MultiDyne®
Video & Fiber Optic Systems

MD9200-DEC
Stand-Alone OTT Streaming Media Decoder

FEATURES

▷ Stand-Alone Form Factor

▷ Optional SRT or Zixi Support

▷ Network Protocol Translation

▷ Dual GigE Interfaces

▷ HTML 5.0 Web-UI

▷ SNMP Management

APPLICATIONS

Streaming Decode & Transcode

▷ Public and Private Network LIVE Contribution

▷ News Contribution

▷ Sport Contribution

▷ Contribution to CDN Transcoding

▷ Live to Mobile Devices

▷ Studio Links

▷ Live Internet Protocol (IP) RTSP Camera Multi View Decode

File Based Decode

▷ Playback on Demand

▷ Ultra-HD Content Looping

▷ Mix Mode SD/HD/3G/4K Looping with UHD Output

▷ HEVC UHD Extreme Signage

Industry-Leading Live OTT Streaming Media Decoder

The MD9200-DEC is an industry-leading live OTT streaming media decoder that supports Ultra High Definition (UHD) 2160P HEVC1, 1080P AVC, and 1080i MPEG2.

IP streaming protocol support includes source specific UDP/RTP with IGMP v3, SRT, Zixi, RTMP, RTSP, HLS, DASH, and TCP with file capture and playback from disk. Network Protocol Translation provides input to output translation from one protocol to the other.

Boasting two independent Gigabit Ethernet ports, the MD9200-DEC is ideal for use across private and public networks. Network security is a priority at MultiDyne. All MultiDyne devices include the latest network security patches, HTTPS web server plus user options to disable SSH, SAMBA and PING. OpenVPN is included and can be used without the need for an optional VPN appliance. MultiDyne offers ongoing patches that include network security updates with new firmware features included for a modestly priced SLA2.

The MD9200-DEC is designed for broadcast and professional decoding. The video interfaces include two mirrored 3G HD-SDI outputs on HDBNC and one HDMI 1.4 output. Optimized to decode very high bit-rate 2160P Ultra High Definition (UHD) bitstreams, the MD9200-DEC decodes 1080P AVC (H264), 1080i MPEG 2 with optional support for 2160P HEVC (H.265). Ancillary data support for closed captions with OSD open captions and SDI embedding is a standard feature.

Audio decode support for up to four PIDs or 8-channels. Audio CODEC support includes MPEG Layer 1/2/3, AAC-LC/HE with optional Dolby Digital decode with pass-through to HDMI and HD-SDI embedding.

Managing and monitoring the MD9200-DEC is facilitated via the Web Server, SNMP and REST APIs.

[1] HEVC Decoding requires an optional software key
[2] Service Level Agreement available per device per year after year one. Year one SLA is included.
[3] Two audio PID decode standard. Two audio PID decode optional.

REAR VIEW

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TECHNICAL SPECIFICATIONS

Input Source Stream Protocols

UPD/RTP Unicast/Multicast	UDP/RTP unicast or multicast support with DVB or MPEG service section.
IGMP 3.0	IGMP 3 Source Specific Multicast with included and exclude support
RTMP, RTSP, TCP	RTMP client/server, RTSP client and TCP client/server
HLS/DASH	Support for HLS and MPEG DASH URL decoding
SRT	SRT Caller, Listener and Rendezvous support for public internet links
Zixi	Zixi public internet transport protocol for use with Zixi Broadcaster/Zen cloud services. Zixi link point is not supported on MultiDyne devices.
File/SATA Drive	TS, PES, ES, MOV, BMFF, MKV file playback. (mSATA hard drive not included)

CODEC Video Decode

	Feature	Notes
H.265 HEVC (H.265)		
8/10 bit SD HEVC 4:2:0	O	Single decode via HDMI or SDI.
8/10 bit 3G HEVC 4:2:0	O	Single decode via HDMI or SDI.
8/10 bit 4K (Ultra HD)	O	Single decode via HDMI or SDI. SDI up to 1080P
AVC (H.264)		
SD AVC 4:2:0 High	S	Single decode via HDMI or SDI
HD AVC 4:2:0 High	S	Single decode via HDMI or SDI
3G AVC 4:2:0 High	S	Single decode via HDMI or SDI
MPEG 2 9H.262		
SD MPEG 2 4:2:0	S	Single decode via HDMI or SDI
HD MPEG 2 4:2:0	S	Single decode via HDMI or SDI
Closed Captions	S	SMPTE 334 carriage of 608 and 708 Captions. On Screen Display (open Captions) support.

CODEC Audio Decode

	Feature	Pairs	Notes
MPEG 1 Layer 2 Audio	S/O	2 or 4	SDI and HDMI Embedded. Second 2-pairs optional.
AAC-LC Stereo (2.0)	S/O	2 or 4	SDI and HDMI Embedded. Second 2-pairs optional.
HE AAC V1.0 Stereo (2.0)	S/O	2 or 4	SDI and HDMI Embedded. Second 2-pairs optional.
HE AAC V2.0 Stereo (2.0)	S/O	2 or 4	SDI and HDMI Embedded. Second 2-pairs optional.
AAC 5.1 Audio Decoding	S	1	SDI and HDMI Embedded.
Dolby Digital Decode	O	2	SDI and HDMI Embedded. Second 2-pairs optional.
Dolby Digital Pass-through	S	1	SDI and HDMI Embedded.
S = Standard O = Optional			

A/V Outputs

	#	Specification	Connector	Notes
HDMI	1	HDMI 1.4b	HDMI Rear	4k frame rates of 50 or 60 only support color over HDMI. All other HDMI frame and rates support 10-bit color over HDMI.
3G-SDI	2	SMPTE 424, 292, 259	HD-BNC Rear	Audio embedded per 272M (259) and 299 M (424/292). Only active in 2K and lower frame sizes.
Analog	1	Analog Audio Monitor	3.5mm 4 pole jack/front	Analog stereo audio using 3.5mm jack. Onlyl active in 1080P and lower frame sizes.

System

	Standard	Connector	Notes
Gigabit 1	802.03	RJ-45/Rear	Copper CAT 5/5e/6/6A
Gigabit 2	802.03	RJ-45/Rear	Copper CAT 5/5e/6/6A
Terminal	VT100	mini USB Type B/Front	Serial Terminal at 115,200, 8, 1, N.
USB2	USB 2	USB 2 Standard-A receptacle/Front	USB 2 compliant. Data mount and Firmware load.
USB3	USB 3	USB 3 Standard-A receptacle/Front	USB 3 compliant. Data mount and Firmware upgrade.
PCIe	PCI Express	52 pin edge connector	Mini PCIe card slot (Host) with USB
mSATA	min-SATA	52 pin edge connector	Mini SATA card slot (Host) with USB
Power In	12 VDC	TE 2 position plug model 284511-2 included	
Power Use		12 Watts maximum while decoding HEVC UHD	
Physical		5.09 Inches (129 mm) Wide, 10.125 inches (257mm) deep, 1.02 inches (26 mm) Tall	

The MD9200-DEC is available as a single slot Ross openGear card. Up to 20, MD9200-DEC decoders can be loaded into a single 2RU openGear chassis.

Optional Rack Shelf

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