



## AT-AR226E

### ADSL2/2+ Ethernet Router

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ADSL2/2+ router with 1 Ethernet port

#### High Bandwidth Access to the Internet and Corporate LAN

The AT-AR226E 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 a ADSL modem, IP router and powerful Stateful Inspection Firewall into one affordable unit, the AT-AR226E provides the ideal solution for bandwidth hungry end-users and ADSL service providers who need security.

The AT-AR226E is easily installed over an existing analog line, supporting standard voice operation together with state-of-the-art ADSL services. Applications include data intensive office use, fast web download, Video-on-Demand (VoD), video streaming and telecommuting via 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-AR226E 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-AR226E's advanced NAT operation also supports comprehensive protocol and port mapping for extensive application support. Virtual Private Network (VPN) operation is transparently supported using IPSec, PPTP and L2TP pass-through, for teleworker applications.

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

Transparent pass-through for Microsoft's Point-to-Point Tunneling Protocol (PPTP), Layer 2 Tunneling 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-AR226E 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-AR226E 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.

#### Key Features

- 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 ADSL2/2+ port
- 1 x 10/100 Ethernet port
- 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 upgradeable

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## Flash Software Update

The AT-AR226E 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.

## 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, while both static and dynamic IP address assignment from the ISP are supported. The AT-AR226E is ideal for 'wires only', self-install services.

## 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 PVC up to eight (bridged)  
Spectral compatibility with POTS  
F5 OAM loopback/send and receive

### Encapsulation Support

RFC 2684 bridge and 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 setup of port forwarding rules for popular games/applications  
NAT application level gateway for popular applications  
DHCP server/relay/client  
DNS relay agent  
Dynamic DNS (DDNS)  
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  
Diagnostic test (DSL, OAM, Network, Ping)  
Telnet/CLI (read only)  
Syslog  
Firmware upgradeable for future feature enhancement

## Security Support

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

## Hardware

Texas Instrument TNETD7100A2 single chip network  
Processor/AFE/line driver chipset  
2MB Flash ROM  
8MB SDRAM  
ITU K.21  
GDT  
DSL forum TR-068 compliant

## Platform Support

OS independent for Ethernet

## Power Requirements

Input voltage: 9VDC +/- 10%  
Input current: 0.5A

## Physical Specifications

### LED Indicators

1 x Power  
1 x Ethernet  
1 x DSL

### External Connectors

1 x ADSL2/2+ port (RJ-11)  
1 x Ethernet 10/100 port (RJ-45; auto MDI/MDI-X)  
1 x Reset button (restore to factory defaults)  
1 x DC power jack (9V)  
1 x On/off button

### Measurements

Dimension: 10.5cm x 10.5cm x 3cm  
(W x D x H)  
Weight: Approx. 250g

### 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-AR226E-xx

ADSL2/2+ Ethernet router, Annex A  
(1 Ethernet 10/100 port)

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

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