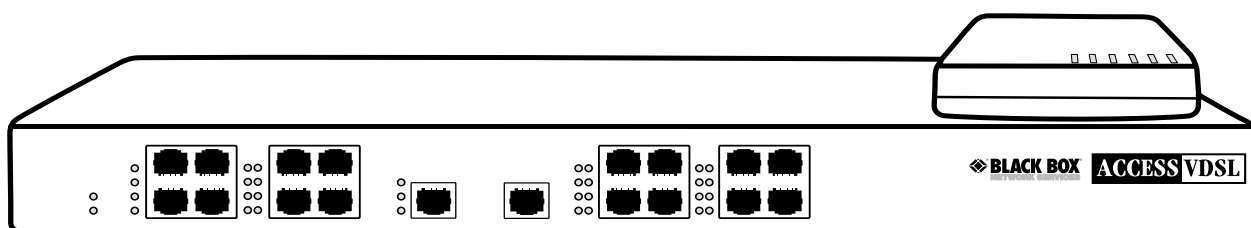


# BLACK BOX®

## NETWORK SERVICES

## VDSL



### 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)
- ▶ VDSL WAN Support
- ▶ Scalability & Investment Protection

The MDS4108AE is a powerful, high performance DSLAM that delivers line rates of 10Mbps (symmetrical) over a distance of 1.3 km.

The MDS4108AE provides 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 MDS4108AE 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. MDS4108AE also features packet filtering, MAC address filtering and PAP/CHAP user authentication. With its additional bridging and routing functions to support unlimited users, MDS4108AE 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 configura-

tion. 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 (SFO), Random Early Detection (RED), Priority Queuing (PQ), Class Based Queuing (CBQ), TEQL, CSZ, PIRO, and TBF for traffic control.

#### VDSL WAN support

Connecting the MDS4108AE to MDS4108AE-CPE (VDSL CPE router) via VDSL interface creates a typical router-to-router connection of 10Mbps bandwidth. The maximum distance between the two VDSL interfaces is 1.3 km over POTS.

**Protection**  
 Supports unlimited users by connecting the MDS4108AE via external switch. Enables Internet access using existing copper phone wires without special line installation, and integrated voice/data access in a single product.

**Scalability & Investment**

**Specifications MDS4108AE**

**Processor** — MCP 750, 400MHz  
**Flash Memory** — 4 MB (Max. 8MB)  
**DRAM Memory** — 64 MB (Max. 256 MB)  
**Ethernet Port**— 1 10/100Base-TX, auto negotiating  
**VDSL Interface** — 8 ports (RJ-11),

POTS Splitter Included  
**Console Port** — one serial port, RJ-45 connector (RS-232)  
**Switching Mode** — Store and forward  
**Flow Control** — IEEE 802.3x in full-duplex  
**Switching Fabric** — 13Gbps

**Standard Protocols** —  
 - TCP/IP: RIP v1/v2, OSPF v2, BGP v4  
 - IEEE 802.1p/D Spanning Tree Protocol  
 - IEEE 802.1q tagged VLAN  
**Power Supply** — 90-130/170-260V, 50/60Hz, Single AC  
**Power Dissipation** — 40W

**Operating Temperature** — 0°-50° C  
**Storage Temperature** — -40°-70° C  
**Operating Humidity** — 0-90% non condensing  
**Dimensions** — (WxDxH) 432 x 544 x 43 mm

**Specifications MDS4108AE-CPE**

**Processor** — 89C51, 25MHz  
**Flash Memory** — 64 KB (Max. 8MB)  
**DRAM Memory** — 512 KB  
**Ethernet Port**— 1 10/100Base-TX, auto negotiating  
**VDSL Interface** — 1 port (RJ-11), POTS Splitter Included

**Power Supply** — 90-260V, 50/60Hz, AC Adaptor  
**Power Dissipation** — 5W  
**Operating Temperature** — 0°-50° C  
**Storage Temperature** — -40°-70° C  
**Operating Humidity** — 0-90% non condensing

**Dimensions** — (WxDxH) 190 x 137 x 40 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 seconds, find the right product with our technical experts.

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

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

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**The world's best customer service** — Custom design services and products, the best warranties, money-saving discount programs.

**BLACK BOX exclusives** — Certification Plus. Guaranteed-for-life products and services.

**Ordering information**

**ITEM**

**CODE**

8-Channel VDSLConcentrator, 1x 10/100Base-T Fast Ethernet, incl. Voice Splitter, (RAM 64MB) .....MDS4108AE  
 VDSL CPE, 1x 10/100Base-T Fast Ethernet, incl. Voice Splitter .....MDS4108AE-CPE