netopia ®
Internet Equipment

R2020 Dual Analog Router

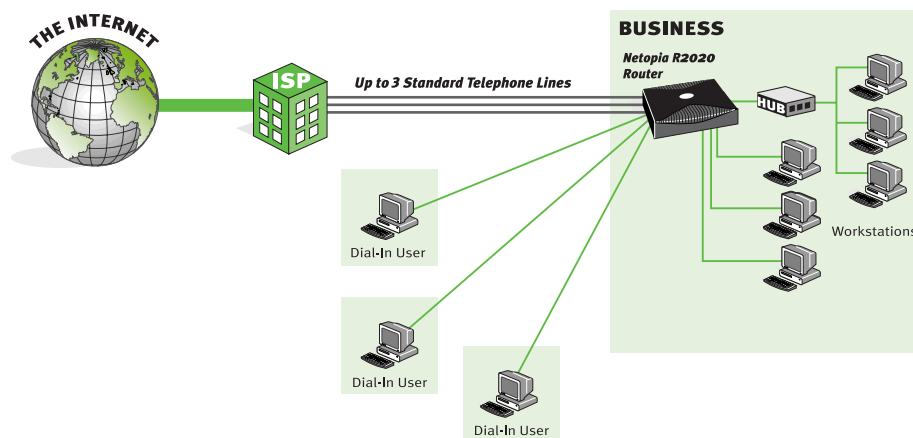*Internet Connectivity Over Ordinary Phone Lines with a Built-in Growth Path*

HIGHLIGHTS

- Dial in and out over 1, 2 or 3 ordinary phone lines

- Uses ordinary phone lines, no special setup required

- Aggregate two built-in modems for up to 112 Kbps performance

- Add an additional external modem for up to 168 Kbps

- Built-in 8-port 10-BaseT Ethernet hub with uplink switch

- Built-in Secure VPN

- NAT, MultiNAT™ and DHCP for easy Internet access

- Remote access to IP/IPX services on LAN for up to 15 dial-in users

- Easy upgrade path to leased line or DSL

Perfect for small businesses, the Netopia R2020 Dual Analog Router delivers a single, shared LAN Internet connection using ordinary phone lines.

The Netopia R2020 links two 56 Kbps analog connections using the MultiLink PPP standard into one virtual pipe. The R2020 intelligently manages the connections, allowing each line to be dynamically allocated for on-demand Internet access or to allow remote dial-in user access. An additional external modem can be attached to the serial port using the Add-On TE6/DB25 Aux Port Serial Cable, to increase Internet access bandwidth to 168 Kbps or provide another dial-in access line.

The Netopia R2020 features a built-in firewall, secure VPN and an 8-port Ethernet hub. Powerful setup and
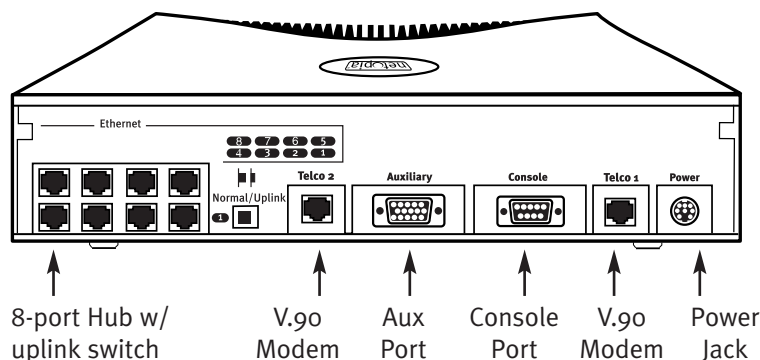
management features make installation simple and hassle-free. Built-in NAT, MultiNAT and a DHCP server, client and relay agent give a network a secure connection to the Internet and allow workstations to receive network configuration automatically.

The modular architecture of the R2020 enables a business to quickly and cost-effectively upgrade one internal modem to a faster connection, such as DSL, and keep the second modem for dial backup redundancy. Router configuration is retained through the upgrade, simplifying the setup process and saving time and money.

PART NUMBERS

R2020	Dual Analog Router
TER/AT1	AppleTalk Kit
TE6/DB25	Aux Port Modem Cable

8-port Hub w/ uplink switch | V.90 Modem | Aux Port | Console Port | V.90 Modem | Power Jack

Technical Specifications

Physical Interfaces

WAN Interface:
- **Dual 56K Analog Modems:** Two 56K analog WAN interface modules configurable as either V.90 or K56flex
- **Auxiliary Serial Port:** Asynchronous serial port for modem connections of up to 230 Kbps

LAN Interfaces:
- **Ethernet:** 8-port 10Base-T hub with uplink switch to easily connect to another hub
- **Serial Console port:** Management port for direct console connections to PC (DB9) or Macintosh (mini-DIN8), cables included

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 WAN 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 (Dialup 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.
- **Easy Upgrade Path:** Modular architecture makes it easy to upgrade to faster, always-on, DSL or leased line connections and retian a V.90 WAN module for dial backup.

Connection Features
- **Line Utilization:** PPP and Multilink PPP selectable 1-line, 2-line, 3-line, or dynamic
- **Connection Profiles:** Specify configuration information for up to 16 connected networks, up to three dial in and/or dial out connection profiles may be active one at a time
- **LAN Dial-out:** Allow anyone on the LAN to dial out to the Internet or to any remote network specified in a connection profile
- **LAN Dial-in:** Authenticate individuals or other network users to dial in to LAN as specified in a connection profile
- **Scheduled Connections:** Connection profiles (Dialup 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.

Management
- **SmartStart™ Wizard:** Windows 95/98 or MacOS application allows for automatic, semi-automatic or manual configuration of the router over Ethernet network
- **Easy Setup:** Menu driven console screens step through required configuration of basic parameters.
- **SmartView:** Web-based tool displays real time view of current router activity including most recent connection statistics and more.
- **SNMPv1:** (RFC 1157) and MIB II (RFC1213), Ethernet MIB and enterprise MIB for remote management using console applications.
- **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 syslog server.

Protocol Support
- **Datalink:** PPP, Analog MP, MP+, BACP
- **IP Addressing:** Dynamic Host Configuration Protocol (DHCP) and BootP
- **WAN IP Interface:** Numbered and unnumbered Interfaces
- **Network Protocols:** IP and IPX routing (AppleTalk tunneling and LAN routing available with optional AppleTalk Kit)
- **Compression:** IP Control Protocol (RFC1332), PPP Stac LZS Compression Protocol, Ascend LZS Compression Protocol, Van Jacobson Header Compression
- **Routing:** Transmit and receive RIPv1 and RIPv2 (RFC1723) 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
- **Connection profiles:** Specify configuration information for up to 15 Virtual Private Network Tunnels in addition to a primary WAN connection
- **PPP Authentication:** PAP, CHAP, Calling Number Authentication (CNA) based on CallerID, Token Security including SecurID

Add-on Kits
- **AppleTalk Kit:** Interconnect remote AppleTalk networks using AURP or provide Internet Access to older Macintosh networks by via Mac IP and LocalTalk to Ethernet routing. (TER/AT1)
- **Aux Port Modem Cable:** Use to connect an external analog modem. (TE6/D25)

Package Includes
- Netopia Router
- One 14.5 ft. RJ45 10-BaseT Ethernet cable
- Two 14.5 ft. RJ11 Analog Phone Cables
- 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:** 1 lb, 14 oz (851 g) (unit carton)
- UL Listed, CSA Approved, FCC part 68 and part 15, Class A

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