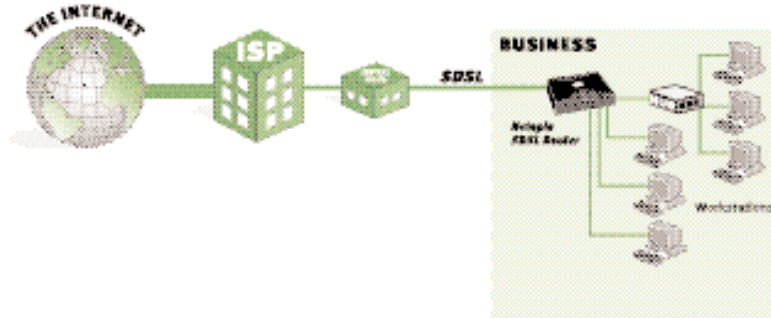




R7100 SDSL Routers

Fast, 'Always-on' Connectivity with Security Built-in from 160 Kbps to 3 Mbps



HIGHLIGHTS

- Symmetric transmission from 160 Kbps to 1.568 Mbps
- SDSL Bonding (IMUX) option for speeds up to 3 Mbps using two SDSL lines*
- 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 10 BaseT 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*
- Certified for use with Copper Mountain Networks Copper-Edge™ access concentrator

* DSL Bonding and integrated ISDN dial backup available Q1 2000

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, allows speeds to be increased up to 1.5 Mbps with no additional hardware investment.

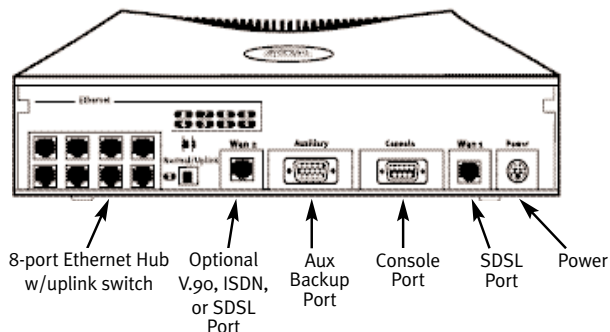
The R7171 Router supports DSL bonding (also known as inverse multiplexing or IMUX) for connections up to 3 Mbps.* The R7100 can be upgraded to support bonding by installing a TER/71 WAN module in the second WAN card slot and adding the TER/IMUX DSL Bonding Add-On.

Netopia R7100 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 R7120 (analog V.90) and the R7131 (ISDN). Netopia SDSL Routers can be upgraded to integrated backup by installing an optional analog V.90 (TER/20) or ISDN (TER/31U) WAN module.

PART NUMBERS

R7100-C	SDSL Router
R7120	SDSL Router w/int. V.90
R7131	SDSL Router w/int. ISDN
R7171	SDSL 2x IMUX Router
TER/DB25	Serial DB25 Cable
TER/AT1	AppleTalk Kit
TER/IMUX	DSL Bonding Add-On
TER/20	V.90 WAN Module
TER/31U	ISDN WAN Module
TER/71	SDSL WAN Module



Technical Specifications

PHYSICAL INTERFACES

WAN Interface

- SDSL support for symmetric connections from 160 Kbps to 1.568 Mbps. Compatible with Copper Mountain CopperEdge access concentrators
- Second WAN interface for optional integrated V.90 or ISDN dial backup or DSL Bonding
- Auxiliary Serial Port: Connect to external analog or ISDN modem for backup or remote configuration. Or use with optional AppleTalk kit.
- Backup to external analog or ISDN modem

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 Internet Service Provider.
- **Scheduled Connections:** Connection profiles (ISP connection 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. 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 from LAN clients to a centralized DHCP server.

- **Modular Architecture:** Flexible hardware design lets you add or change connection types by swapping out WAN module cards.
- **Optional DSL Bonding (IMUX):** Combine two SDSL lines for speeds up to 3 Mbps using Inverse Multiplexing (IMUX). Standard on model R7171. Available as an add-on to the R7100 router (order TER/71 and TER/IMUX). Available only through service providers using Copper Mountain DSL Central Office equipment.
- **Dial Backup:** Backup to analog or ISDN modem connected to auxiliary serial port. Aux Port Modem (TE6/DB25).

MANAGEMENT FEATURES

- **DSLAM:** Integrated with Copper Mountain CopperView management for remote troubleshooting, diagnostics, and DSL firmware download. (When connected to CopperEdge™ access concentrator).
- **Easy Setup:** Menu-driven console screens step through required configuration of basic parameters.
- **Copper Throttle Speed Setting:** Speed automatically set by remote Copper Mountain DSL concentrator.
- **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):** 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 system analog server.
- **SNMPv1:** (RFC 1157) and MIB II (RFC1213), Ethernet MIB and enterprise MIB for remote management using console applications.

DATA PROTOCOL SUPPORT

- **Network Protocols:** IP and IPX routing (AppleTalk tunneling and LAN routing available with optional AppleTalk Kit).
- **Frame Relay:** Supports ANSI T1.617 and ANSI T1.618 Annex D LMI, Annex A and Cisco LMI, (RFC 1490) multiprotocol Interconnect over Frame Relay.
- **PPP over HDLC (RFC 1662), PPP over Ethernet (RFC 2516/RFC 1483), PPP over Frame Relay (RFC 1973):** PAP, CHAP or no authentication
- **PPP Compression:** IP Control Protocol (RFC1 332), PPP Stac LZS Compression Protocol, Ascend LZS Compression Protocol, Van Jacobson Header Compression.
- **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.
- **WAN IP Interface:** Numbered or Unnumbered Interface.

- **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.
- **Connection Profiles:** Specify configuration information for up to 15 Virtual Private Network Tunnels in addition to a 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)
- **DSL Bonding Add-On:** Allows bonding of multiple DSL lines (IMUX), multiplying available bandwidth up to two times. Upgrading an existing DSL router to support DSL Bonding also requires purchase of an additional DSL WAN module (TER/71 for SDSL). This Kit includes a firmware upgrade key only. (TER/IMUX)
- **Analog Dial-in Kit:** Adds remote access server (RAS) functionality and analog dial-in support via an external analog modem attached to the router auxiliary serial port. Includes a DB25 serial cable. (TER/AD1)
- **Aux Port Modem Cable:** Allows connection of analog or ISDN modems with DB25 serial ports to the Aux port of an R-Series router for dial backup functionality. Can also be used with all R-Series routers for remote, out-of-band management. (TE6/DB25)

WAN MODULES

- **TER/20:** V.90 Integrated Backup Module
- **TER/31U:** ISDN U Integrated Backup Module (Requires firmware 4.5 version or greater.)
- **TER/71:** SDSL Module for IMUX (Requires firmware upgrade available Q1 2000)

PACKAGE INCLUDES

- Netopia Router
- Category 5 Ethernet cable (6ft./28.35cm)
- Category 5 SDSL 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:** AC 100-240 V; 50/60 Hz; 1.66A
- **Dimensions:** 9.45" (240mm) wide x 2.25" (57.2mm) high x 7.95" (202mm) long
- **Weight:** 1 lb 14 oz (851g) (unit carton)
- **Regulatory Approvals:** UL Listed; 60950, CSA Approved; CAN/CSA-C22.2 No. 950-95, EN 60950, FCC part 68 and FCC part 15, Class B approved; EN 300 368.2-1997 European EMC and Immunity

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