Supported formats and file types

About	Description
Revision	1.4; 1.5
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Authors	RT Software development

Overview

The purpose of this document is to define the compatible formats and file types that can be played and displayed by Swift Engine as well as imported as assets into Swift CG and Swift CG+ graphics projects.

Still image input wrappers

- Targa (.tga)
- JPEG (.jpeg .jpg)
- TIFF (.tiff)
- Bitmap (.bmp)
- GIF (.gif)
- PPM (.ppm)
- ASF (.asf)
- JNG (.jng)
- PNG (.png)
- RT3D (.rt3d)
- HDR (.hdr)
- Xpm
- Jng
- Ppm
- Lxf
- exr

Movie format input wrappers

- Mpg
- Mpeg
- Mp4
- Mov
- Mts
- Avi
- Aif
- M2v
- Swf
- Asf
- Wmv
- M3u
- Flv
- Hdr
- Mxf
- Ts
- 3gp
- Vob
- Dv
- F0
- e0
- M4v
- Gfx
- Lxf
- mkv

Supported input codecs

- WMV1/2/3
- mpeg
- mpeg2
- mpeg4
- mjpeg
- H263
- H264
- H265
- ProRes
- AVC50/100/200
- DNxHD
- HuffyYUV
- MJpeg
- FLV
- VC-1
- DV25/50/100
- YUV420/2 (raw)
- XDCAM

Audio Formats

- Wav
- Mp3
- Ogg
- AAC
- AC3
- PCM

Layoff Formats

Output type	Output variations
.mpg	mpeg1
	mpeg2
.avi	mpeg1
	mpeg2
	mpeg4
	mjpg
	flv
	YUV422
	BGR
	BGRA
	Huffyuv
	Huffyuv+alpha
	targa
	dv - DV25/50/100*
	dv - DV25/50/100*
.mxf	DV25/50/100*
	AVC50/100*
	DNxHD
	mpeg2
.mov	qtRLE(animation)
	mjpeg
	mpeg2
	dnxhd
flv	flv
tmv	Swift Engine proprietary format

Video standards

PAL	NTSC	720p	1080i	1080p	4k (UHD)

Framerates

25p	25i	24p	29.97i	29.97p	50i	50p	59.94i	59.94p

Tactic: Clips will be Upscaled/Downscaled to the currently configured standard.

IntraFrame is preferred (GOP 1).

Recommendations:

Codecs with alpha channels for Quicktime wrapped movies

- Best choice for automation:
    - xdcam avi as foreground movie
    - + PAL8 QTRLE as matte movie on one shader
- Best choice AR/VR:
    - Animation encoded quicktime movie (QTRLE)
- 3rd choice: Prores 4444

Matte channels in Swift CG and Swift CG+

Matte channels are set on a texture slot in Swift GC and Swift CG+.

This process requires producing a grayscale movie of the matte (sequence) as a grayscale (pal8) QTRLE (QuickTime animation) and it's subsequent correct assignment in the Swift CG or Swift CG+ graphic.

This can be used in conjunction with another texture on the same shader incorporating the fill.

This can be anything from the above formats.

10bit, 4k and HDR

Swift Engine can render in 10bit mode for UHD full scale output. In order to take full advantage of this you will need to use floating point textures. These are currently restricted to HDR images.