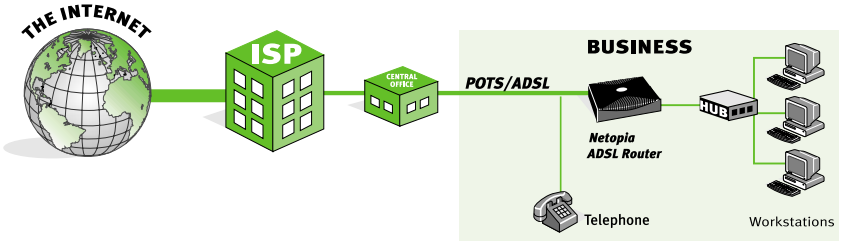
4541 ADSL Router

Business Class Asymmetric DSL Access



Highlights

- ADSL WAN interface supports up to 8.192 Mbps Downstream and 1.024 Mbps Upstream
- Configurable to support both G.dmt and G.lite ADSL standards
- Integrated Netopia data routing engine provides secure, manageable Internet connectivity
- Built-in VPN features offer secure Internet connections between remote offices and travelers
- Built-in firewall protects LAN resources from Internet intruders
- NAT/NATP, multi-NAT, and DHCP for security and convenience
- 10/100-BaseT Ethernet port connects easily to an existing LAN hub
- Interoperable with a wide array of DSLAM equipment

The Netopia 4541 ADSL Router is a next generation, ITU standards compliant, asymmetrical data router optimized for the small and medium size business environment. Leveraging Netopia's extensive data router development experience, the 4541 employs state-of-the-art silicon and software technology for optimal performance.

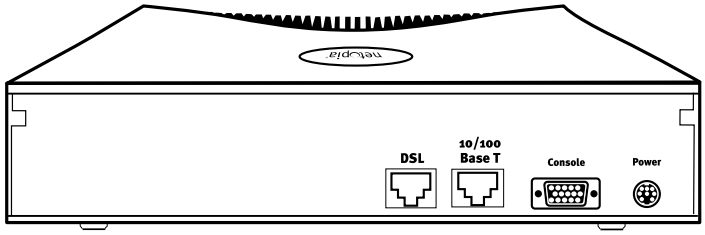
ADSL enables a business to take advantage of existing plain old telephone service (POTS) phone lines to support broadband DSL services over the same line, enabling the service provider to more quickly provision the copper local loop and avoiding delays incurred when additional lines are installed. The 4541 ADSL Router provides asymmetric bandwidth of up to 8.192 Mbps downstream and 1.024 Mbps upstream which is ideal for small and medium business, telecommuter and SOHO environments where fast Internet download speed is a key requirement.

The 4541 ADSL Router cost-effectively combines powerful business-class features and ease-of-use. Equipped with a built-in firewall and secure VPN, the 4541 delivers all the advanced features that a business needs for a secure, reliable, and high-speed Internet connection.

Powerful data routing features make shared Internet connectivity simple and easy. NAT support offers the convenience and economy of using a single IP address provided by the ISP, while the integrated DHCP server automates IP address assignment for connected computers. A built-in firewall protects a network from would-be intruders. Stac LZS data compression ensures optimal performance for data traffic over the link to the ISP.

Part Numbers

4541200NA	North America
4541200EU	Europe
4541200UK	United Kingdom
4541200AP	Asia Pacific



Technical Specifications

Physical Interfaces

WAN Interface

- ADSL port with 32 Kbps to 8.192 Mbps Downstream and 32 Kbps to 1.024 Mbps Upstream, available in increments of 32 Kbps
- ANSI T1.413 Issue 2, ITU G.992.1 (G.dmt) Annex A, ITU G.992.2 (G.Lite)

LAN Interface

- 10/100BaseT Ethernet port

Management Interface

- Console Management port for direct console connections to PC (DB9)
- In band management via Telnet or SNMP

Security Features

- **Built-in Firewall**: Pre-configured firewall to disallow all inbound traffic originated from the Internet; pre-configured NetBIOS filters to optimize performance of DSL link. Includes IP filtering; filter packets on a per-connection profile basis for source/destination address, service, and protocol. Up to 255 rules in up to 8 filter sets.
- **Secure VPN**: Setup encrypted Virtual Private Networks for building intranets and extranets to serve remote users, branch offices, and business partners. Built-in IPSec support with DES and manual key support, fully interoperable with major IPSec vendors;Integrated PPTP Access Concentrator (PAC) and Network Server (PNS) functionality compatible with Microsoft Windows 95/98/00/NT Dial-Up Networking clients and NT Servers. Can replace NT server to provide VPN access to remote users. Also includes ATMP for interoperability with Ascend routers and 56-bit DES Netopia extensions for an efficient, secure VPN connection between remote offices using Netopia routers.
- **NAT/NAPT**: (Network Address and Network Address Port Translation): Provides enhanced security and flexibility by "hiding" all IP addresses on the LAN behind a single statically or dynamically assigned IP address on the Internet. Port Translation allows mail, Web, PPTP, and other servers on the LAN to be accessible from the Internet. (RFC 1631)
- **Multi-NAT**: Sophisticated NAT extension that provides security of a NAT "wall" to hide LAN IP addresses on LAN while providing flexible use of all addresses offered by an ISP.
- **LAN-based Filtering**: Prevent User defined LAN applications from accessing the Internet
- **RADIUS Client support**: For authenticating system configuration access
- **Scheduled Connections**: Connection profiles (ISP connections or VPN tunnels) can be initiated on a schedule to define full-time, on-demand, or periodic connections. Up to 16 connections can be scheduled including blackout periods and on-demand connection windows.

Advanced Features

- **Dynamic Host Configuration Protocol (DHCP) Server, Client and Relay Agent**: As a DHCP server (RFC 2131), the router allows LAN clients to get their IP address configuration automatically when in bridged 1483 mode. As a DHCP client (RFC 2131), the router can acquire IP configuration information from a remote server. As a DHCP Relay Agent (RFC 1542), the router can forward DHCP requests to a centralized DHCP server across the WAN.

Quality of Service

- **Frame Relay:** FRF.12 support
- **ATM:** UBR support

Management Features

- **Easy Setup**: Menu-driven console screens step through required configuration of basic parameters
- **Management Security**: Password-protected with up to 4 user names and passwords
- **LEDs**: Diagnostic lights for at-a-glance management of Ethernet, WAN, and power connections
- **Firmware**: Upgrade firmware in flash memory via TFTP or X-Modem transfer using modem or direct cable connection; configuration retained with upgrades
- **ICMP Ping**: Tests IP connectivity from router to local or remote site
- **Trace Route**: Determines routing path to particular host name or IP address
- **Trivial File Transfer Protocol (TFTP) Client**: Allows remote upload and download firmware and configuration files directly to the router
- **Telnet Client**: Provides remote management access to Telnet hosts on the LAN and WAN
- **Syslog Client**: Maintains ongoing activity log on a syslog server
- **SNMPV1**: (RFC 1157) and MIB II (RFC 1213), Ethernet MIB, and enterprise MIB for remote management using console applications.

Data Protocol Support

- **Network Protocols**: IP routing
- **ATM Protocols**: ATM Multiprotocol Encapsulation over ATM Adaptation Layer 5 (RFC 1483): Logical Link Control (LLC) encapsulation routed modes
- **PPP Over ATM, PPP over Ethernet**: PAP, CHAP or no authentication (RFC 2364); Compression Control Protocol (RFC 1974)
- **Frame Relay Support**: ANSI T1.617 and ANSI T1.618 Annex D LMI, Annex A and Cisco LMI, (RFC 1490) multiprotocol interconnect over Frame Relay and FRF.12 Fragmentation
- **Compression**: IP Control Protocol (RFC 1332), PPP Stac LZS Compression Protocol (RFC 1974), Ascend LZS Compression Protocol, Van Jacobson Header Compression
- **Virtual Circuit**: Terminates ATM Permanent Virtual Circuit (PVC) with ATM Adaptation Layer 5 (AAL5) and Adaptation Layer 2 (AAL2); Allows manual configuration of Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI) for the full range of addresses. Supports up to 8 PVCs.
- **Routing**: Transmit and Receive RIPV1 and RIPV2 (RFC 2453) and RIPV1 compatibility mode, up to 32 static routes with default route and the option to not advertise routes, configurable with up to 8 subnets on LAN with DHCP pool associated with each subnet
- **IP Addressing**: Dynamic Host Configuration Protocol (DHCP) and BootP servers. Supports up to 8 different pools of IP addresses (one per subnet) with a maximum of 512 addresses
- **WAN IP Interface**: Numbered or Unnumbered Interface
- **Connection Profiles**: Specific configuration information for up to 15 Virtual Private Network Tunnels in addition to a primary WAN connection

Package Includes

- Netopia Router
- Category 5 Ethernet cable (6ft./28.35cm)
- RJ11 WAN cable (6ft./28.35cm)
- Console cable (PC)
- CD containing complete documentation,and links to Internet browsers, and other valuable applications.
- 2 user License of Timbuktu Pro collaboration software.

Hardware Specifications

- **Environmental Requirements**: Operating: 0 to +40 C.; Storage: 0 to +70 C (20 to 80% non-condensing)
- **Power Requirements**: Europe: 100-240 VAC, 50/60 HZ, 0.6A; North America: 120VAC nominal, 60HZ, .25A
- **Dimensions**: 9.45" (240mm) wide x 2.25" (57.2mm) high x 7.95" (202mm) long
- **Weight**: Weight: 1 lb 14 oz (851g) (unit carton)
- **Regulatory Approvals**:

  UL Listed; 60950, CSA Approved; CAN/CSA-C22.2 No. 950-95, FCC part 68 and FCC part 15, Class B approved: EN 60950, EN 300 368.2-1997 (European EMC and Immunity), TS-001 (Australian Safety)

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