AT-ARW256E

Wireless ADSL Router

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IEEE 802.11g Wireless ADSL Bridge/Router with 4 Ethernet ports and 1 USB port

High Bandwidth Access to the Internet and Corporate LAN

The AT-ARW256E 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 wireless access point, ADSL modem, IP router, 4-port 10/100TX switch and Stateful Inspection Firewall into one affordable unit, the AT-ARW256E provides the ideal solution for bandwidth-hungry end-users and ADSL service providers who need security. The AT-ARW256E 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). VPN operation is supported using IPSec, PPTP and L2TP pass-through.

Business-class Stateful Inspection Firewall with Intrusion Detection

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-ARW256E 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. In addition, a built-in 'Intrusion Detection System' protects against a wide range of Denial of Service attacks. Network Address Translation (NAT) also 'hides' all LAN users behind one public IP address, protecting the LAN from external hackers. Single PPTP or multiple IPSec and L2TP sessions are supported using the AT-ARW256E's sophisticated pass-through capability; standard NAT limitations are no longer a barrier for the power user.

The Service Provider's Choice

The AT-ARW256E 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-ARW256E 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.

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, including USB, 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-ARW256E 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 performance. NAT allows 253 users to share one public IP address for low-cost Internet access.

Key Features

- IEEE 802.11, 802.11b and 802.11g compliant
- Conforms to Wireless Ethernet Compatibility Alliance (WECA) and Wireless Fidelity (Wi-Fi) standards
- Supports 802.11b and 802.11g simultaneously
- Supports seamless WLAN roaming
- Supports Direct Sequence Spread Spectrum (DSSS) technology
- 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 or B
- 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
- 1 x USB port
- 4 x 10/100 Ethernet ports
- Network Address Translation (NAT)
- Integral Stateful Inspection Firewall
- Integral Intrusion Detection System
- 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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Intelligent ADSL Rate Adaptation

The upstream and downstream data rates are dynamically allocated by the AT-ARW256E to minimize noise and maximize service reliability. For each session, the ADSL connection speed is automatically reconfigured to achieve maximum data throughput (within the limits imposed by the service provider).

Flash Software Update

The AT-ARW256E 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 Equalisation 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 8 (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
RFC 2225/1577 Classical IP
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
Universal Plug and Play (UPnP)

WLAN Support

IEEE 802.11, 802.11b and 802.11g compliant
Conforms to Wireless Ethernet Compatibility Alliance (WECA) and Wireless Fidelity (Wi-Fi) standards
Supports 802.11b and 802.11g simultaneously
Supports seamless WLAN roaming
Frequency band:
- 2412MHz – 2462MHz (North America/FCC)
- 2412MHz – 2472MHz (ETSI/Europe)
- 2412MHz – 2484MHz (Japan)
- 2457MHz – 2472MHz (France)
- 2457MHz – 2462MHz (Spain)

Supports Direct Sequence Spread Spectrum (DSSS) technology
Modulation: OFDM with BPSK, QPSK, 16QAM, 64QAM, DBPSK, DQPSK, CCK
Wireless Media Access Protocol: CSMA/CA with ACK
Dynamic Rate Scaling: 54, 48, 36, 24, 12, 11, 9, 6, 5.5, 2 and 1 Mbps
Operating Range: >300m (Open Air)

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 TNETD7300 Single Chip Network Processor/AFE/Line Driver Chipset
Marvell 88E6060-RCJ 5+1 Port 10/100 MAC/PHY Switch (Auto MDI/MDI-X)
Texas Instrument TNETW1130 based IEEE 802.11b/g MiniPCI Daughterboard
USB 1.1 compliant
4MB Flash ROM
16MB SDRAM
Dying Gasp
ITU K.21

Platform Support

OS independent for Ethernet and WLAN
Windows 98SE/2000/Me/XP/2003 for USB

Power Requirements

Input Voltage: 9vDC +/- 10%
Input Current: 1.0A

Physical Specifications

LED Indicators

1 x Power
4 x Ethernet
1 x Wireless
1 x USB
1 x DSL
1 x Internet

External Connectors

1 x ADSL/2/2+ port (RJ-11)
1 x USB 1.1 port (Type B)
1 x Reset button (restore to factory defaults)
4 x Ethernet 10/100 port (RJ-45; auto MDI/MDI-X)
1 x DC power jack (9V)
1 x Power on/off switch
1 x Coaxial connector for detachable, 180° rotate-able, 2.4GHz, 3dBi antenna

Measurements

Dimensions: 176.5(L) x 118.9(W) x 37.9(H) mm
Weight: Approx. 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-ARW256E-xx
Wireless ADSL Bridge/Router, Annex A
(4 Ethernet 10/100 ports, 1 USB port)

AT-ARW256E(B)-xx
Wireless ADSL Bridge/Router, Annex B
(4 Ethernet 10/100 ports, 1 USB port)

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

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