

# Vantage Encode Format Support

The table presented here defines Vantage encoder support for various codec formats and associated container formats. In the table an “x” defines that a container for a specified codec is supported. Color groups associate additional feature support within technologies (i.e., whether HDR or 4K is supported for a given codec and container). The table also breaks out Vantage Multiscreen (our ABR encoding) versus Vantage IPTV/VOD encoding. The first half of this table is ordered by Codec, while the last half of the pages present the information ordered by container.

## Organized By Video Codec

Video Codec	Container	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
<b>AVC Intra</b>										
	AS-03 MXF	x								
	AS-11 DPP HD MXF	x								
	AS-11 X6 MXF	x								
	ARD_ZDF MXF	x								
	OP1a MXF	x								
	TIFO	x								
<b>AVC Ultra Intra</b>										
	AVC Ultra MXF	x	x	x						
<b>AVC Ultra Long GOP</b>										
	AVC Ultra MXF	x	x	x						
<b>DNxHD</b>										
	OP1a MXF	x								
	QuickTime MOV	x								
	TIFO	x								
<b>DNxHR</b>										
	OP1a MXF	x		x						
	QuickTime MOV	x		x						
<b>DV</b>										
	OP1a MXF	x								
	QuickTime MOV	x								
	Omneon QT Reference	x								
	TIFO	x								
<b>DVCPPro</b>										
	QuickTime MOV	x								
<b>DVCPPro HD</b>										
	OP1a MXF	x								
	QuickTime MOV	x								
	Omneon QT Reference	x								
<b>FFV1</b>										
	MKV	x		x						
	MP4	x		x						
	QuickTime MOV	x		x						

# Organized By Video Codec

Vantage  
Format  
Encode

Video Codec	Container	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
<b>French Shim</b>										
	AS-10 MXF	x								
<b>Grass Valley (Canopus) HQ</b>										
	OP1a MXF	x								
	QuickTime MOV	x								
<b>Grass Valley (Canopus) HQX</b>										
	OP1a MXF	x		x						
	QuickTime MOV	x		x						
<b>h.264</b>										
	AS-11 X1 MXF	x								
	AS-11 X5 MXF	x								
	AS-11 X9 MXF	x								
	Elementary Stream	x	x	x						
	MP4	x	x	x	x	x	x	x	x	x
	Transport Stream							x	x	x
	OP1a MXF	x	x	x						
	QuickTime MOV	x	x	x						
	TIFO	x	x	x	x	x	x	x	x	x
	Apple HLS				x	x	x			
	MPEG DASH				x	x	x			
	CMAF				x	x	x			
	MSS				x		x			
	ATS				x	x	x			
<b>h.265</b>										
	Elementary Stream	x	x	x						
	MP4	x	x	x	x	x	x	x	x	x
	Transport Stream							x	x	x
	TIFO	x	x	x	x	x	x	x	x	x
	Apple HLS				x	x	x			
	MPEG DASH				x	x	x			
	CMAF				x	x	x			
	ATS				x	x	x			
<b>h.265 Dolby Vision Profile 5</b>										
	MP4	x	x	x						
<b>IMX</b>										
	XDCAM MXF	x								
	QuickTime MOV	x								
	Omneon QT Reference	x								
	TIFO	x								
<b>JPEG</b>										
	Keyframe	x		x				x		x

## Organized By Video Codec

Video Codec	Container	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
<b>JPEG-2000 (CPU)</b>										
	AS-02 MXF	x	x	x						
	OP1a MXF	x	x	x						
	DCP Package	x	x	x						
	IMF Package	x	x	x						
<b>JPEG-2000 (GPU Accelerated)</b>										
	AS-02 MXF	x	x	x						
	OP1a MXF	x	x	x						
	DCP Package	x	x	x						
	IMF Package	x	x	x						
<b>JPG-2000 Interleaved Dolby Vision</b>										
	IMF Package	x	x	x						
<b>MPEG-2</b>										
	Elementary Stream	x								
	MPEG-2 Transport Stream							x		
	MPEG-2 Program Stream	x						x		
	AS-03 MXF	x								
	OP1a MXF	x								
	TIFO	x						x		
<b>PNG</b>										
	Keyframe	x		x				x		x
<b>ProRes</b>										
	OP1a MXF	x	x	x						
	QuickTime MOV	x	x	x						
	TIFO	x	x	x						
<b>QT Animation</b>										
	QuickTime MOV	x								
<b>QT Uncompressed</b>										
	QuickTime MOV	x								
<b>VP9</b>										
	MPEG DASH				x		x			
<b>x264 (RDD25 Restricted)</b>										
	RDD25 Proxy MXF	x								
<b>XAVC Intra</b>										
	XAVC MXF	x	x	x						
<b>XAVC Long GOP</b>										
	XAVC MXF	x	x	x						
<b>XDCAM</b>										
	ARD_ZDF MXF	x								



## Organized By Audio Codec

Audio Codec	Container	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
<b>AAC</b>										
	AS-11 X9 MXF	x								
	MP4	x			x			x		
	Transport Stream							x		
	MPEG-2 Transport Stream							x		
	MPEG-2 Program Stream							x		
	OP1a MXF	x								
	RDD25 Proxy MXF	x								
	Quick Time	x								
	TIFO				x			x		
	Apple HLS				x					
	MPEG DASH				x					
	CMAF				x					
	MSS				x					
	ATS				x					
<b>AC-3</b>										
	Elementary Stream	x								
	MP4	x			x			x		
	Transport Stream							x		
	MPEG-2 Transport Stream							x		
	MPEG-2 Program Stream							x		
	AS-02 MXF	x								
	OP1a MXF	x								
	Quick Time	x								
	TIFO				x			x		
	Apple HLS				x					
	MPEG DASH				x					
	CMAF				x					
	MSS				x					
	ATS				x					
<b>Dolby ATMOS</b>										
	MP4	x								
	Elementary Stream	x								
<b>Dolby E</b>										
	WAV	x								
<b>EAC-3</b>										
	Elementary Stream	x								
	MP4	x								
	Transport Stream							x		
	MPEG-2 Transport Stream							x		





# Organized By Container

## Standalone Formats

Container	Codec	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
<b>BWAV</b>										
	PCM	x								
	MPEG-1 Layer 2 Audio	x								
<b>WAV</b>										
	PCM	x								
	Dolby E	x								
<b>Elementary Stream</b>										
	MPEG-2	x								
	h.264	x	x	x						
	h.265	x	x	x						
	PCM	x								
	Dolby Atmos	x								
	AC-3	x								
	EAC-3	x								
<b>MKV</b>										
	FFV1	x		x						
	PCM	x								
<b>MP4</b>										
	FFV1	x		x						
	h.264	x	x	x	x	x	x	x	x	x
	h.265	x	x	x	x	x	x	x	x	x
	h.265 Dolby Vision Profile 5	x	x	x						
	XDCAM EX	x								
	PCM	x								
	AAC	x								
	AC-3	x								
	EAC-3	x								
	Dolby Atmos	x								
	MPEG-1 Layer 2 Audio				x			x		
<b>Transport Stream</b>										
	h.264							x	x	x
	h.265							x	x	x
	PCM							x		
	AAC							x		
	AC-3							x		
	EAC-3	x								
	MPEG-1 Layer 2 Audio							x		

**NOTE about Container Table Rows:**  
Video codecs have a white background  
Audio codecs have a tan background

Video codec
Audio codec





# Organized By Container

Container	Codec	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
<b>MPEG-2 Transport Stream</b>										
	MPEG-2							x		
	PCM							x		
	AAC							x		
	AC-3							x		
	EAC-3							x		
	MPEG-1 Layer 2 Audio							x		
<b>MPEG-2 Program Stream</b>										
	MPEG-2	x						x		
	PCM							x		
	AAC							x		
	AC-3							x		
	EAC-3							x		
	MPEG-1 Layer 2 Audio	x						x		
<b>Keyframe</b>										
	JPG	x		x				x		x
	PNG	x		x				x		x
	JPEG	x		x				x		x
<b>ARD_ZDF MXF</b>										
	AVC Intra 100	x								
	XDCAM	x								
	PCM	x								
<b>AS-02 MXF</b>										
	JPEG-2000 (CPU)	x	x	x						
	JPEG-2000 (GPU Accelerated)	x	x	x						
	PCM	x								
	AC-3	x								
	EAC-3	x								
<b>AS-03 MXF</b>										
	AVC Intra	x								
	MPEG-2	x								
	PCM	x								
<b>AS-10 MXF</b>										
	French Shim	x								
	PCM	x								
<b>AS-11 DPP HD MXF</b>										
	AVC Intra	x								
	PCM	x								

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Video codec
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# Organized By Container

Container	Codec	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
<b>AS-11 X1 MXF</b>										
	h.264	x								
	PCM	x								
<b>AS-11 X5 MXF</b>										
	h.264	x								
	PCM	x								
<b>AS-11 X6 MXF</b>										
	AVC Intra	x								
	PCM	x								
<b>AS-11 X9 MXF</b>										
	h.264	x								
	AAC	x								
	PCM	x								
<b>OP1a MXF</b>										
	AVC Intra	x								
	DNxHD	x								
	DNxHR	x		x						
	DV	x								
	DVCPro	x								
	DVCPro HD	x								
	Grass Valley (Canopus) HQ	x								
	Grass Valley (Canopus) HQX	x								
	JPEG-2000 (CPU)	x	x	x						
	JPEG-2000 (GPU Accelerated)	x	x	x						
	MPEG-2	x								
	ProRes	x	x	x						
	h.264	x	x	x						
	PCM	x								
	AAC	x								
	AC-3	x								
	EAC-3	x								
<b>RDD25 Proxy MXF</b>										
	x264 (RDD25 Restricted)	x								
	AAC (RDD25 Restricted)	x								
<b>AVC Ultra MXF</b>										
	AVC Ultra Intra	x	x	x						
	AVC Ultra Long GOP	x	x	x						
	PCM	x								
<b>XDCAM MXF</b>										

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# Organized By Container

Container	Codec	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
	IMX	x								
	XDCAM HD	x								
	XDCAM EX	x								
	PCM	x								
<b>XAVC MXF</b>										
	XAVC Intra	x	x	x						
	XAVC Long GOP	x	x	x						
	PCM	x								
<b>QuickTime MOV</b>										
	DNxHD	x								
	DNxHR	x		x						
	DV	x								
	DVCPro	x								
	DVCPro HD	x								
	Grass Valley (Canopus) HQ	x								
	Grass Valley (Canopus) HQX	x		x						
	IMX	x								
	ProRes	x	x	x						
	h.264	x	x	x						
	XDCAM HD	x								
	XDCAM HD 4:2:2	x								
	XDCAM EX	x								
	FFV1	x		x						
	QT Animation	x								
	QT Uncompressed	x								
	PCM	x								
	AAC	x								
	AC-3	x								
	EAC-3	x								
<b>Omneon QT Reference</b>										
	DV	x								
	DVCPro	x								
	DVCPro HD	x								
	IMX	x								
	XDCAM HD	x								
	XDCAM HD 4:2:2	x								
	PCM	x								
<b>TIFO</b>										
	AVC Intra	x								
	DNxHD	x								

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Video codec
Audio codec



## Organized By Container

Container	Codec	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
<b>TIFO (Continued)</b>	DV	x								
	IMX	x								
	ProRes	x	x	x						
	MPEG-2	x						x		
	XDCAM HD	x								
	XDCAM EX	x								
	h.264	x	x	x	x	x	x	x	x	x
	h.265	x	x	x	x	x	x	x	x	x
	PCM	x			x			x		
	AAC				x			x		
	AC-3				x			x		
	EAC-3				x			x		
	MPEG-1 Layer 2 Audio	x			x			x		

## Cinema Packages

Container	Codec	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
<b>DCP Package</b>										
	JPEG-2000 (CPU)	x	x	x						
	JPEG-2000 (GPU Accelerated)	x	x	x						
	PCM	x								
<b>IMF Package</b>										
	JPEG-2000 (CPU)	x	x	x						
	JPEG-2000 (GPU Accelerated)	x	x	x						
	JPEG-2000 Interleaved Dolby Vision	x	x	x						
	PCM	x								

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Video codec
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## Streaming Packages

Container	Codec	Flip64	HDR	4K	Multiscreen	HDR	4K	IPTV	HDR	4K
<b>Apple HLS</b>										
	h.264				x	x	x			
	h.265				x	x	x			
	AAC				x					
	AC-3				x					
	EAC-3				x					
	MPEG-1 Layer 2 Audio				x					
<b>MPEG DASH</b>										
	h.264				x	x	x			
	h.265				x	x	x			
	VP9				x		x			
	AAC				x					
	AC-3				x					
	EAC-3				x					
	MPEG-1 Layer 2 Audio				x					
	Opus				x					
<b>CMAF</b>										
	h.264				x	x	x			
	h.265				x	x	x			
	AAC				x					
	AC-3				x					
	EAC-3				x					
	MPEG-1 Layer 2 Audio				x					
<b>MSS</b>										
	h.264				x	x	x			
	AAC				x					
	AC-3				x					
	EAC-3				x					
	MPEG-1 Layer 2 Audio				x					
<b>ATS</b>										
	h.264				x	x	x			
	h.265				x	x	x			
	AAC				x					
	AC-3				x					
	EAC-3				x					
	MPEG-1 Layer 2 Audio				x					

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