioritization using the industry-standard Differentiated Services (DiffServ) protocol
- MAP (Multi-media Auto Provisioning)

Voice Features

- SIP (Section Initiating Protocol, RFC 3261) version 2
- SDP (RFC 2327)
- RTP/RTCP (RFC1889, 1890)
- Echo cancellation: G.168
- Silence Suppression
- CNG (comfort Noise Generation)
- Dynamic Jitter Buffer
- DTMF Detection and Generation
- DTMF for either In-band or Out-band Traffic with PCM, RFC2833 (SIP INFO)
- Modem and Fax tone detection
- Dialing Type: Tone
- Loop Start and Ground Start
- Ring cadence frequency can be tuned by firmware
- Multiple SIP Account/phone Numbers-Freely assignable to Each Phone Part
- Multiple Channel Technology

Voice Codes

- G.711 (a-law and u-law)
- G.729 a/b
- G.726* (option)
- G.723* (option)

Call Features

- Call Waiting/Call Waiting with Caller ID
- Call Forwarding (Unconditional/Busy/No answer)
- Call Transferring (Blind/Consult On Hold/Attendant)
- Call Hold/Call Retrieve/Second Call
- Speed Dial/Phone Book/Internal Call
- Incoming Call Policy for Unspecified Phone No. (Call Accept/Call Forward/Call Block)
- Three Way Conference with local mixing
- Conference call with Media server
- Flash Hook Timer/Music on Hold
- IVR (Interactive Voice Response)/Early Media
- MWI (Message Waiting Indicator)
- DTMF Relay/Modem Relay
- Fax Relay/T.38 Fax Relay
- CLIP (Calling Line Identification Presentation)
- CLIR (Calling Line Identification Restriction)

Hardware Specifications

- Support 4M flash + 16M SDRAM (default)/4M Flash +32M SDRAM
- RJ-11 for ADSL over POTS/RJ45 for ADSL over ISDN/U-R2
- 1 auto MDI/MDI-X 10/100M Ethernet RJ45 ports for LAN connection
- Restore Factory Defaults/Reboot button
- 2 FXS POTS interface
- Dual Layout Liner power and Switch power
- RJ-11 for Life line (P-2602RL-DxA)
- Follow TR-068 for phone Jack color identification

Physical Specifications

- Dimensions: 43 (W) x 124 (D) x 181 (H) mm
- Weight: 342g

Environmental Specifications

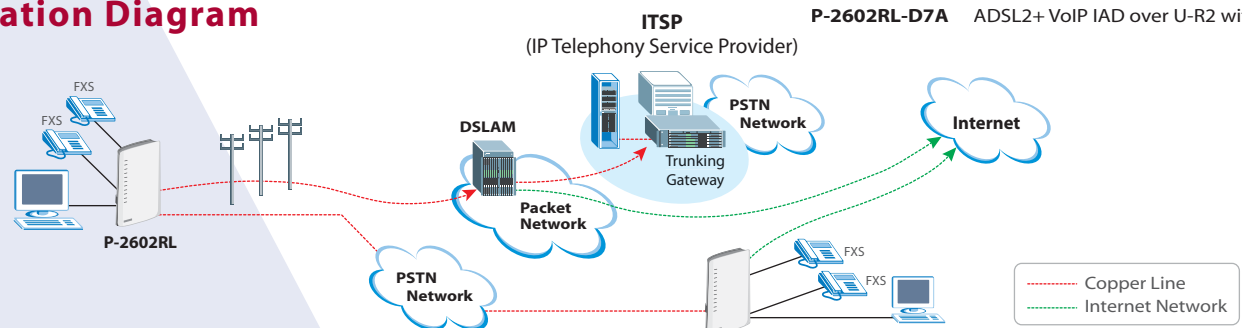
- Operating Temperature: 0°C ~ 40°C
- Operating Humidity: 20% ~ 85% (non-condensing)
- Storage Temperature: -20°C ~ 60°C
- Storage Humidity: 10% ~ 90% (non-condensing)

* Firmware upgradeable for future enhancement

Product Description

- P-2602R-D1A** ADSL2+ VoIP IAD over POTS
- P-2602R-D3A** ADSL2+ VoIP IAD over ISDN
- P-2602R-D7A** ADSL2+ VoIP IAD over U-R2
- P-2602RL-D1A** ADSL2+ VoIP IAD over POTS with Lifeline
- P-2602RL-D3A** ADSL2+ VoIP IAD over ISDN with Lifeline
- P-2602RL-D7A** ADSL2+ VoIP IAD over U-R2 with Lifeline

Application Diagram



For more product information, visit us on the web www.ZyXEL.com

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