

## Rhozet Format Support

This document provides a complete list of the supported import and export formats for Rhozet products. In order to transcode from one format to another, Rhozet must be able to both decode the input format and then encode into the output format. For example, if you are converting from a QuickTime DV25 file into a GXF MPEG-2 Long-GOP format, then Carbon Coder needs to be able to both decode QuickTime DV25 files and encode GXF MPEG-2 Long-GOP files. You can use the table on the next pages to determine if your particular import/export requirements are supported. The table lists each format, and indicates whether that format is supported for import and/or export. The table further indicates whether a particular codec is included with Carbon Coder. In addition to the codecs that ship with Carbon Coder, you can also install most DirectShow or QuickTime codecs for use with the product. If a particular codec in the list is not included with Carbon Coder, we have provided links for downloading that codec. Some codecs are available for free and some require an additional purchase from the codec developer. If you do not see a particular format that you need in the list, please send us a note at [support@rhozet.com](mailto:support@rhozet.com). We are continually updating our product with new features and want your feedback.

The formats in the table are organized according to container and then by codec. A container (also known as a “wrapper”) is a defined structure for how video data, audio data, and metadata are multiplexed into a final file. This is different from a codec, which only defines how video or audio data are compressed. Keep in mind that just because two devices read the same codec that does not mean they are compatible. It is possible to have the exact same codec being wrapped in non-compatible containers. For example, an MPEG-2 codec may be used to compress video that is then put into a MPEG-2 Transport Stream, a MPEG-2 Elementary Stream, a DVD VOB, a MXF file, or an AVI file. When you look up formats in the following list, make sure that you are looking at the required combination of container and codec.

For more information about containers and codecs, we recommend the following sources:

Overview of Video Codecs:

[http://en.wikipedia.org/wiki/Video\\_codecs](http://en.wikipedia.org/wiki/Video_codecs)

Video Compression (Includes Table of Compression and Container Formats)

[http://en.wikipedia.org/wiki/Video\\_compression](http://en.wikipedia.org/wiki/Video_compression)

Comparison of Video Container Formats

[http://en.wikipedia.org/wiki/Comparison\\_of\\_container\\_formats](http://en.wikipedia.org/wiki/Comparison_of_container_formats)

Introduction to Video Compression:

<http://www.videsignline.com/howto/showArticle.jhtml?articleID=185301351>

Quantel Digital Factbook

[http://www.quantel.com/site/en.nsf/html/library\\_dfb](http://www.quantel.com/site/en.nsf/html/library_dfb)

MPEG-2

<http://en.wikipedia.org/wiki/MPEG-2>

MPEG-4

<http://en.wikipedia.org/wiki/MPEG-4>

Video Streaming White Papers

<http://whitepapers.zdnet.com/search.aspx?kw=Video+Streaming>

Container	Codec	Import	Export	Incl.	Comments
<i>3GPP and 3GPP2</i>					
3GPP	H.263	Y	Y	Y	
3GPP	H.264	Y	Y	Y	
3GPP	MPEG-4	Y	Y	Y	
<i>AVI</i>					
AVI	Blackmagic HD 10-bit 4:2:2	Y	Y	N	<a href="http://www.blackmagic-design.com">http://www.blackmagic-design.com</a>
AVI	Blackmagic HD 10-bit 4:4:4	Y	Y	N	<a href="http://www.blackmagic-design.com">http://www.blackmagic-design.com</a>
AVI	Blackmagic HD 8-bit 4:2:2	Y	Y	N	<a href="http://www.blackmagic-design.com">http://www.blackmagic-design.com</a>
AVI	Canopus DV	Y	Y	Y	DVCPRO25, AVI 1.0 and 2.0 (Open DML)
AVI	Canopus HQ	Y	Y	N	<a href="http://www.canopus.com">http://www.canopus.com</a>
AVI	Cinepak	Y	Y	Y	
AVI	DivX	Y	Y	N	<a href="http://www.divx.com/divx/windows/">http://www.divx.com/divx/windows/</a>
AVI	DPS	Y	Y	N	<a href="http://www.leitch.com/custserv/webdl.nsf/FD/DPS_AVI_Codec15.exe">http://www.leitch.com/custserv/webdl.nsf/FD/DPS_AVI_Codec15.exe</a>
AVI	Indeo R3.2	Y	Y	Y	
AVI	Indeo Video 4.5	Y	Y	Y	
AVI	Indeo Video 5.1	Y	Y	Y	
AVI	Intel IYUV	Y	Y	Y	
AVI	Matrox AXIO	Y	Y	N	<a href="http://www.matrox.com">http://www.matrox.com</a>
AVI	Microsoft DV	Y	Y	Y	DVCPRO25, AVI 1.0 and 2.0 (Open DML), DV Type 1 and Type 2
AVI	Microsoft Video 1	Y	Y	Y	
AVI	Motion JPEG	Y	Y	Y	
AVI	MPEG-2	Y	N	Y	
AVI	Uncompressed RGB	Y	Y	Y	
AVI	xVID	Y	Y	N	<a href="http://www.xvid.org">http://www.xvid.org</a>
<i>FLV - Flash</i>					
FLV	Sorenson Spark	Y	Y	N	Included with Adobe Flash Professional 8
FLV	VP6	N	Y	N	Included with Adobe Flash Professional 8 or from On2
<i>GXF – Grass Valley</i>					
GXF	DV25 525	Y	Y	Y	DVCAM or DVCPRO
GXF	DV25 625	Y	Y	Y	DVCAM or DVCPRO
GXF	MPEG-2 I-frame 525	Y	Y	Y	720x512i - 29.97 Generic MPEG, 720x480i - 29.97 Generic MPEG, 720x512i - 29.97 D10/IMX
GXF	MPEG-2 I-frame 625	Y	Y	Y	720x608i - 25 Generic MPEG, 720x576i - 25, Generic MPEG, 720x608i - 25 D10/IMX
GXF	MPEG-2 I-frame HD	Y	Y	Y	1920x1080i - 29.97, 1920x1080i - 25, 1280x720 - 59.94
GXF	MPEG-2 IPB 525	Y	Y	Y	720x512i - 29.97 Generic MPEG, 720x480i - 29.97 Generic MPEG, 720x512i - 29.97 D10/IMX
GXF	MPEG-2 IPB 625	Y	Y	Y	720x608i - 25 Generic MPEG, 720x576i - 25, Generic MPEG, 720x608i - 25 D10/IMX
GXF	MPEG-2 IPB HD	Y	Y	Y	1920x1080i - 29.97, 1920x1080i - 25, 1280x720 - 59.95

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Container	Codec	Import	Export	Incl.	Comments
<i>Image Sequences</i>					
Image Seq.	BMP	Y	Y	Y	
Image Seq.	DPX	Y	N	Y	
Image Seq.	JPEG	Y	Y	Y	
Image Seq.	JPEG2000	N	Y	Y	
Image Seq.	MacPaint	N	Y	Y	
Image Seq.	Photoshop	N	Y	Y	
Image Seq.	PICT	N	Y	Y	
Image Seq.	PNG	Y	Y	Y	
Image Seq.	QT Image	N	Y	Y	
Image Seq.	SGL	N	Y	Y	
Image Seq.	TGA	Y	Y	Y	
Image Seq.	TIFF	Y	Y	Y	
<i>LXF – Leitch/Harris</i>					
LXF	DV25	Y	Y	Y	DVCAM or DVCPRO
LXF	MPEG-2 I-frame 4:2:0	Y	Y	Y	VBI supported in SD
LXF	MPEG-2 I-frame 4:2:0 HD	Y	Y	Y	
LXF	MPEG-2 I-frame 4:2:2	Y	Y	Y	VBI supported in SD
LXF	MPEG-2 I-frame 4:2:2 HD	Y	Y	Y	
LXF	MPEG-2 IPB 4:2:0	Y	Y	Y	VBI supported in SD
LXF	MPEG-2 IPB 4:2:0 HD	Y	Y	Y	
LXF	MPEG-2 IPB 4:2:2	Y	Y	Y	VBI supported in SD
LXF	MPEG-2 IPB 4:2:2 HD	Y	Y	Y	
<i>MPEG Elementary Streams</i>					
MPEG ES	MPEG-1	Y	Y	Y	Proxy
MPEG ES	MPEG-2	Y	Y	Y	SP@MP, MP@LL, MP@ML, MP@HL, MP@H14, HP@ML, HP@HL, HP@H14, 422P@ML, 422@HL
<i>MPEG Program Streams</i>					
MPEG PS	DVD	Y	Y	Y	No embedded AC-3 encode
MPEG PS	MPEG-2	Y	Y	Y	SP@MP, MP@LL, MP@ML, MP@HL, MP@H14, HP@ML, HP@HL, HP@H14, 422P@ML, 422@HL
MPEG PS	SVCD	Y	Y	Y	
<i>MPEG Transport Streams</i>					
MPEG TS	H.264	Y	Y	Y	
MPEG TS	HDV HD-1	Y	Y	Y	MP@ML, MP@H-14, MP@HL (1280x720, 720x480, 720x576)
MPEG TS	HDV HD-2	Y	Y	Y	MP@ML, MP@H-14, MP@HL (1440)
MPEG TS	MPEG-2	Y	Y	Y	SP@MP, MP@LL, MP@ML, MP@HL, MP@H14, HP@ML, HP@HL, HP@H14, 422P@ML, 422@HL
<i>MPEG-1 System Streams</i>					
MPEG-1 SS	MPEG-1	Y	Y	Y	VideoCD, Proxy
<i>MPEG-4</i>					
MPEG-4	H.264	Y	Y	Y	
MPEG-4	MPEG-4 Improved	Y	Y	Y	ISMA Profile 1 -- MPEG-4 ASP
MPEG-4	MPEG-4-Basic	Y	Y	Y	ISMA Profile 0

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Container	Codec	Import	Export	Incl.	Comments
<i>MXF (Material Exchange Format)</i>					
MXF (OP1a)	D10 (IMX)	Y	Y	Y	30, 40, 50 Mbit. Includes support for Quantel and XDCAM
MXF (OP1a)	DV25	Y	N	Y	
MXF (OP1a)	DV50	Y	N	Y	
MXF (OP1a)	DVCPProHD	Y	N	Y	
MXF (OP1a)	JPEG 2000	Y	N	Y	Supported with WAV
MXF (OP1a)	MPEG-2 I-frame	Y	N	Y	
MXF (OP1a)	MPEG-2 Long GOP	Y	N	Y	
MXF (OPAtom)	DV25	Y	N	Y	WAV only
MXF (OPAtom)	DV50	Y	N	Y	
MXF (OPAtom)	DVCPProHD	Y	N	Y	
<i>Omneon (both MXF and QuickTime)</i>					
Omneon	OP1a IMX (MXF)	Y	Y	Y	720x512i, 720x608i
Omneon	DV (QuickTime)	Y	Y	Y	720x486i, 720x576i
Omneon	IMX (QuickTime)	Y	Y	Y	720x512i, 720x608i
Omneon	MPEG-2 IBP (QuickTime)	Y	Y	Y	720x480i, 720x512i, 720x576i, 720x608i, 1280x720p, 1920x1080i
Omneon	MPEG-2 I-frame (QuickTime)	Y	Y	Y	720x480i, 720x512i, 720x576i, 720x608i, 1280x720p, 1920x1080i
<i>Quantel</i>					
Quantel	MXF OP1a IMX	Y	Y	Y	40Mbit NTSC. 30 Mbit PAL.
Quantel	MXF HD	Y	Y	Y	720p
<i>QuickTime</i>					
QuickTime	Apple Animation	Y	Y	Y	
QuickTime	Apple BMP	Y	Y	Y	
QuickTime	Apple Cinepak	Y	Y	Y	
QuickTime	Apple Component Video - YUV 422	Y	Y	Y	
QuickTime	Apple DV/DVCPRO	Y	Y	Y	
QuickTime	Apple Graphics	Y	Y	Y	
QuickTime	Apple H.261	Y	Y	Y	
QuickTime	Apple Motion JPEG A	Y	Y	Y	
QuickTime	Apple Motion JPEG B	Y	Y	Y	
QuickTime	Apple MPEG-4	Y	Y	Y	
QuickTime	Apple None	Y	Y	Y	
QuickTime	Apple Photo - JPEG	Y	Y	Y	
QuickTime	Apple Planar RGB	Y	Y	Y	
QuickTime	Apple PNG	Y	Y	Y	
QuickTime	Apple TGA	Y	Y	Y	
QuickTime	Apple TIFF	Y	Y	Y	
QuickTime	Apple Video	Y	Y	Y	
QuickTime	Avid DNxHD	Y	Y	N	<a href="http://www.avid.com/onlineSupport/browse.asp?productID=0&amp;topicID=404&amp;browse=">http://www.avid.com/onlineSupport/browse.asp?productID=0&amp;topicID=404&amp;browse=</a>
QuickTime	Avid Media Composer Meridian 1:1	Y	Y	N	<a href="http://www.avid.com/onlineSupport/browse.asp?productID=0&amp;topicID=404&amp;browse=">http://www.avid.com/onlineSupport/browse.asp?productID=0&amp;topicID=404&amp;browse=</a>
QuickTime	Avid Media Composer Meridian JFIF	Y	Y	N	<a href="http://www.avid.com/onlineSupport/browse.asp?productID=0&amp;topicID=404&amp;browse=">http://www.avid.com/onlineSupport/browse.asp?productID=0&amp;topicID=404&amp;browse=</a>

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Container	Codec	Import	Export	Incl.	Comments
<i>QuickTime (continued)</i>					
QuickTime	BlackMagic 10-bit	Y	Y	N	<a href="http://www.blackmagic-design.com/support/software/">http://www.blackmagic-design.com/support/software/</a>
QuickTime	BlackMagic RGB 10-bit	Y	Y	N	<a href="http://www.blackmagic-design.com/support/software/">http://www.blackmagic-design.com/support/software/</a>
QuickTime	DV100	Y	N	Y	
QuickTime	H.263	Y	Y	Y	
QuickTime	H.264	N	Y	Y	
QuickTime	Intel Indeo Video 4.4	Y	Y	Y	
QuickTime	JPEG 2000	Y	Y	Y	
QuickTime	Omneon	Y	Y	Y	See Omneon container section for more detail
QuickTime	Sorenson Video	Y	Y	Y	
QuickTime	Sorenson Video 3	Y	Y	Y	
<i>Raw</i>					
Raw	FLC	Y	Y	Y	
Raw	Raw DV (DIF)	Y	Y	Y	
<i>Real</i>					
Real	Real Video 10	N	Y	Y	
Real	Real Video 8	N	Y	Y	
Real	Real Video 9	N	Y	Y	
<i>VOB</i>					
VOB	MPEG-2	Y	Y	Y	Requires an AC-3 audio decoder if embedded AC-3 on input side
<i>WMV/ASF</i>					
WMV/ASF	Window Media Video 9	Y	Y	Y	
WMV/ASF	Windows Media Video 7	Y	Y	Y	
WMV/ASF	Windows Media Video 8	Y	Y	Y	
WMV/ASF	WMV 9 Adv. Profile	Y	Y	Y	Draft VC-1
<i>YUV – Uncompressed</i>					
YUV	I420	Y	Y	Y	