

Avid Codec Guide

Posted by Jon Chappell on Monday July 15 2013 5:38 PM to *Video Editing, Avid, Tutorials*

Avid Media Composer and Symphony ship with a wide range of old and modern codecs. They can also be **downloaded** free of charge for systems without Avid products installed.

SD codecs

Avid DV – SD codec used when exporting DV material

Avid MPEG2 50 – SD codec for MPEG 30, 40 or 50 material

Avid Meridien Compressed – SD codec for compressed material

Avid Meridien Uncompressed – SD codec used for 1:1 OMF outputs

Meridien Compressed has various compression ratios ranging from 2:1 (36 Mbps) to 35:1 (12 Mbps).

SD / HD codecs

Avid 1:1x * – 8-bit lossless 4:2:2 codec that produces very large file sizes

Avid Packed – Essentially the same as 1:1x except it supports 10-bit media

Avid RGBPacked – RGB version of the Packed codec

Avid DV100 – HD codec used for exporting DV100 media

* x normally refers to 10-bit codecs but in the case of Avid 1:1x it was used to designate MXF during the transition away from OMF

DNxHD Codecs

DNxHD is the most likely codec to be used in Media Composer. *Each variant is named according to bitrate and bit depth*, so for example DNxHD 120 means it's a 120 Mb/s 8-bit codec and DNxHD 185x means it's a 185 Mb/s 10-bit codec (the x indicates 10-bit).

Offline Codecs

DNxHD 36

DNxHD 60

DNxHD 80

DNxHD 90

Medium Quality Codecs

DNxHD 100

DNxHD 115

DNxHD 120

Mastering Codecs

DNxHD 145

DNxHD 175

DNxHD 185

DNxHD 185x

DNxHD 220

DNxHD 220x

DNxHD 440

DNxHD 440x

Similar Bitrate Codecs

Try to choose a codec that matches the bitrate of your acquisition format. *All codec bitrates are calculated at 23.98 fps.*

DNxHD 36 – DV, IMX40, XDCAM EX, XDCAM HD

DNxHD 60 – DV50, IMX50, Apple Intermediate @ 1080, XDCAM HD422

DNxHD 100 – AVC Intra 100, Cineform 444 @ 720, Digibeta

DNxHD 115 – Cineform 422 @ 1080

DNxHD 120 – DVCPRO HD, Motion JPEG @ 1080

DNxHD 145 – HDCAM

DNxHD 220 – Sony SR Lite

DNxHD 440 – Uncompressed 422 10-bit @ 720, Sony SR SQ, HDCAM SR

Approximate ProRes equivalents

All codec bitrates are calculated at 1080p 23.98 fps.

ProRes Proxy – DNxHD 36

ProRes LT – DNxHD 80

ProRes 422 – DNxHD 115

ProRes HQ – DNxHD 175x

ProRes 4444 – DNxHD 440x (444) (although ProRes 444 is actually closer in bandwidth to DNxHD 220)

Other variants

Avid Media Composer 6 and higher can also wrap ProRes in an MXF wrapper. This is only available on the Mac version of Media Composer.

Calculating storage space

Our [online calculator](#) will calculate storage space for some of these but our [Mac](#) and [iOS](#) calculators have more options and codecs.