ProRes-Overview[edit]

ProRes supports different data rates and different resolutions. All ProRes422-variants use Chroma subsampling of 4:2:2 at 10 Bit Color depth. ProRes 4444 samples color in the 4:4:4 schema with a color depth of 12 Bit.

resolution	fps	ProRes 422 Proxy	ProRes 422 LT	ProRes 422	ProRes 422 HQ	ProRes 4444 (without Alpha)	ProRes 4444 XQ (without Alpha)
(points)	(Hz)	(Mbit/s)	(Mbit/s)	(Mbit/s)	(Mbit/s)	(Mbit/s)	(Mbit/s)
720 × 576	50i, 25p	12	28	41	61	92	138
1280 × 720	25p	19	42	61	92	138	206
1440×1080	50i, 25p	32	73	105	157	236	354
1920 × 1080	50i, 25p	38	85	122	184	275	415
	50p	76	170	245	367	551	826
2048 × 1536	25p	58	131	189	283	425	637
	50p	117	262	377	567	850	1275
3840 × 2160	25p	151	342	492	737	1106	1659
	50p	303	684	983	1475	2212	3318
4096 × 2160	25р	162	365	524	786	1180	1769
	50p	323	730	1049	1573	2359	3539
5120 × 2880	25p	202	456	655	983	1475	2212
	50p	405	912	1311	1966	2949	4424

ProRes 422[edit]

Key features[edit]

•8K, 5K, 4K, UHD, 2K, HD (up to 1920×1080), & SD resolutions

•4:2:2 chroma subsampling

10-bit sample depth

•I frame-only encoding

•Variable bitrate (VBR) encoding

•Normal 147 Mbit/s and High-Quality 220 Mbit/s and ProRes (LT) 100Mbit/s as well as ProRes Proxy for HD 45Mbit/s for HD resolution at 60i

•Normal 42 Mbit/s and High-Quality 63 Mbit/s for SD resolution at 29.97

•Fast encoding and decoding (both at full size and half size)

ProRes 4444 and ProRes 4444 XQ[edit]

ProRes 4444 and **ProRes 4444 XQ** are lossy video compression formats developed by Apple Inc. for use in postproduction and include support for an alpha channel.

ProRes 4444 was introduced with Final Cut Studio (2009)[6] as another in the company's line of intermediate codecs for editing material but not for final delivery. It shares many features with other, 422, codecs of Apple's ProRes family but provides better quality than 422 HQ in colour detail.[7] It has a target data rate of approximately 330 Mbit/s for 4:4:4 sources at 1920x1080 and 29.97 fps

ProRes 4444 XQ was introduced with Final Cut Pro X version 10.1.2 in June 2014. It has a target data rate of approximately 500 Mbit/s for 4:4:4 sources at 1920x1080 and 29.97 fps, and requires OS X v10.8 (Mountain Lion) or later.

Key features[edit]

•8K, 5K, 4K, 2K, HD (up to 1920×1080), & SD resolutions[8]
•4:4:4 chroma subsampling
•Up to 12-bit sample depth for video
•Variable bitrate (VBR) encoding
•Alpha channel support at up to 16-bit sample depth

ProRes RAW[edit]

In April 2018 Apple released ProRes RAW. It is built upon the same technology as other ProRes codecs, but is directly applied to the raw data coming from the sensor, thus delaying the debayering process to the post-production stage. ProRes RAW therefore aims at quality and better colour reproduction, rather than performance.[9]