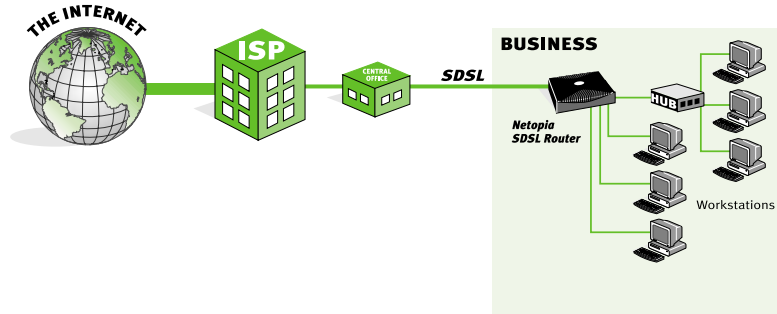


netopia. R7200 SDSL Routers

Fast, 'Always-on' Connectivity with Security Built-in
from 192 Kbps to 1.5 Mbps



HIGHLIGHTS

- Symmetric transmission from 192 Kbps to 1.5 Mbps
- Built-in firewall to protect LAN resources from Internet intruders
- Built-in secure VPN to connect remote branch offices, travelers, and remote workers *
- Built-in 8-port Ethernet hub with uplink switch
- NAT and MultiNAT™ for secure yet flexible IP configuration
- Built-in dial backup via auxiliary serial port *
- Optional integrated V.90 or ISDN dial backup
- Compatible with Nokia ATM/DSL Multiplexer

* *Optional on R7200-T*

Discover the next generation in easy-to-use, high performance, 'always-on' network connectivity with the Netopia family of SDSL Routers.

SDSL provides equal bandwidth in both upstream and downstream directions for business applications such as hosting web and e-mail servers, transferring large files, video teleconferencing and connecting remote corporate locations. The multi-speed feature of SDSL enables initial service configuration at any speed, then as bandwidth needs grow, increases speed up to 1.5 Mbps with no additional hardware investment.

Netopia R7200 Series SDSL Routers cost-effectively combine powerful business-class features and ease-of-use. Equipped with a built-in firewall, 8 port Ethernet hub, secure

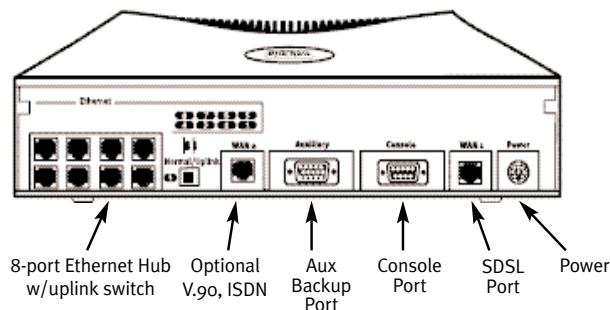
VPN* and dial backup options, the Netopia SDSL Router family delivers all the advanced features that a business needs for a secure and reliable LAN-based Internet connection.

Dial backup can be provided through either an external analog or ISDN modem connected to the serial port, or through an integrated WAN module installed in the second WAN port. Integrated dial backup is included on the R7220 (analog V.90) and the R7231 (ISDN). The R7200 can be upgraded to integrated backup by installing an optional analog V.90 (TER/20) or ISDN (TER/31U) WAN module.

PART NUMBERS

R7200 SDSL Router
R7200-T SDSL Router for Covad™
R7220 SDSL Router w/Int. V.90
R7231 SDSL Router w/Int. ISDN

TER/AT1 AppleTalk Kit
TER/ABK Aux Port Backup
TER/VPN2 Secure VPN
TE6/DB25 Aux Port Modem Cable
TER/20 V.90 WAN Module
TER/31U ISDN WAN Module



Technical Specifications

Physical Connections

WAN Interface

- SDSL port with support for symmetric connections of 192 Kbps, 384 Kbps, 768 Kbps, 1.152 Mbps and 1.536 Mbps (uses RJ45 connector).
- Second WAN interface for integrated optional V.90 or ISDN dial backup.
- Auxiliary Serial Port: Connect to external analog or ISDN modem for remote configuration or optional backup. Or use with optional AppleTalk kit.

LAN Interface

- 8-port 10-BaseT Ethernet hub with uplink switch.

Management Interface

- Console Management port for direct console connections to PC (DB9) or Macintosh (mini-DIN8), cables included.
- Remote out-of-band management available over modem connection, requires optional Aux Port Modem (TE6/DB25).
- In band management via Telnet, SNMP or Web.

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 & IPX (RIP and SAP) 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:** Set up encrypted Virtual Private Networks for building intranets and extranets to serve remote users, branch offices, and business partners. Integrated PPTP Access Concentrator (PAC) and Network Server (PNS) functionality compatible with Microsoft Windows 95/98/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)
- **MultinAT:** Sophisticated NAT (RFC 1631) 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.
- **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 2152), 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.

- **Modular Architecture:** Flexible hardware design lets you add or change connection types by swapping out WAN module cards.
- **Dial backup:** (Optional on R7200-T) Backup to analog or ISDN modem connected to auxiliary serial port. Requires optional Aux Port Modem (TE6/DB25).

Management Features

- **Easy Setup:** Menu-driven console screens step through required configuration of basic parameters.
- **Auto SpeedSet:** Automatically hunts through available speed modes until successfully trains at the speed set by remote DSL concentrator.
- **Web based Management:** Web-based tool displays current router activity including most recent connection statistics and more.
- **Management Security:** Password-protected with up to 4 user names and passwords.
- **LEDs:** 21 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; battery backup to protect configuration across power failures.
- **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 or 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.

Protocol Support

- **Network Protocols:** IP and IPX routing (AppleTalk tunneling and LAN routing available with optional AppleTalk Kit)
- **ATM Protocols:** ATM Multiprotocol Encapsulation over ATM Adaption Layer 5 (AAL5) Logical Link Control (LLC) encapsulation (RFC 1483), bridged and routed modes
- **PPP over ATM (RFC 2364), PPP over Ethernet (RFC 2516):** PAP, CHAP or no authentication
- **PPP Compression:** IP Control Protocol (RFC 1332), PPP Stac LZS Compression Protocol, Ascend LZS Compression Protocol, Van Jacobson Header Compression
- **Virtual Circuit:** Terminates ATM Permanent Virtual Circuit (PVC) with ATM Adaptation Layer 5 (AAL5); Allows manual configuration of Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI)
- **Routing:** Transmit and Receive RIPv1 and RIPv2 (RFC 1723) and RIPv1 compatibility mode, up to 16 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:** Specify configuration information for up to 15 Virtual Private Network Tunnels in addition to primary WAN connection

Feature Add-ons

- **AppleTalk Kit:** Interconnect remote AppleTalk networks using AURP or provide Internet access to older Macintosh networks via Mac IP and LocalTalk to Ethernet routing (TER/AT1)
- **Aux Port Backup Kit (for R7200-T only):** Adds backup support via an external analog or digital modem attached to the router auxiliary serial port. Includes a DB25 serial cable (TER/ABK)
- **Secure VPN Add-on (for R7200-T only):** Adds Secure VPN solution using PPTP and ATMP. Firmware key only. (TER/VPN2)
- **Aux Port Modem Cable:** Use to connect DB25 connector on analog or ISDN modem to router for backup or remote management. (TE6/D25)

WAN Modules

- **TER/20:** V.90 Integrated Backup Module
- **TER/31:** ISDN Integrated Backup Module (Requires firmware upgrade available Q1 2000)

Package Includes

- Netopia Router
- One 14.5 ft. RJ45 10-BaseT Ethernet cable
- Console cable
- CD containing complete documentation, useful setup programs, Internet browsers and other valuable applications
- 2 user License of Timbuktu Pro collaboration software

Hardware Specifications

- **Memory:** 4 MB DRAM memory
- **Environmental Requirements:** Operating: 0° to +40° C. Storage: 0° to +70° C (20 to 80% non-condensing)
- **Power Requirements:** AC 100-240 V; 50/60 Hz; 1.2A
- **Dimensions:** 9.45" (240 mm) wide X 2.25" (57.2 mm) high X 7.95" (202 mm) long
- **Weight:** 1lb, 14 oz (851 g) (unit carton)
- UL Listed, CSA Approved, FCC part 68 and part 15, Class A

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