Allied Telesis®

AT-AR221E V2
Broadband Router w/Firewall

AT-AR221E v2
4 x 10/100TX, 1 WAN port,
ADSL Broadband router

Enjoy the Benefits of High-speed Internet Access in the Home and Office LAN

The Allied Telesis AT-AR221E v2 is the perfect solution for the home or small office that wants to use high-speed, 'always on' DSL and Cable services to access the Internet. DSL and Cable services offer speeds up to 200 times faster than 56kbps modems. Take advantage of high-speed DSL/cable connections to provide video-streaming, video-conferencing and new multimedia applications. High base functionality and simple upgradability make it the ideal choice for homes and businesses wanting to exploit the benefits of high-speed networking services.

Integral 4 Port Fast Ethernet Switch

Build high-speed LAN backbones at home or in the office using the integral 4 port 10/100Mbps, auto-sensing, Ethernet switch. A simple push-button up-link port provides cascading to additional hubs or switches to further increase the number of users.

Easy to Set-up

Installation takes a matter of minutes using the intuitive, browser-based interface. Simply point any standard browser at the default IP address of the AT-AR221E v2 and get started. Standard Ethernet cables connect the AT-AR221E v2 to LAN users and the Cable/xDSL modem – that's it. No configuration or reconfiguration of any PC application is required. All TCP/IP operating systems are supported including Windows 95/98/NT/ME/XP, Unix and MAC. An integral DHCP server provides automatic IP address assignment to all PC's on the LAN, while both static and dynamic IP address assignment from the Internet Service Provider are supported.

Some service providers use PPP over Ethernet (PPPoE) as a way of automatically assigning user IP addresses instead of DHCP. The AT-AR221E v2 supports both DHCP and PPPoE.

Firewall Security

Cable and DSL modems do not provide any firewall protection, and because they offer an 'always-on' connection, users are actually more at risk using these services than with conventional modem dial-up. However, by simply connecting the AT-AR221E v2 between the cable or xDSL modem and the private LAN, the AT-AR221E v2 provides a powerful Network Address Translation (NAT) Firewall that 'hides' all LAN users behind one public IP address, hence protecting LAN users from attack.

Controlled Internet Access

It is sometimes desirable to restrict Internet access or to block specific services or applications. The AT-AR221E v2 uses packet filtering based on destination IP address to block access to specified sites. Packet filtering can also be based on the IP port number. Different services such as E-mail, www and FTP use standard port numbers to communicate. By filtering all packets destined for a specified port number, the network administrator can, for example, deny all LAN users access to SMTP/POP3 Internet E-mail services, while allowing all users to access www/HTTP services.

Key Features

- Allows multiple users to access the Internet at the same time via a single public IP Address using NAT (Network Address Translation)

- Supports UPnP

- Integrated 4 port 10/100TX auto-sensing switch

- Supports PPPoE allowing users to seamlessly connect to ISPs with the user familiar 'dial-up' type connection interface

- Built-in DHCP server to automatically assign and manage LAN IP addresses

- Built-in easy firewall to protect your PCs from outside intruders

- Allows external Internet users to access from an internal target host using the Virtual Server option

- Supports Microsoft Windows Messenger/MSN Messenger/Net-meeting and other instant messenger software

- Firmware upgradable through web browser

- Supports SNMP Management

- Built-in web-based user interface for easy configuration and management

Up to 253 LAN Users Can Share One Line and One IP Address

• The AT-AR221E v2 supports up to 253 LAN attached users – easily enough for a small office, while high-speed cable and ADSL services mean that they can all share a single line and still have plenty of performance.

• Network Address Translation (NAT) allows 253 users to share one Internet IP address for low-cost Internet access.

Flash Software Update

• The AT-AR221E v2 can be upgraded simply by loading new firmware into Flash memory using Trivial File Transfer Protocol (TFTP), new enhancements can be e-mailed to a user site then loaded into the unit with TFTP.

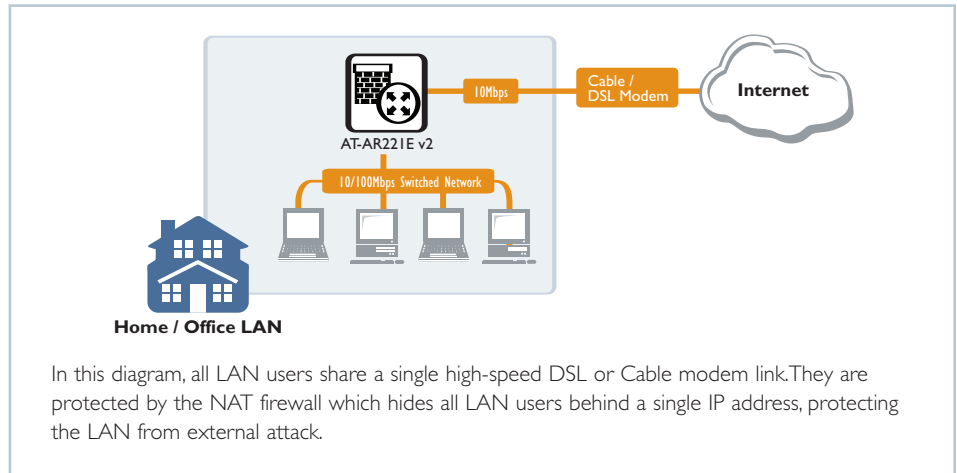## IPSec and ISAKMP Pass-through for Secure VPN Operation

• The AT-AR221E v2 provides transparent pass-through for IPSec and ISAKMP protocols, allowing attached LAN users to implement secure Virtual Private Network (VPN) client applications on their PCs.

Virtual Server Support

• This feature allows servers on the LAN (e.g a Web server or e-mail server) to be accessible to users on the Internet – even through the NAT Firewall, which normally rejects all inbound connections by default.

DNS Proxy Support

• The AT-AR221E v2 can act as a proxy DNS server to all LAN users, this greatly simplifies user PC setup as the proxy DNS address is always the same (i.e the AT-AR221E v2 address) and does not change even if a different ISP or external DNS server is used.

In this diagram, all LAN users share a single high-speed DSL or Cable modem link. They are protected by the NAT firewall which hides all LAN users behind a single IP address, protecting the LAN from external attack.

Feature Summary

WAN Port 10Mbps	1 x RJ-45
LAN Ports 10/100Mbps	4 x RJ-45
UTP Network Protocols	TCP/IP, DHCP, DNS, NAT TFTP, HTTP, PPPoE
Number of LAN users	253
Internet access controls (filtering)	yes
Browser-based configuration	yes
Network Address Translation (NAT)	yes
Dynamic Host Configuration Protocol (DHCP)	yes
Automatic MDI/MDI-X	yes
Up-link port	yes
IPSEC and ISAKMP Pass-through	yes
Virtual Server support	yes
DNS Proxy	yes
Static IP address assignment	yes
Dynamic IP address assignment	yes
Status LEDs	Power/self-test LAN/WAN link and Activity

Technical Specifications

Power Characteristics
External 9vDC, 1A

Environmental Specifications
Operating Temp	0°C to 40C
Non-Operating Temp	20°C to 70°C
Relative Humidity	10% to 90%

Physical Characteristics
Dimensions	17.7cm x 10.3cm x 3.1cm

Electrical/Mechanical Approvals
CE
EN 60950 (Safety Europe)
FCC Part 15 Class B, Part 68 (Emissions)
UL 1950 (Safety US)
EN 55022 Class B (Immunity)

Ordering Information

AT-AR221E v2-xx
Broadband ADSL Router
4 10/100 Port Ethernet with Firewall, NAT, PAT

Where xx =	
10	for U.S. power cord
20	for no power cord
30	for U.K. power cord
40	for Australian power cord
50	for European power cord

Connecting The IP World

Allied Telesis