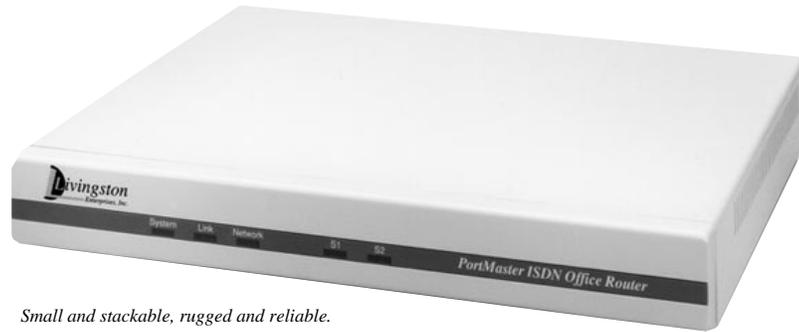*ISDN Office Router*

Livingston PortMaster ISDN Office Router

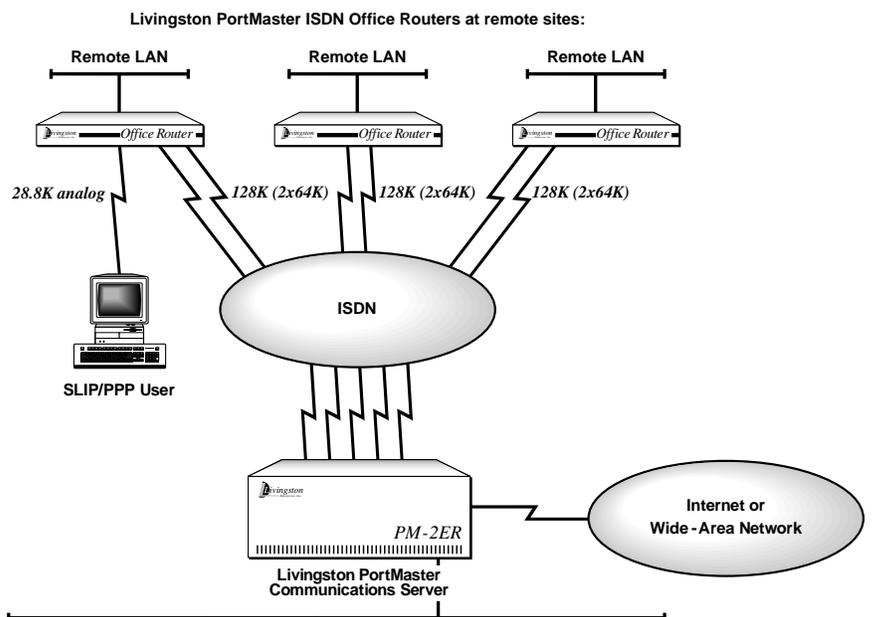**Affordable, High-Speed Internetworking for Small Offices.**

Small and stackable, rugged and reliable.

Now even remote users and small offices can benefit from high-speed dial-up access to central office resources and the Internet. Using ISDN (Integrated Services Digital Network) phone lines, the PortMaster™ ISDN Office Router combines the speeds of dedicated leased lines with the economy of dial-up phone service.

The PortMaster ISDN Office Router has an Ethernet port, an ISDN BRI (basic rate interface) port supporting two 64-Kbps B-channels and one 16-Kbps D-channel, and an asynchronous port. It can be used as a powerful dial-up multiprotocol router (TCP/IP, Novell IPX), a dial-in/dial-out IP and IPX communications server, or both. Dual B-channel aggregation providing 128 Kbps bandwidth is supported using Multilink PPP (MP). The 115.2 Kbps asynchronous port provides a second dial-in/dial-out port for user-to-LAN and LAN-to-LAN dial-up routing.

The PortMaster ISDN Office Router runs Livingston's industry-proven ComOS™, the most efficient remote access technology available. It also includes firewall security features, the Livingston-invented RADIUS (Remote Authentication Dial In User Service) protocol, and Livingston's ChoiceNet™ technology for centralized filter management. Livingston PMconsole™ graphical administration software makes configuration easy.

Another piece of Livingston's total remote

Livingston PortMaster ISDN Office Routers at remote sites:

Remote LAN   Remote LAN   Remote LAN

Office Router   *Office Router*   *Office Router*

28.8K analog   *128K (2x64K)*   *128K (2x64K)*   *128K (2x64K)*

ISDN

SLIP/PPP User

PM-2ER

**Livingston PortMaster
Communications Server**

**Internet or
Wide-Area Network**

Livingston
Enterprises, Inc.

SPECIFICATIONS

GENERAL

Flash memory
Local or network booting via tftp
SNMP (MIB 2)
Reverse Telnet
Ping utility
Traceroute utility
IPX SAP Filtering
Multi-line load balancing
Domain name service or network information service
Auto detect dial-out authentication scripts
Single or multiprotocol support selectable on each port
Novell keep-alive spoofing
PPP auto detect
Session idle timers
Clear channel TCP
BOOTP

SUPPORTED PROTOCOLS

TCP, IP, IPX, SPX, SAP, RIP, SLIP, CSLIP, ICMP, UDP, ARP, telnet, rlogin,
PPP (Fully compliant: RFC 1331; RFC 1332; RFC 1334; RFC 1618;
backward compatible: RFC 1171; RFC1172), MP (RFC 1717), V.120

ROUTING SUPPORT

Concurrent TCP/IP and Novell IPX routing
On-demand dial-up routing
Unnumbered WAN links for TCP/IP
Static routes
On-demand, continuous connection, and manual/scheduled dialing
Auto detect dial-out authentication scripts
Dynamic routing using RIP for IP and IPX
RIP support on a per-interface basis
Support for IP host, subnet, and network routes
Automatic packet queuing and redial
*Proxy ARP*

SECURITY

Local username/password database
Dialback
PAP and CHAP authentication
Inbound/outbound IP and IPX packet filters
Central authentication via RADIUS protocol
Per-user authorization filters (source address, destination address,
      protocol, protocol service [Web, e-mail, ftp], status of connection)
User accounting (audit trails)
ChoiceNet centralized filtering technology

ASYNCHRONOUS PORT SUPPORT

LAN-to-LAN dial-on-demand routing
Concurrent TCP/IP and Novell IPX dial-in
Standard dial-up phone lines (using V.32 bis and V.34 modems)
Dial back-up of ISDN WAN ports
ISDN (using terminal adapter)
Local and remote console

ISDN SUPPORT

Standards: ITU-T Q.920, Q.921, Q.922, Q.930, Q.931, Q.932
Certifications: NET3/ICTR3, JATE*
Switch compatibility: National ISDN-1 (NI-1), AT&T 5ESS custom,
      Northern Telecom DMS-100 custom, Euro-ISDN (ETSI),
      1tr6, German National ISDN, VN4, NTT INS-Net64*,
      KDD*
Compatible with CSD/CSV services
V.120 ISDN-to-DTE terminal rate adaption
AT command emulation for ISDN dial-out
V.120/Synchronous PPP autodetect
Digital dialtone diagnostics
Multilink PPP with dynamic bandwidth extensions
      *pending approval
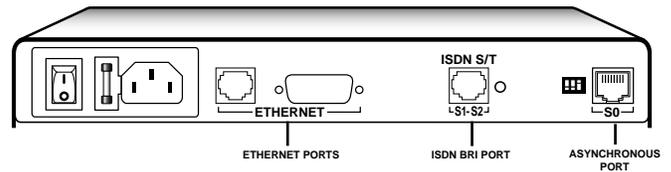
LIVINGSTON PORTMASTER ISDN OFFICE ROUTER with S/T interface.
(A U-interface version is also available.)

HARDWARE

One Ethernet port with two switch-selectable interfaces:
      AUI connector
      Built-in 10BaseT transceiver (RJ-45)
One ISDN BRI (basic rate interface) port
      Two 64-Kbps B-channels, one 16-Kbps D-channel
      S/T interface or U interface (with integrated NT-1)
      RJ-45 connector
One asynchronous serial port
      Up to 115.2 Kbps
      RS-423/232 interface
      RJ-45 connector
      DTR, DSR, DCD, RTS, CTS, TxD, RxD
Either or both WAN ports can be used as a primary dial-up router
      port, back-up dial-up router port, dial-in port for network
      management, or one- or two-port communications server for
      remote LAN connectivity (SLIP, PPP, Telnet, TCP/IP, IPX).
Dimensions
      Length: 8.75 in (22 cm)
      Width: 10.5 in (26.2 cm)
      Height: 1.75 in (4.3 cm)
      Weight: 3.9 lb (1.8 kg)
Power Requirements
      110 VAC ±10%, 47-63 Hz
      240 VAC ±10%, 47-63 Hz
Environmental Operating Range
      Temperature: 32F to 104F (0C to 40C)
      Humidity: 10% to 90%
Agency Approvals
      FCC, UL, CSA, CE

Livingston Enterprises, Inc.

Livingston Enterprises

6920 Koll Center Parkway, # 220

Pleasanton, California 94566 USA

phone 800.458.9966 *or* 510.426.0770

fax 510.426.8951

e-mail info@livingston.com

web http://www.livingston.com/

960-1018 5/96