



MDX 9200 MEDIA DISTRIBUTION SWITCH

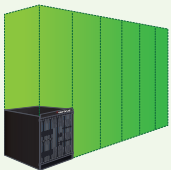
Network operators are faced with extraordinary challenges given the explosion of on-demand, rich media applications. Service offer planning now includes multi-screen convergence, time/place shifting and network PVR just to name a few. Amidst constant budget pressures, rapidly changing business models and increasing consumer expectation, operators must find new infrastructure solutions.

A traditional video serving office can require dozens of independent rack-mount servers, load balancers and switches offering little economy of scale. Current implementations may also handle TV, PC and handheld applications separately while requiring the entire infrastructure to be duplicated locally at every site. This model becomes unsustainable as subscriber bases grow and rapidly expanding content libraries stretch the limits of these legacy systems. To this end, the Verivue MDX Media Distribution Switch has arrived to define the next generation of rich media distribution platforms. The MDX 9000 series is designed to grow with you and is an important new platform for operators to evaluate when weighing the relative TCO associated with building out video streaming infrastructure.

Carrier Ethernet Foundation

The MDX 9200 is a carrier class Ethernet switch with integrated storage and delivery capabilities designed to support the throughput and reliability of demanding I/O intensive content delivery. The MDX 9200 is designed to serve media distribution and caching needs of medium to large media serving offices of:

- Cable Service Providers
- Telco Broadband Providers
- On-Line Video Provider



This carrier-grade, integrated architecture vastly simplifies management, lowers energy consumption and reduces footprint and installation complexity.

The MDX innovative hardware and software implementation centers on the following four areas of design:

Seamless Multi-Screen Convergence by supporting a wide range of transport protocols and container formats that allow networks to be designed for peak usage across multiple screens from a common network platform.

Intelligent Content Distribution operating as part of a fully distributed media network combining a storage hierarchy with intelligent algorithms that automatically adapt to unpredictable traffic patterns.

VueStor™ Solid-State Storage Subsystem implements a patent-pending control architecture for Flash Memory to provide higher reliability, longer life expectancy and higher, deterministic performance. VueStor eliminates in-efficient spindles which heretofore were unable to keep up with the bandwidth requirements of streaming media.

Green Design Advantage provides the most efficient power consumption, heat dissipation and space utilization, solving some of the most critical issues facing operators today.



PLATFORM HIGHLIGHTS

- High performance and reliable Flash storage—No spin-up time, seek time or rotational latency.
- Seamless support for HTTP and VOD/UDP media delivery from a single “Universal” Network Port.
- Ultra-low power consumption.
- Extremely small footprint per stream density – 14RU for 20-200Gbps streaming
- Hot-swappable hardware architecture; upgrade, add or replace modules with no down-time.
- In-Service Software Upgrades and 99.999% uptime
- Reduce the complexity/cost of multi-device solutions combining storage, Ethernet switching, Firewall, Load Balancing.
- Deliver long-tail content as efficiently and cost effectively as the most popular programming.
- Real time cache decision algorithms accounts for network availability/costs as well as fixed/on-demand content popularity.
- Dramatically reduced cooling requirements

MDX 9200: HARDWARE SPECIFICATIONS

Delivery Modules (DM)
1-10 delivery modules providing 20-200 Gb/s of multi-protocol delivery

Switch/Ingest Module (SIM)
9.6 Gb/s continuous ingest bandwidth



Storage Modules (SM)
Up to twelve 2TB Flash-based Solid State Storage Modules

Switch/Control Module (SCM)
200 Gb/s switch fabric

MDX 9200 CHASSIS

200 Gb/s Streaming and Delivery Capacity
Integrated L2/L3 Switch Fabric
Optional 3+1 Redundant Switch Fabric
Hot-Swappable Fan Tray
Dual DC Power Inputs
AC Power Inputs (Optional N+1)
1-10 Delivery Modules (N+1 Configurable)
1-12 Storage Modules (N+1 and N+2 Configurable)
All Modules, Hot Swappable

DIMENSIONS

Height: 62.23 cm (24.5 in.) 14-RU
Width: 44.2 cm (17.4 in.), 19 inch rack design
Depth: 55.88 cm (22 in.)
Weight: 90.72kg (200 lbs) fully loaded

POWER

4500 Watts, Fully Populated
1525 Watts, Minimally Powered

INPUT VOLTAGE:

-48V DC (-40 to -60)
110/240 V (85 – 264 VAC)

ENVIRONMENTALS

Operating Temperature:
- Long Term Operating: 5° – 40° C
- Short Term Operating: 5° – 50° C
Humidity
- Long Term Operating: 5%– 85%
- Short Term Operating: 5%– 95%
Altitude
- Maximum at 30° C: 4000 Meters
Minimum
- 1525 Watts – 5204 BTU
Maximum
- 4500 Watts – 15358 BTU

DELIVERY MODULE (DM)

Up to 20 Gb/s of streaming and delivery capacity per DM

STORAGE MODULE (SM)

Available in 1, 2 and 4 TB Capacities
Up to 12 Storage Module Slots

INTERFACE PORTS

Delivery Module
- 2 x 10 GbE – SM and MM XFP
- 20 x 1 GbE – Copper, SM and MM SFP
Switch/Ingest Module
- 2 x 10 GbE or 4 x 1 GbE
Switch/Control Module
- 1 GbE and Serial Ports

NEBS COMPLIANCE

GR-78
GR-1089-CORE
GR-63-CORE

SAFETY

EN 60950-1:2005
UI60950-1 :2007
CAN/CSA-C22.2 No. 60950-1 :2007

ELECTROMAGNETIC EMISSIONS AGENCY

AS/NZS 3548:1995 (CISPR 22 Class A)
EMC Directive (89/336/EEC)
EN55022 Class A (CISPR-22 Class A)
ETSI 300-386
FCC Part 15 Class A
IECS-03 Issue 3 Class A
VCCI

KEY SOFTWARE FEATURES

UDP/MPEG-2TS, HTTP-PDL, RTP
RTSP, RTP
MPEG-2, H.264, FLV, Silverlight,
Binary Images
Cable Environment:
NGOD, ISA
Management Support
CLI
WebGUI
SNMP
MIB
NETCONF