

DNxHR Codec Bandwidth Specifications

Information

Question How much storage bandwidth is required to playback DNxHR encoded material?

Data rate required per stream of DNxHR for the specified frame rate (in MB/sec)

Resolution	Codec	Samples per line	Active lines per raster	Compressed bytes per frame	Data rate in MB/s for specified frame rate (exact value)				
					23.976	25	29.97	50	59.94
HD*	DNxHR 444	1920	1080	1822720	41.68	43.46	52.10	86.91	104.19
	DNxHR HQX	1920	1080	909312	20.79	21.68	25.99	43.36	51.98
	DNxHR HQ	1920	1080	909312	20.79	21.68	25.99	43.36	51.98
	DNxHR SQ	1920	1080	602112	13.77	14.36	17.21	28.71	34.42
	DNxHR LB	1920	1080	188416	4.31	4.49	5.39	8.98	10.77
2K	DNxHR 444	2048	1080	1941504	44.39	46.29	55.49	92.58	110.98
	DNxHR HQX	2048	1080	970752	22.20	23.14	27.75	46.29	55.49
	DNxHR HQ	2048	1080	970752	22.20	23.14	27.75	46.29	55.49
	DNxHR SQ	2048	1080	643072	14.70	15.33	18.38	30.66	36.76
	DNxHR LB	2048	1080	200704	4.59	4.79	5.74	9.57	11.47
UHD	DNxHR 444	3840	2160	7286784	166.61	173.73	208.27	347.46	416.54
	DNxHR HQX	3840	2160	3641344	83.26	86.82	104.08	173.63	208.15
	DNxHR HQ	3840	2160	3641344	83.26	86.82	104.08	173.63	208.15
	DNxHR SQ	3840	2160	2408448	55.07	57.42	68.84	114.84	137.67
	DNxHR LB	3840	2160	749568	17.14	17.87	21.42	35.74	42.85
4K	DNxHR 444	4096	2160	7770112	177.67	185.25	222.08	370.51	444.16
	DNxHR HQX	4096	2160	3887104	88.88	92.68	111.10	185.35	222.20
	DNxHR HQ	4096	2160	3887104	88.88	92.68	111.10	185.35	222.20
	DNxHR SQ	4096	2160	2568192	58.72	61.23	73.40	122.46	146.81
	DNxHR LB	4096	2160	798720	18.26	19.04	22.83	38.09	45.66

Answer

* HD resolutions are only available as a proxy setting in a High-Resolution project. There is no way to select DNxHR resolutions from within a HD project-type.

Dual 1 GB ISIS connection required
10 GB ISIS connection required

DNxHR Key				
Short Name	Long Name	Bit Depth	Chroma Sub-Sampling	Compression Ratio
DNxHR 444	DNxHR 4:4:4	12	RGB / 4:4:4	4.5:1
DNxHR HQX	DNxHR High Quality (12 bit)	12	4:2:2	5.5:1
DNxHR HQ	DNxHR High Quality (8 bit)	8	4:2:2	4.5:1
DNxHR SQ	DNxHR Standard Quality	8	4:2:2	7:1
DNxHR LB	DNxHR Low Bandwidth	8	4:2:2	22:1

For more ISIS-specific DNxHR storage information see [ISIS Bandwidth for DNxHR Material](#)
 For how this information relates to local storage devices see [Local Storage Bandwidth Specifications](#)

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CCIL Doc Id

CCIL Modification 8/4/2015 Date