

Common File Types and Storage Requirements

FILE TYPE	Video Demensions	Compression Codec	Bitrate in Mbps	Color Channels / bit depth	Frame Encoding	GB /MIN	ESTIMATED FILE SIZES in GB *			
							:30	:60	2:30	10:00
4K Full Aperture 35mm Film	4096x3112	Uncompressed	8752	RGB 4:4:4 / 10	none	64.1	32.1	64.1	160.3	641.0
4K Digital	4096x2160	Uncompressed	6075	RGB 4:4:4 / 10	none	44.5	22.2	44.5	111.2	444.9
4K Red Raw	4096x2160	JPEG 2000	335	Bayer Pattern / 12	i-frame	2.5	1.2	2.5	6.1	24.5
4K DCP	4096x2160	JPEG 2000	250	RGB 4:4:4 / 12	i-frame	1.8	0.9	1.8	4.6	18.3
2K DCP	2048x1080	JPEG 2000	250	RGB 4:4:4 / 12	i-frame	1.8	0.9	1.8	4.6	18.3
2K Full Aperture 35mm Film	2048x1556	Uncompressed	2188	RGB 4:4:4 / 10	none	16.0	8.0	16.0	40.1	160.3
2K Digital	2048x1080	Uncompressed	1519	RGB 4:4:4 / 10	none	11.1	5.6	11.1	27.8	111.3
HD 1080p Uncompressed	1920x1080	Uncompressed	1424	RGB 4:4:4 / 12	none	10.4	5.2	10.4	26.1	104.3
HD 1080p ProRes4444	1920x1080	Apple ProRes 4444	330	RGB 4:4:4:4 / 12	i-frame	2.4	1.2	2.4	6.0	24.2
HD 1080p Avid DNxHD	1920x1080	DnxHd 220	220	YUV 4:2:2 / 10	i-frame	1.6	0.8	1.6	4.0	16.1
HD 1080p ProRes(HQ)	1920x1080	Apple ProRes (HQ)	198	YUV 4:2:2 / 10	i-frame	1.5	0.7	1.5	3.6	14.5
HD 1080p ProRes	1920x1080	Apple ProRes	132	YUV 4:2:2 / 10	i-frame	1.0	0.5	1.0	2.4	9.7
HD 1080p ProRes (LT)	1920x1080	Apple ProRes (LT)	92	YUV 4:2:2 / 10	i-frame	0.7	0.3	0.7	1.7	6.7
						MB /MIN	ESTIMATED FILE SIZES in MB *			
HD Broadcast 1080i	1920x1080	MPEG2 **	45	YUV 4:2:0 or 4:2:2 / 8	GOP	337.5	169	338	844	3375
HD Broadcast 720p	1280x720	MPEG2 **	45	YUV 4:2:0 or 4:2:2 / 8	GOP	337.5	169	338	844	3375
HD 1080p for BluRay	1920x1080	H.264 ***	40	YUV 4:2:0 / 8	GOP	40.0	20.0	40.0	100.0	400.0
NTSC ProRes(HQ)	720x486	Apple ProRes (HQ)	71	YUV 4:2:2 / 10	i-frame	532.5	266	533	1331	5325
NTSC Broadcast	720x486	MPEG2 **	18	YUV 4:2:0 or 4:2:2 / 8	GOP	135.0	68	135	338	1350
NTSC DVD	720x486	MPEG2 **	7	YUV 4:2:0 or 4:2:2 / 8	GOP	52.5	26.3	52.5	131.3	525.0
iphone	480x320	H.264 ***	1.5	YUV 4:2:0 or 4:2:2 / 8	GOP	11.3	5.6	11.3	28.1	112.5
ipad	1280x720	H.264 ***	5.2	YUV 4:2:0 or 4:2:2 / 8	GOP	39.0	19.5	39.0	97.5	390.0
3gp	176x144	H.264 ***	0.64	YUV 4:2:0 or 4:2:2 / 8	GOP	4.8	2.4	4.8	12.0	48.0
WEB ENCODING						MB/MIN	ESTIMATED FILE SIZES in MB *			
HD 1080p	1920x1080	H.264 ***	12			90	45.0	90.0	225.0	900.0
HD 720p	1280x720	H.264 ***	8			60	30.0	60.0	150.0	600.0
SD 480p	854x480	H.264 ***	4			30	15.0	30.0	75.0	300.0
SD H.264	640x480	H.264 ***	2			15	7.5	15.0	37.5	150.0
AUDIO ENCODING						MB/MIN	ESTIMATED FILE SIZES in MB *			
MP3		MP3	192Kbps	48kHz		1.41	0.7	1.4	3.5	14.1
Broadcast		PMC/WAV/AIFF	786	48kHz		5.76	2.9	5.8	14.4	57.6
CD		WAV	706	44.1kHz		5.29	2.6	5.3	13.2	52.9

* Actual Storage may vary depending on Audio Configuration and Metadata

** Bitrates can vary to adjust for quality or storage requirements

*** 40Mbps is the max data rate for BluRay encoding (usually set for variable bitrate with 40Mbps as the max peak)

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