

MDX-48X6C IP Media 100G Aggregation Switch

Low latency, High availability, High Bandwidth. Provides line rate L2 & L3 Switching plus Hybrid Match & Forward, supporting up to 48x 10/25GbE connections with 6x 40/100 GbE uplinks.

Features and Benefits

- 48x SFP28 (1G/10G/25G) + 6 x QSFP28 (100G)
- Switching capacity 1.8 Tbps, forwarding rate 2.6 Bpps
- Hot-swappable, load-sharing redundant PSUs (AC/DC)
- 5+1 redundant, hot-swappable, configurable fan modules
- Energy efficient: 310W (typical w/o optics), max 510W
- 1RU, 43.84(W) x 47.3(D) x 4.35(H) cm
- 9.43Kg (20.78lb) w/ two PSUs
- 1x RJ45 serial console
- 1x RJ45 1000BASE-T management
- 1x USB Type-A storage
- 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



Front



Rear

The Media Links MDX-48X6C is a high performance non-blocking multicast switch designed specifically for aggregating IP Media streams and operating in conjunction with Media Links' MD8000 and MDP Series product portfolios. Contained in a compact 1RU form factor with NEBS certification, the MDX-48X6C provides line rate L2 and L3 switching, supporting up to 48x 10/25GbE and 6 x 40/100GbE connections.

Handling both compressed and uncompressed video/audio streams as well as bidirectional TCP-over-IP data traffic, the MDX-48X6C is designed with a non blocking architecture for multicast streams, and for no packet loss at full bandwidth via selection of various configurations. The switch also incorporates several safeguards such as Loop/Flood Protection, Over Subscription, and Per Flow Bandwidth Management to maximize performance while preventing/minimizing the propensity of service interruptions.

Low power consumption additionally separates this device from similar competitive offerings. The hardware provides High availability features including redundant, hot swappable AC, -48VDC or 12VDC power inputs, redundant fan modules and configurable airflows.

The MDX-48X6C is loaded with the Open Network Install Environment (ONIE) which supports the installation of compatible Network Operating System software for SDN/NFV capability.

Ports

Switch Ports:

- 48x 25G SFP28 plus 6 x 100G QSFP28 ports:
 - Each SFP28 supports 1x 10G or 25GbE
 - Each QSFP28 supports 1x 40/100GbE or 4 x 25GbE or 4 x 10GbE per port using splitter cables

Management ports on port side (1 each):

- RJ45 serial, RJ45 100/1000BASE-T mgmt, USB Type A storage

Key Components

Switch Silicon: Broadcom BCM56967 Tomahawk 1.8 Tbps

CPU Modules:

- Intel Atom® C2538 quad-core 2.4GHz x86 processor

Performance

- Switching Capacity: 1.8 Tbps
- Forwarding Rate: 2.6 Bpps
- Jumbo frames support up to 9216 Bytes
- Packet Buffer Size: 22 MB integrated packet buffer
- MAC Addresses: 8K min./136K max.

Physical and Environmental

- Dimensions (WxDxH): 43.84 x 47.3 x 4.35 cm (17.26 x 18.62 x 1.73 in)
- Weight: 9.43 kg (20.78 lb), with two installed PSUs
- Fans: 5+1 redundant, hot-swappable
- Operating Temperature: 0°C to 45°C (32°F to 113°F)
- Operating Humidity: 5% to 95% non-condensing

Software

- Diagnostics
- Hardware monitoring
- PicOS

LEDs

- 10G SFP+ Port LEDs: Link Speed, Link Status, Activity
- 25G SFP28 Port LEDs: Link Status, Activity for 25G status
- 100G QSFP28 Port LEDs: Link Status, Activity for 100G status
- 100G QSFP28 Breakout LEDs: show Link, Status, Activity with 4 x 25G breakout
- Ethernet Management Port LED: Link Status, Activity
- System LEDs: Diagnostic, Locator, PSU and Fan Status

Power

- PSUs: 2 redundant, load-sharing, hot-swappable AC or -48 VDC
- Input Voltage: 90 to 240 VAC at 50-60 Hz. -36 to -72 VDC
- PSU Efficiency: Up to 93% for AC PSUs
- Power input option: 12 VDC
- The total estimated power budget is around 511 W

Regulatory

- EMI
 - CE Mark, EN55032 Class A, EN55024, EN61000-3-2, EN61000-3-3, FCC Part 15 Subpart B Class A, VCCI Class A, CCC
- Safety
 - CB, UL/CUL, CCC, BSMI

Layer 2 / Layer 3 Support

Item	Details
VLAN Bridge (802.1Q)	L2 switching
Ingress VLAN Translation (Q-in-Q)	
LLDP (802.1AB)	Media Links compatibility
Multicast IGMP (v2/v3)	Snooping/querier
QoS: 802.1Q priority	
QoS: IPv4 Diffserv	L2+/L3
QoS: Shaping per queue, per port	
QoS: Buffer Optimization	Guaranteed resource for high-priority classes
1588v2	E2E-TC
Uni-directional operation for two fiber optics	10G/100G
High-power Optics	QSFP28 Class-6

System Management Support

Item	Support
CLI Management	Yes
Netconf	Yes
Yang model	Yes
SNMP v1, v2c, v3 (MIB, Trap)	Yes
Syslog	Yes
NTP	Yes
SSH v1/v2	Yes
Flow-Management (match & forward) MRF-Openflow	Yes
Firmware update	Yes

Hardware Management Support

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
Board/Fan/PSU/SFP Information	
Traps for HW Monitoring	CPU usage, MAC Table usage, RPSU status/fan, Fan Unit status, SFP plug-in/plugin-out

Media Links (Headquarters)
Kawasaki Tech Center 18F
580-16 Horikawa-cho,
Saiwai-ku, Kawasaki-shi,
Kanagawa 212-0013 Japan
Phone: +81 44-589-3440
query@medialinks.co.jp

Media Links Americas
431-C Hayden Station Road
Windsor, CT 06095
USA
Phone: +1 860-206-9163
Fax: +1 860-206-9165
info@medialinks.com

Media Links EMEA
Suite 18242, PO Box 6945,
London W1A 6US
UK
Phone: +44 207 096 9569
emea_info@medialinks.com

Media Links Australia
2-12 Rokeby Street,
Collingwood, VIC 3066,
Australia
Phone: +61 3-9017-0175
Fax: +61 3-8456-6339
info@medialinksaustralia.com.au

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www.medialinks.com