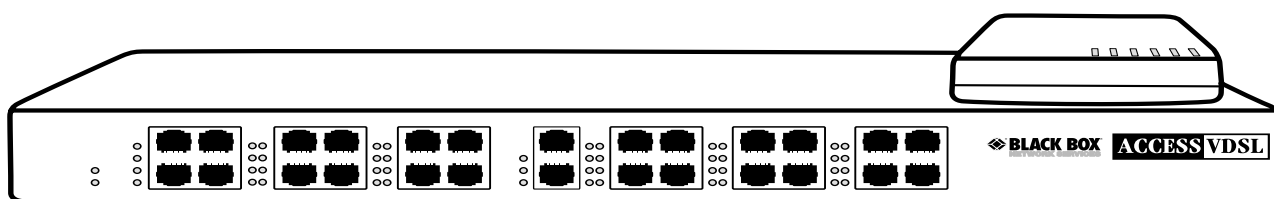# BLACK BOX®
NETWORK SERVICES

SDSL

Key Features

- Embedded LINUX

- Simple Configuration And management

- IP Routing Protocol and WAN Protocol Support

- NAT Support for IP Address Conservation and Security

- Easy IP Management via DHCP Server/Relay

- Enhanced Internet Security

- Virtual LANs (VLANs)

- Quality of Service (QoS)

- SDSL WAN Support

- Transmission Rate Control

- Scalability & Investment Protection

The MDS4024AE is a powerful, high performance DSLAM that delivers configurable linerates up to 2.3 Mb (symmetrical) – comparable to an E1 connection – over a distance of 5 km. Its incremental transmission speed (256K to 2.3 Mb, in 128 Kb increments) allows service providers to adjust for traffic.

The MDS4024AE provides optional support for splitter equipment that combines voice calls and Internet access on the same phone line with no reconfiguration. Port-trunking capabilities relieve potential bottlenecks by providing a high-capacity logical interface. The cost-effective MDS4024AE features VLAN-like forward grouping to facilitate administration of logical groups of stations, and provides security by limiting the traffic between forward groups. It works with a variety of protocols, including TCP/IP, RIP, OSPF, and BGP. MDS4024AE also features packet filtering, MAC address filtering and PAP/CHAP user authentication. With its additional bridging and routing functions to support unlimited users,

MDS4024AE is a best of breed routing solution for SME businesses, mid-size service providers, and B&A providers.

Simple Configuration and Management
Setup Menu provides easy, step-by-step instructions for custom router configuration. Supports Simple Network Management Protocol (SNMP) and Command Line Interface (CLI) via console or Telnet. Both FTP and TFTP are supported for software downloads.

IP Routing Protocol and WAN Protocol Support
Supports the following IP protocols: Open Shortest Path First V2 (OSPF), Border Gateway Protocol V4 (BGP), and Routing Information Protocol V1/V2 (RIP).

NAT Support for IP Address Conservation and Security
Extends the use of limited addresses. Enables LAN to maximize internal IP address resources by using separate IP address sets for internal and external traffic.

Easy IP Management via DHCP Server/Relay
Simplifies system administration by automating IP address management. Enables the router to dynamically negotiate its own IP address and allocate local IP addresses to clients via Dynamic Host Configuration Protocol (DHCP) server. It also supports DHCP relay.

Enhanced Internet Security
Packet Filtering and User Authentication (PAP/CHAP) keep the network secure from intrusion. This can be used to block internal users from browsing selected external sites. Supports site-to-site IP tunneling via Generic Routing Encapsulation (GRE) and IP-over-IP tunneling (IPIP).

Virtual LANs (VLANs)
Enables packets to be forwarded only between ports belonging to the same VLAN containing its own set of ports to restrict access from one segment to another. Supports up to 256 tagged VLANs defined in the IEEE 802.1q standard. Supports for IEEE 802.1d Spanning Tree Protocol (STP) per VLAN for redundant backbone connections and loop-free networks.

Quality of Service (QoS)
Supports QoS features such as Stochastic Fair Queuing (SFQ), Random Early Detection (RED), Priority Queuing (PQ), Class Based Queuing (CBQ), TEQL, CSZ, PIRO, and TBF for traffic control.

SDSL WAN support
Connecting the MDS4024AE to MDS4024AE-CPE (SDSL CPE router) via SDSL interface creates a typical router-to-router connection up to 2.3Mbps bandwidth. The maximum distance between the two SDSL interfaces is 5km over POTS.

Transmission Rate Control
Allows service providers to allocate data rates from 256 Kb to 2.3 Mb by the increment of 128 Kb.

Scalability & Investment Protection
Supports unlimited users by connecting the MDS4024AE via external switch. Enables Internet access using existing

copper phone wires without special line installation, and integrated voice/data access in a single product.

Specifications MDS4024AE

Processor — MCP 750, 400MHz
Flash Memory — 8 MB
DRAM Memory — 64 MB, expandable to 256 MB
Buffer Memory — 1 MB SRAM
Ethernet Port — 1 10/100Base-TX, auto negotiating

SDSL Interface — 24 ports (RJ-11)
Console Port — one serial port, RJ-45 (RS-232)
Power Supply — Single 90 to 260 VAC, 50/60 Hz
Power Dissipation — 64W
Operating Temperature — 0°- 50° C

Storage Temperature — -40°-70° C
Operating Humidity — 0-950% non condensing
Dimensions — (WxDxH) 432 x 524 x 43 mm

Specifications MDS4024AE-CPE

Processor — 80C32, 11MHz
Flash Memory — 64 KB
DRAM Memory — 1 MB
Buffer Memory — 1 MB SRAM
Ethernet Port — 1 10/Base-TX
SDSL Interface — 1 port (RJ-11)

Power Supply — Single 90 to 260 VAC, 50/60 Hz, AC Adapter
Power Dissipation — 3W
Operating Temperature — 0°- 50° C
Storage Temperature — -40°-70° C
Operating Humidity — 0-950% non condensing

Dimensions — (WxDxH) 89 x 122 x 30 mm

Black Box Network Services - The world's largest network services company

We are, with 25 years of experience, the world leader in network infrastructure services.

On the Phone — no charge, answer calls in less than 20 secounds, find the right product with our technical experts.

On-site — superior design and engineering, Certified installations, end-to-end service.

On-line — receive techinical knowledge on-line, including technology overviews, BLACK BOX Explains and the Knowledge Box.

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▼ *Ordering information*

ITEM	CODE
24-Channel SDSL Concentrator, 1x 10/100Base-T Fast Ethernet, (RAM 64MB) MDS4024AE	
SDSL CPE, 1x 10Base-T Ethernet MDS4024AE-CPE	