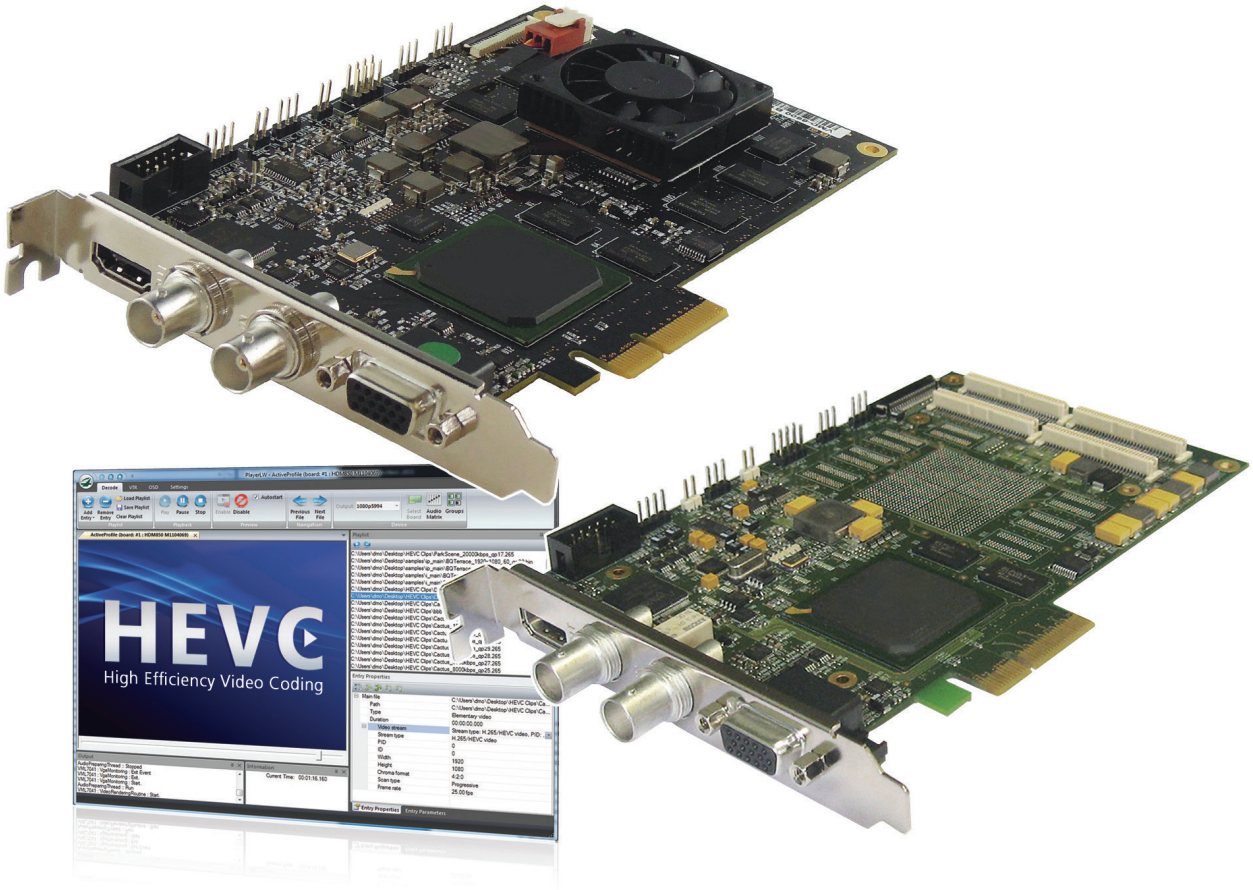
HDM Family

Professional Decoder Cards
HEVC / H.264 / MPEG-2



VITEC
VIDEO INNOVATIONS

HDM Family

Professional Decoder Cards HEVC / H.264 / MPEG-2

The HDM family is VITEC's High Definition decoding product line. Highly versatile, they support multiple formats, including HEVC/H.265, H.264 and MPEG-2 video decoding up to 1080p60 over 3G-SDI, HDMI and analog video. Unmatched by the competition, HDM cards support continuous, frame-accurate and seamless back-to-back playback so that your high end expectations are always met: do not loose or repeat a single frame.

The easily-integrated VITEC HDM decoder cards feature an alpha-blended full-frame and HD/SD-SDI input for insertion of live video content. The HDM family also provides full frame rate on-screen display as well as upscaling and downscaling to any resolution with auto adaptive color conversion, making them your best ally to transition your SD content to the HD world and vice versa. Dual outputs also allow decoded video to be simultaneously output in two distinct formats to create HD and SD versions of the same content. Depending on model, HDM cards use either a hardware decoder or a hybrid hardware/software decoding engine that allows flexibility to support a larger choice of codecs.

An SDK/API developer kit allows one or several VITEC HDM decoder cards to be controlled and integrated into a video system quickly and easily. SDK/API compatibility is ensured across the complete VITEC product range allowing a seamless upgrade to a different decoder.

HDM decoder cards are also compatible with the Livewire framework of our VITEC encoder product line. Based on this technology, LW Player, a powerful decoding application, provides a plug and play experience.

Key Features

- 3G-SDI and HDMI outputs up to 1080p60
- Versatile decoders: HD/SD HEVC, H.264 and/or MPEG-2 decode
- Unique seamless frame accurate back to back playback
- Hardware scaler from any to any resolution
- Genlock Input, RS-422 control, Full frame OSD

Applications

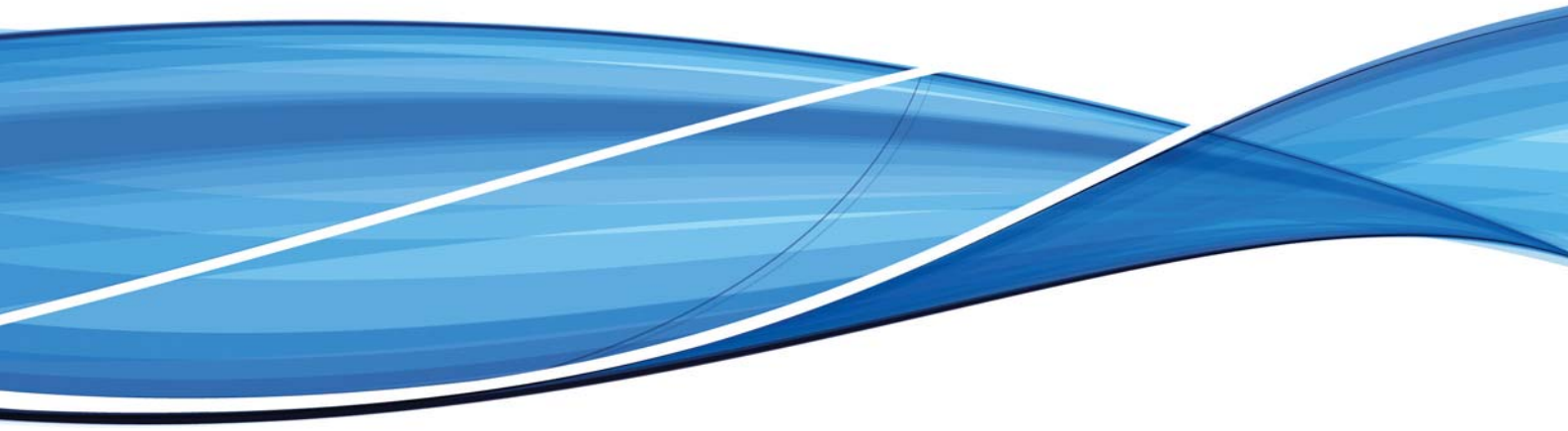
- Content Distribution
- Station/News automation
- Entertainment
- Quality Control and Assurance

HDM Family overview

	Codec	Color space	Video Outputs	Resolution	Video Input
HDM850+	HEVC H.264 MPEG-2 MPEG-1	4:2:2 / 4:2:0	SDI / HDMI YPbPr / RGB Composite / S-Video	SD/HD (up to 1080p60)	File, stream or SDI input
HDM850	H.264 MPEG-2 MPEG-1	4:2:2 / 4:2:0	SDI / HDMI YPbPr / RGB Composite / S-Video	SD/HD (up to 1080p60)	File, stream or SDI input
HDM1050	H.264 Hardware MPEG-2 Hardware HEVC / H.265 MPEG-1	4:2:2 / 4:2:0	SDI / HDMI YPbPr / RGB Composite / S-Video	SD/HD (up to 1080p60)	File, stream or SDI input

Technical Specifications

HDM Family	HDM850+	HDM850	HDM1050
VIDEO OUTPUTS			
Digital	HD / SD-SDI up to 3Gb/s /1080p60 (SMPTE 259, 292, 424,425-A), HDMI 1.3, Secondary SD-SDI (SMPTE 259) for simultaneous HD & SD playback		
Analog	YPbPr, RGB up to 1080p30, Composite,S-video		
VIDEO INPUTS			
Digital	HD / SD-SDI up to 3Gb/s for seamless live video stream into a MPEG playlist		
SUPPORTED FORMATS			
Video Formats	1080p, 1080i, 720p, NTSC, PAL		
Picture Size	HD / SD		
Chroma Sampling Format	4:2:2 & 4:2:0		
Hardware Decoding	—	—	H.264 and MPEG-2
HEVC Profile	Main422 10@ L4.1 High Tier	—	Main422 10@L4.1 High Tier
H.264 Profile	Hi10@L4.2 (10bits)		
MPEG-2 Profile	HP@HL		
Color Standards	BT.709 & BT.601		
File Formats	MP4, MOV, MXF (OP1 a/OP-Atom) MPEG-2 PS / TS		
Audio Codecs	MPEG, LPCM, AAC, SMPTE302M, AC3 and SMPTE337M pass-through		
Maximum Video Bit Rate	Up to 50Mbps (HEVC) / 100 Mbps (H.264) / 150 Mbps (MPEG-2)	Up to 100 Mbps (H.264) / 150 Mbps (MPEG-2)	Up to 50Mbps (HEVC) / 100 Mbps (H.264) / 150 Mbps (MPEG-2)
AUDIO OUTPUTS			
Embedded Audio Channel	SDI (16), HDMI (8)		
Digital	AES3 (8)		
Analog	Unbalanced (2)		
ADVANCED FEATURES			
Seamless frame accurate playback	Yes		
RS-422 control	Sony 9-pin protocol, device mode		
VITC / LTC Output	Yes		
Closed captionning	CEA608/708,608 Waveform		
CC Transports	SMPTE RDD11 and OP47 SMPTE436M for MXF files ANSI/SCTE 128, ATSC A/72 [CC & AFD in AVC/HEVC user data] ATSC A/53d, ANSI/SCTE 21 [CC & AFD in MPEG2Video user data] ANSI/SCTE 20 (DVS 157) [CC in MPEG2Video user data] ETSI EN 301 775 [Teletext data in separate TS stream]		
Genlock / Reference Input	Yes		
Video / Audio adjustments	Yes (Analog & Digital)		
Upscaling / Downscaling	Any to Any resolution with auto adaptive color conversion		
Deinterlacing	Yes		
Streaming Interface	Yes (UDP TS / RTSP / RTP, Unicast / Multicast)		
Monitoring / Preview	Yes		
On Screen Display (OSD)	Full screen - Alpha blended - Full frame rate (animation)		
Multiboarding	Yes		
DEVELOPERS RESSOURCES			
Operating Systems	Windows 7 / XP / Serveur 2003-2008 (32/64 bit)		
Software	Powerful end user application provided		
Development Kits	Livewire SDK & Stradis SDK		
SYSTEM CONFIGURATION			
Recommended Configuration	H.264/MPEG-2 Pentium Dual Core 2.5 GHz, 4GB RAM / HEVC Pentium Quad Core 3.1 Ghz, 4GB RAM	Pentium Dual Core 2.5 GHz, 4GB RAM	Pentium Dual Core 2.5 GHz, 2GB RAM
PCI compliance	PCIe rev1.1 (4 lanes)		
Dimensions of the board	167.7 x 111.2 mm (6.60" x 4.38")		
Power consumption	10.3W	10.3W	12.5W



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