Allied Telesis ™

AT-AR256E V3
ADSL2/2+ 4 Port Router

AT-AR256EV3-xx

ADSL2/2+ router with 4 Ethernet ports

High Bandwidth Access to the Internet and Corporate LAN

The AT-AR256E is the perfect solution for the small office or branch office that wants to use high-speed, 'always on' ADSL services to access the Internet or other corporate locations. Combining an ADSL modem, IP router, 4 port 10/100Mbps switch and Stateful Inspection Firewall into one affordable unit, the AT-AR256E provides the ideal solution for bandwidth-hungry end-users and ADSL service providers who need security.

The AT-AR256E is easily installed over an existing analog line, supporting standard POTS operation together with state-of-the-art ADSL services. Applications include data intensive office use, fast web download, Video-on-Demand, video streaming and telecommuting via Virtual Private Network (VPN).

Business-class Stateful Inspection Firewall

Because ADSL offers an 'always on' connection, users are actually more at risk using this service than with conventional modem dial-up. To counter this threat, the AT-AR256E is equipped with a powerful Stateful Inspection Firewall that protects against malicious attacks from the Internet – giving peace of mind security for the home and office LAN.

Network Address Translation (NAT) 'hides' all LAN users behind one public IP address, protecting the LAN from external hackers. The AT-AR256E's advanced NAT operation also supports comprehensive protocol and port mapping for extensive application support. Single PPTP or multiple IPSec and L2TP sessions are supported using the AT-AR256E's sophisticated pass-through capability; standard

NAT limitations are no longer a barrier for the power user.

IPSec, PPTP and L2TP Pass-through for Secure VPN Operation

Transparent pass-through for Microsoft's Point-to-Point Tunnelling Protocol (PPTP), Layer 2 Tunnelling Protocol (L2TP) and Internet Protocol Security (IPSec) allows organizations to extend their corporate network to remote users and branch offices, by building a VPN across the Internet using secure 'tunnels'. This eliminates the cost of long distance dial-ups and the need for Remote Access Server (RAS) equipment.

The Service Provider's Choice

The AT-AR256E is ADSL2 and ADSL2+ compliant, supporting up to 12Mbps and 24Mbps downstream data rates respectively. Using industry-standard Discrete Multi-Tone (DMT) technology, the AT-AR256E supports network speeds up to 8Mbps downstream and up to 1Mbps upstream. Alternatively, G.lite is supported for applications where minimum cost and tool-free installation is required. Close partnering with Digital Subscriber Line Access Multiplexer (DSLAM) vendors ensures the highest levels of interoperability for service providers, with extensive ADSL testing being carried out. Built-in support for PPP over Ethernet (PPPoE) and PPP over ATM (PPPoA) provides full compatibility with existing ISP dial-up systems. Bridged Ethernet and IP over ATM complete the range of flexible and robust network connectivity options. Superior rate/reach performance ensures that service providers and users alike enjoy maximum data throughput at maximum line-lengths from the exchange.

Intelligent ADSL Rate Adaptation

The upstream and downstream data rates are dynamically allocated by the AT-AR256E to minimize noise and maximize service reliability. For each session, the ADSL connection speed is

Key Features

- High-speed ADSL connectivity with integral 4 port switch

- Supports RE-ADSL2/2+, ADSL2/2+, G.dmt.bis, G.lite.bis, G.dmt and G.lite ADSL standards, Annex A

- Supports ADSL standards Annex L and Annex M

- Up to 24Mbps downstream, and up to 3.5Mbps upstream data rate

- 1 x ADSL/2/2+ port

- 4 x 10/100 Ethernet ports

- Network Address Translation (NAT)

- Integral Stateful Inspection Firewall

- IPSec, PPTP and L2TP VPN pass-through

- Dynamic port opening for gaming applications

- Browser-based GUI

- PAP/CHAP/MS-CHAP authentication

- Dynamic IP address assignment

- Static IP address assignment

- Dynamic Host Configuration Protocol (DHCP) server/relay/client

- SNMP v1 and v2c

- Compact form factor

- Flash upgradable

automatically reconfigured to achieve maximum data throughput (within the limits imposed by the service provider).

Easy to Set-up

Installation takes a matter of minutes using the simple, browser-based configuration interface. Standard cabling is used to connect to the Ethernet LAN and ADSL. All cables are supplied with the product. All TCP/IP operating systems are supported, including Windows, Linux and Mac. An integral DHCP server provides automatic IP address assignment to all PCs on the LAN to minimize network administration. Both static and dynamic IP address assignment are supported on the ADSL interface, so that all connection modes are supported.

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

The AT-AR256E supports up to 253 LAN-attached users — easily enough for a small office, while high-speed ADSL services mean that they can all share a single line and still have plenty of bandwidth. NAT allows 253 users to share one public IP address for low-cost Internet access.

Flash Software Update

The AT-AR256E can be upgraded simply and quickly by loading new firmware into flash memory using the simple, browser-based application. New enhancements can be loaded into the unit in a matter of minutes.

Main Features
ADSL/ATM Support
- ANSI T1.413-1998 Issue 2, ITU-T G.992.1 (G.dmt), G.992.2 (G.lite), G.992.3 (G.dmt.bis), G.992.4 (G.lite.bis), G.992.5 (ADSL2+), G.992.3/4 Annex L (RE-ADSL2), G.992.5 Annex L (RE-ADSL2+) and G.992.5 Annex M compliant
- Rate adaptive modem at 32Kbps steps
- Dynamic adaptive equalization to improve carrier's service area
- Bridge tap mitigation
- ATM layer with traffic shaping QoS (UBR, CBR, VBR-rt, VBR-nrt)
- AAL ATM attributes — AAL5
- Multiple WAN connection (PVC) up to 8
- Spectral compatibility with POTS
- F4 and F5 OAM loopback/send and receive
- PVC to VLAN mapping

Encapsulation Support
- RFC 2684 bridge/routed LLC and VC Mux
- RFC 2364 PPPoA client
- RFC 2516 PPPoE client
- Transparent bridge
- PAP/CHAP/MS-CHAP for password authentication

Network Support
- Static IP
- Dynamic RIP routing
- IP/TCP/UDP/ICMP/ARP/RARP application
- Network Address Translation (NAT)
- Port mapping/forwarding
- Easy set-up of port forwarding rules for popular games/applications
- NAT application level gateway for popular applications
- DHCP server/relay/client
- DNS relay agent
- DMZ
- IPSec and PPTP/L2TP VPN pass-through
- PPP always on with configurable timeout
- PPP Dial on Demand

Management Support
- Web-based HTTP management GUI
- Web-based firmware upgrade (local)
- Soft factory reset button via web GUI
- Telnet/CLI (read only)
- Syslog
- Firmware upgradable for future feature enhancement

Security Support
- NAT for basic firewall
- Packet filtering firewall
- Stateful Packet Inspection firewall
- Protection against Denial of Service attacks
- Password authentication to modem

Hardware
- Texas Instrument TNETD7300EZDW (TI7200) Single Chip Network Processor/AFE/Line Driver Chipset
- IC Plus IP175C 5 port 10/100 MAC/PHY switch (auto MDI/MDI-X)
- 2MB Flash ROM
- 8MB SDRAM
- Dying gasp
- ITU K.21
- GDT

Platform Support
OS independent for Ethernet

Power Requirements
Input voltage:	9vDC +/- 10%
Input current:	1.0A

Physical Specifications
LED Indicators
1 x power
4 x Ethernet
1 x DSL
1 x Internet

External Connectors
1 x ADSL/2/2+ port (RJ-11)
4 x Ethernet 10/100 port (RJ-45; auto MDI/MDI-X)
1 x reset button (restore to factory defaults)
1 x power jack (9vDC)
1 x power on/off switch

Measurements
Dimensions: (W x D x H)	15.5cm x 12cm x 3cm
Weight:	350g

Environmental Characteristics
Operating temperature:	0°C to 40°C
Non-operating temperature:	-25°C to 70°C
Operating humidity:	30% to 80% relative humidity (non-condensing)
Non-operating humidity:	30% to 95% relative humidity (non-condensing)

Ordering Information

AT-AR256EV3-xx
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Where xx = 10 for US power adapter
30 for UK power adapter
40 for Australian power adapter
50 for European power adapter

Connecting The (IP) World

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