MEDIA LINKS®
Media Defined Networking®

Description

The MDX-32C Core Switch provides 32 ports of up to 100 Gbit/s connectivity each, for a total switching capacity of 6.4 Tbit/s. This high-performance system is ideally suited for cross-connecting and managing thousands of media streams while preventing network oversubscription or blocking.

Features & Benefits

High capacity and bandwidth, Low latency, High availability. Delivers line rate L2 & L3 Switching plus Hybrid Match & Forward, supporting up to 32x 40/100 GbE connections.
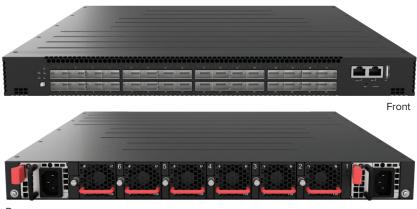
Technical overview

- 32x QSFP28(40G/100G)
- Switching capacity of up to 6.4 Tbps
- Forwarding rate of 4.7 Bpps
- L2 and L3 wire speed forwarding
- MAC Addresses: 136 K
- Hot-swappable, load-sharing redundant PSUs (AC/DC)
- 5 + 1 redundant, hot-swappable, configurable fan modules
- Energy efficient: 310W (typical w/o optics), max 550W
- 1RU, 43.8(W) x 51.5(D) x 4.35(H) cm
  17.3(W) x 20.3(D) x 1.7(H) in
- 10.87 kg (23.96 lb), with two PSUs
- 1x RJ45 serial console
- 1x RJ45 1000BASE-T management port
- 1x USB Type-A storage port
- All ports on front; PSU and fans accessible from rear
- LLDP with MD8000/MDX/MDP product families
- Uni-directional operation for bi-directional two fiber optical
- Media Flow Table (MFT) for strict management of media stream transfers

---

Related Products

MDX-48x6C IP Media Aggregation Switch

ProMD EMS Software

DATASHEET

MDX-32C IP Media 100G Core Switch

Front

Rear

Built for core, carrier, superhub, and studio applications, and part of the MD8000 100G Ecosystem, the Media Links MDX-32C is a high performance IP Media Switch designed to work in concert with Media Links' MDX family of edge and aggregation switches. The MDX-32C delivers 32 QSFP28 high speed 100Gb Ethernet ports and provides line rate Layer 2 and Layer 3 switching with a total switching capacity of 6.4 Tbps. The switch supports 4K VLAN IDs and 136K MAC addresses and uses a Packet Buffer size of 16MB in a shared buffer pool.

The MDX-32C is optimized to handle both compressed and uncompressed video/audio streams as well as bidirectional TCP-over-IP data traffic and is designed with a non-blocking architecture that assures no packet loss at full bandwidth rates in various configurations. It supports unicast and multicast traffic with 9KB Jumbo frames and features an advanced set of Quality of Service (QoS) features including per port priority queuing, traffic scheduling, and traffic classification.

The unit features a compact 1RU form factor and includes NEBS certification. Power for the switch is supplied by two redundant, load-sharing, hot swappable AC or -48VDC power supplies and cooling is provided by 5 + 1 hot-swappable redundant fans. Several device management options are available, including SNMP and CLI.

Ports

Switch Ports:
32x QSFP28
Each QSFP28 supports 1x 40/100GbE or 4x 10/25GbE
per port using splitter cables

Management ports on port side:
1x RJ45 serial console
1x RJ45 100/1000BASE-T management port
1x USB Type A storage port

Switch Performance

Switching Capacity: 6.4Tbps full duplex
Forwarding Rate: 4.7Bpps
Jumbo frames support up to 9212 Bytes (w/o FCS)
Packet Buffer Size: 16MB
MAC Addresses: 136K
VLAN IDs: 4K

Physical and Environmental

Dimensions (WxDxH): 43.8 x 51.5 x 4.35 cm (17.3 x 20.3 x 1.7 in)
Weight: 10 kg (23 lb), with two installed PSU modules
Fans: Hot-swappable 5+1 redundant fans
Operating Temperature: 0°C to 45°C (32°F to 104°F)
Operating Humidity: 5% to 95% non-condensing

Power

PSUs: 2 redundant, load-sharing, hot-swappable AC or -48 VDC
Input Voltage: 90 to 264 VAC at 50-60 Hz or -36 to -72 VDC
PSU Efficiency: Up to 93% for AC PSUs
Max Power: 550W

Regulatory

EMI:
CE Mark, EN55032 Class A, EN55024,
EN61000-3-2, EN61000-3-3,
FCC Part 15 Subpart B Class A, VCCI Class A

Safety:
CB, UL/CUL
NEBs Level-1/3

Media Flow Table (MFT)

Three types of MFT's enable media network optimization for Media Links products (Xscend, MDP Series & MD8000).

Multicast Flow Table	
Target streams	Multicast IP media streams (e.g. Video stream)
Parameters	Destination IP address, VLAN ID, Stream Bandwidth, Input port, Output ports, Source IP address (Option)
Number of entries	up to 8000 streams
Flow direction	Uni-direction, Input port to output ports

L2 Unicast Flow Table	
Target streams	L2 unicast streams (e.g. Tunneling data stream)
Parameters	Destination MAC address, VLAN ID, Stream Bandwidth, Input port, Output port
Number of entries	up to 8000 streams
Flow direction	Uni-direction, Input port to output ports

VLAN Flow Table	
Target streams	VLAN streams (e.g. General data stream)
Parameters	VLAN ID, Stream Bandwidth, Ports
Number of entries	up to 1000 streams
Flow direction	Bi-directional, between membership ports

Flow Meter

MFT configuration options for rate limiting (policing) and detailed monitoring on a per-stream basis

Item	Detail
Number of meters	up to 1000
Policing rate	Can be set in kbps units
Monitoring	For ingress stream(s) that have meter(s) attached
	Current bandwidth, Byte counters, Packet counters

Switch Functions

Item	Details
QoS: Marking	802.1Q priority
QoS: Traffic Classification	2 class
QoS: Traffic Scheduling	Strict priority
IEEE 1588v2(PTP) support	E2E-TC

Port

Item	Details
Uni-directional operation for two fiber optics	10G, 25G, 40G, 100G
Port VLAN mode	Trunk or Access, selectable
FEC	RS-FEC for 100GbE
High-power Optics (SFP power Level)	SFP28 : up to Level-3(2W) QSFP28 : up to Class-6(4.5W)
Q-in-Q TPID	0x8100, 0x88a0, 0x9100, 0x9200

Core Switching

MDX 32C™

6.4 TBPS

Multicast Enhanced

Non-blocking Switch

System Management

Item	Details
Access Interface	Outband(Mgmt: RJ-45) and Inband (via switch ports)
CLI Management	Configuration and Monitor
SNMP Version	v1, v2c
SNMP MIB	Private-MIB, IF-MIB, System-MIB
SNMP Trap	up to 10 destinations
Syslog	up to 10 destinations
NTP	up to 3 time servers
SSH v1/v2	up to 75 simultaneous sessions
FTP	
LLDP	Standard LLDP (IEEE802.1AB) or Media Links proprietary
Configuration file	Automatic and manual saving Automatically restored on startup

Hardware Management

Item	Details
Temperature Monitoring	CPU, SwitchChip, PSU
Fan Speed Control	SwitchChip, PSU, Fan Unit
Fan Speed Monitoring	SwitchChip, PSU, Fan Unit
Power Monitoring	PSU Status
CPU Load Monitoring	Usage, Memory
Mac Table Monitoring	Usage
SFP/QSFP Monitoring	Temp, Voltage, Bias, Tx/Rx Power
Traps for HW Monitoring	CPU/Memory usage, Table usage, PSU status, Fan Unit status, SFP/QSFP plug-in/plug-out