



MILLENNIUM DXL

QUICK GUIDE

PANAVISION.COM



KEY MAPPING OPTIONS

Operator A, Operator B, Assistant A, Assistant B, 1, 2, 1+2

-Auto WB	-Exposure	-Not Assigned	-Return Feed
-Black Balance	-Format Media	-Peaking	-Save UI screen shot
-Camera Presets	-Horizon	-Playback	
-Eject Media	-Magnify	-Record Start/Stop	-Video

USER PAGE MAPPING OPTIONS

Operator User Page 8x buttons, Assistant User Page 8x buttons

Aperture	-Fan Speed: 1	-Focus Distance: Far	-REDCODE
-Camera Pitch	-Fan Speed:2	-Focus Distance: Near	-Recording Frame Rate
-Camera Roll	-Fan Maximum Preview Speed	-Format	-Temperature: Core
-Color Space	-Fan Maximum Record speed	-ISO	-Temperature: Sensor
-Color Temperature	-Focal Length	-LCD Brightness	-Tools
-Exposure:Shutter Angle	-Focus Distance	-Magnify	

MAX FRAME RATE AND COMPRESSION

*ProRes 2K LT

8K (1.9:1)		
8192px x 4320px 40.96mm x 21.60mm 46.31mm diagonal 1.71 x 35mm crop		
FPS	R3D	R3D + ProRes
24	5:1	5:1
25	5:1	6:1
30	6:1	7:1
40	8:1	9:1
48	10:1	11:1
50	10:1	11:1
60	12:1	14:1

8K 2:1 (2.0:1)		
8192px x 4096px 40.96mm x 20.48mm 45.79mm diagonal 1.71 x 35mm crop		
FPS	R3D	R3D + ProRes
24-25	5:1	5:1
30	6:1	6:1
40	8:1	9:1
48	10:1	10:1
50	10:1	11:1
60	12:1	13:1
63.8	13:1	14:1

8K WS (2.4:1)		
8192px x 3456px 40.96mm x 17.28mm 44.46mm diagonal 1.71 x 35mm crop		
FPS	R3D	R3D + ProRes
24	4:1	4:1
25	4:1	5:1
30	5:1	5:1
40	7:1	7:1
48-50	8:1	9:1
60	10:1	11:1
72	12:1	13:1
75	12:1	14:1

8K HD (1.78:1)		
7680px x 4320px 38.40mm x 21.60mm 44.06mm diagonal 1.6 x 35mm crop		
FPS	R3D	R3D + ProRes
24-25	5:1	5:1
30	6:1	6:1
40	8:1	8:1
48	9:1	10:1
50	10:1	11:1
60	12:1	13:1



7.5K (1.9:1)

7680px x 4080px | 38.40mm x 20.40mm
43.48mm diagonal | 1.6 x 35mm crop

FPS	R3D	R3D + ProRes
24-25	5:1	5:1
30	6:1	6:1
40	8:1	8:1
48-50	9:1	10:1
60	11:1	12:1
64	12:1	13:1

7.5K 2:1 (2.0:1)

7680px x 3840px | 38.40mm x 19.20mm
42.93mm diagonal | 1.6 x 35mm crop

FPS	R3D	R3D + ProRes
24-25	5:1	5:1
30	6:1	6:1
40	7:1	8:1
48	9:1	9:1
50	9:1	10:1
60	11:1	10:1
68	12:1	13:1

7.5K WS (2.4:1)

7680px x 3240px | 38.40mm x 16.20mm
41.68mm diagonal | 1.6 x 35mm crop

FPS	R3D	R3D + ProRes
24-25	4:1	4:1
30	5:1	5:1
40	6:1	7:1
48	7:1	8:1
50	8:1	8:1
60	9:1	10:1
72-75	11:1	12:1
80.57	12:1	14:1

7.5K HD (1.78:1)

7296px x 4104px | 36.48mm x 20.52mm
41.86mm diagonal | 1.52 x 35mm crop

FPS	R3D	R3D + ProRes
24-25	5:1	5:1
30	6:1	6:1
40	7:1	8:1
48	9:1	9:1
50	9:1	10:1
60-63.7	11:1	12:1



7K (1.9:1)		
7168px x 3780px 35.84mm x 18.90mm 40.52mm diagonal 1.49 x 35mm crop		
FPS	R3D	R3D + ProRes
24-25	4:1	4:1
30	5:1	5:1
40	7:1	7:1
48	8:1	8:1
50	8:1	9:1
60	10:1	11:1
68.93	11:1	12:1

7K 2:1 (2.0:1)		
7168px x 3584px 35.84mm x 17.92mm 40.07mm diagonal 1.49 x 35mm crop		
FPS	R3D	R3D + ProRes
24-25	4:1	4:1
30	5:1	5:1
40	6:1	7:1
48	7:1	8:1
50	8:1	8:1
60	8:1	10:1
72	11:1	12:1

7K WS (2.4:1)		
7168px x 3024px 35.84mm x 15.12mm 38.9mm diagonal 1.49 x 35mm crop		
FPS	R3D	R3D + ProRes
24	3:1	4:1
25-30	4:1	4:1
40	5:1	6:1
48	6:1	7:1
50	7:1	7:1
60	8:1	9:1
72	9:1	10:1
75	10:1	11:1
85.94	11:1	13:1

7K HD (1.78:1)		
6720px x 3780px 33.60mm x 18.90mm 38.55mm diagonal 1.4 x 35mm crop		
FPS	R3D	R3D + ProRes
24-25	4:1	4:1
30	5:1	5:1
40	6:1	7:1
48	7:1	8:1
50	8:1	8:1
60	9:1	10:1
68.93	10:1	12:1



6.5K (1.9:1)
6656px x 3536px | 33.28mm x 17.68mm
37.21mm diagonal | 1.39 x 35mm crop

FPS	R3D	R3D + ProRes
24-25	4:1	4:1
30	4:1	5:1
40	6:1	6:1
48	7:1	7:1
50	7:1	8:1
60	9:1	9:1
72-73.88	10:1	12:1

6.5K 2:1 (2.0:1)
6656px x 3328px | 33.28mm x 16.64mm
37.21mm diagonal | 1.39 x 35mm crop

FPS	R3D	R3D + ProRes
24-30	4:1	4:1
40	6:1	6:1
48-50	7:1	7:1
60	8:1	9:1
72-75	10:1	11:1
78.46	10:1	12:1

6.5K WS (2.4:1)
6656px x 2808px | 33.28mm x 14.04mm
36.12mm diagonal | 1.39 x 35mm crop

FPS	R3D	R3D + ProRes
24-25	3:1	3:1
30	4:1	4:1
40	5:1	5:1
48-50	6:1	6:1
60	7:1	8:1
72	8:1	9:1
75	8:1	10:1
90-92.86	10:1	12:1

6.5K HD (1.78:1)
6144px x 3456px | 30.72mm x 17.28mm
35.25mm diagonal | 1.28 x 35mm crop

FPS	R3D	R3D + ProRes
24	3:1	4:1
25-30	4:1	4:1
40	5:1	6:1
48	6:1	7:1
50	7:1	7:1
60	8:1	9:1
72	9:1	10:1
75	10:1	11:1



6K (1.9:1)		
6144px x 3240px 30.72mm x 16.20mm 34.73mm diagonal 1.28 x 35mm crop		
FPS	R3D	R3D + ProRes
24-25	3:1	3:1
30	4:1	4:1
40	5:1	5:1
48	6:1	6:1
50	6:1	7:1
60	7:1	8:1
72-75	9:1	10:1
80.67	10:1	11:1

6K 2:1 (2.0:1)		
6144px x 3072px 30.72mm x 15.36mm 34.35mm diagonal 1.28 x 35mm crop		
FPS	R3D	R3D + ProRes
24-25	3:1	3:1
30	4:1	4:1
40	5:1	5:1
48-50	6:1	6:1
60	7:1	8:1
72	8:1	9:1
75	8:1	10:1
85.05	10:1	11:1

6K WS (2.4:1)		
6144px x 2592px 30.72mm x 12.96mm 33.34mm diagonal 1.28 x 35mm crop		
FPS	R3D	R3D + ProRes
24-30	3:1	3:1
40	4:1	4:1
48-50	5:1	5:1
60	6:1	6:1
72-75	7:1	8:1
90	9:1	10:1
96-100	9:1	11:1

6K HD (1.78:1)		
5760px x 3240px 28.80mm x 16.20mm 34.04mm diagonal 1.20 x 35mm crop		
FPS	R3D	R3D + ProRes
24-25	3:1	3:1
30	4:1	4:1
40	5:1	5:1
48-50	6:1	6:1
60	7:1	7:1
72-75	8:1	9:1
80.67	9:1	10:1



5K (1.9:1)

5120px x 2700px | 25.60mm x 13.50mm
28.94mm diagonal | 1.07 x 35mm crop

FPS	R3D	R3D + ProRes
24-25	2:1	2:1
30	3:1	3:1
40	4:1	4:1
48-50	4:1	5:1
60	5:1	6:1
72-75	6:1	7:1
90	8:1	9:1
96	8:1	10:1

5K 2:1 (2.0:1)

5120px x 2560px | 25.60mm x 12.80mm
28.62mm diagonal | 1.07 x 35mm crop

FPS	R3D	R3D + ProRes
24-25	2:1	2:1
30	3:1	3:1
40	3:1	4:1
48	4:1	4:1
50	4:1	5:1
60	5:1	5:1
72-75	6:1	7:1
90	7:1	8:1
96-100	8:1	9:1

5K WS (2.4:1)

5120px x 2160px | 25,60mm x 10.80mm
27.78mm diagonal | 1.07 x 35mm crop

FPS	R3D	R3D + ProRes
24-30	2:1	2:1
40	3:1	3:1
48	3:1	4:1
50	4:1	4:1
60	4:1	5:1
72-75	5:1	6:1
90	6:1	7:1
96	6:1	8:1
100	7:1	8:1
120	8:1	10:1

5K HD (1.78:1)

4800px x 2700px | 24.00mm x 13.50mm
27.54mm diagonal | 1.0 x 35mm crop

FPS	R3D	R3D + ProRes
24-25	2:1	2:1
30	3:1	3:1
40	3:1	4:1
48-50	4:1	4:1
60	5:1	5:1
72	6:1	6:1
75	6:1	7:1
90	7:1	8:1
96	8:1	9:1 ₇



4K (1.9:1)		
4096px x 2160px 20.48mm x 10.80mm 23.15mm diagonal 0.85 x 35mm crop		
FPS	R3D	R3D + ProRes
24-30	2:1	2:1
40-48	2:1	3:1
50	3:1	3:1
60	3:1	4:1
72	3:1	5:1
75	4:1	5:1
90-96	5:1	6:1
100	5:1	7:1
120	6:1	8:1
120.83	7:1	8:1

4K 2:1 (2.0:1)		
4096px x 2084px 20.48mm x 10.24mm 22.90mm diagonal 0.85 x 35mm crop		
FPS	R3D	R3D + ProRes
24-30	2:1	2:1
40	2:1	3:1
48-50	3:1	3:1
60	3:1	4:1
72	4:1	4:1
75	4:1	5:1
90-100	5:1	6:1
120-125	6:1	8:1
127.37	7:1	8:1

4K WS (2.4:1)		
4096px x 1728px 20.48mm x 8.64mm 22.23mm diagonal 0.85 x 35mm crop		
FPS	R3D	R3D + ProRes
24-40	2:1	2:1
48	2:1	3:1
50	2:1	3:1
60	3:1	3:1
72-75	3:1	4:1
90-100	4:1	5:1
120	5:1	6:1
125	6:1	7:1
144	6:1	8:1
150	7:1	9:1

4K HD (1.78:1)		
3840px x 2160px 19.20mm x 10.80mm 22.03mm diagonal 0.8 x 35mm crop		
FPS	R3D	R3D + ProRes
24-40	2:1	2:1
48-50	3:1	3:1
60	3:1	4:1
72-75	4:1	4:1
90	5:1	5:1
96	5:1	6:1
100	5:1	6:1
120	6:1	7:1



3K (1.9:1)

3072px x 1620px | 15.36mm x 8.10mm
17.36mm diagonal | 0.64 x 35mm crop

FPS	R3D	R3D + ProRes
24-60	2:1	2:1
72-75	3:1	3:1
90-100	3:1	4:1
120	4:1	5:1
125	4:1	6:1
144-150	5:1	6:1
160.27	5:1	7:1

3K WS (2.4:1)

3072px x 1296px | 15.36mm x 6.48mm
16.67mm diagonal | 0.64 x 35mm crop

FPS	R3D	R3D + ProRes
24-75	2:1	2:1
90-100	3:1	3:1
120-125	3:1	4:1
144-150	4:1	5:1
168-175	5:1	6:1
180-192	5:1	7:1
200	5:1	8:1

2K (1.9:1)

2048px x 1080px | 10.24mm x 5.40mm
11.58mm diagonal | 0.43 x 35mm crop

FPS	R3D	R3D + ProRes
24-120	2:1	2:1
125-150	2:1	3:1
168-192	3:1	4:1
200-210	3:1	5:1
216	4:1	5:1
225-240	4:1	6:1

2K WS (2.4:1)

2048px x 864px | 10.24mm x 4.32mm
11.11mm diagonal | 0.43 x 35mm crop

FPS	R3D	R3D + ProRes
24-120	2:1	2:1
125-180	2:1	3:1
192	3:1	3:1
200-225	3:1	4:1
240-250	3:1	5:1
264-275	4:1	6:1
288-300	4:1	7:1
301.1	4:1	8:1



8K 6:5 (1.2:1)		
5184px x 4320px 25.92mm x 21.60mm 33.64mm diagonal 1.24 x 35mm crop		
FPS	R3D	R3D + ProRes
24-30	4:1	4:1
40	6:1	6:1
48-50	7:1	7:1
60	8:1	9:1

7K 6:5 (1.2:1)		
4536px x 3780px 22.68mm x 18.90mm 29.52mm diagonal 1.08 x 35mm crop		
FPS	R3D	R3D + ProRes
24-25	3:1	3:1
30	3:1	4:1
40	4:1	5:1
48-50	5:1	6:1
60	6:1	7:1
68.93	7:1	8:1

6K 6:5 (1.2:1)		
3888px x 3240px 19.44mm x 16.20mm 25,31mm diagonal 0.93 x 35mm crop		
FPS	R3D	R3D + ProRes
24-25	2:1	2:1
30	3:1	3:1
40	3:1	4:1
48-50	4:1	4:1
60	5:1	5:1
72	6:1	6:1
75-80.67	6:1	7:1

5K 6:5 (1.2:1)		
3240px x 2700px 16.20mm x 13.50mm 21.09mm diagonal 0.77 x 35mm crop		
FPS	R3D	R3D + ProRes
24-30	2:1	2:1
40	2:1	3:1
48-50	3:1	3:1
60	3:1	4:1
72-75	4:1	5:1
90-96	5:1	6:1



4K 6:5 (1.2:1)		
2592px x 2160px 12.96mm x 10.80mm 16.87mm diagonal 0.62 x 35mm crop		
FPS	R3D	R3D + ProRes
24-50	2:1	2:1
60	2:1	3:1
72-75	3:1	3:1
90	3:1	4:1
96-100	4:1	4:1
120	4:1	5:1

35MM FIELD OF VIEW EQUIVALENTS

	Focal Length	35MM Field of View
Primo 70 Primes	14mm	8mm
	24mm	14mm
	27mm	16mm
	35mm	21mm
	40mm	24mm
	50mm	29mm
	65mm	38mm
	80mm	47mm
	100mm	59mm
	125mm	74mm
	150mm	88mm
	200mm	118mm
	250mm	147mm

	Focal Length	35MM Field of View
Primo 70 Zooms	28mm - 80mm	16mm - 47mm
	70mm - 185mm	41mm-109mm
	200mm - 400mm	118mm - 235mm



MINUTES PER 512GB MAG @ 24 FPS									
	2:1	3:1	4:1	5:1	6:1	7:1	8:1	9:1	10:1
8K				27	33	38	44	49	55
8K 2:1				29	35	40	46	52	58
8K WS			27	34	41	48	55	61	68
8K HD				29	35	41	47	52	58
8K 6:5			35	43	52	60	69	78	86
7.5K				31	37	43	49	55	62
7.5K 2:1				33	39	46	52	59	66
7.5K WS			31	39	47	54	62	70	78
7.5K HD				32	39	45	52	58	65
7K			29	36	43	50	57	64	71
7K 2:1			30	38	45	53	60	68	75
7K WS		27	36	45	54	62	71	80	89
7K HD			30	38	46	53	61	69	76
7K 6:5		34	45	56	68	79	90	101	113
6.5K			33	41	49	57	66	74	82
6.5K 2:1			35	44	52	61	70	78	87
6.5K WS		31	41	52	62	72	83	93	104
6.5K HD		27	36	45	55	64	73	82	91



MINUTES PER 512GB MAG @ 24 FPS									
	2:1	3:1	4:1	5:1	6:1	7:1	8:1	9:1	10:1
6K		29	39	49	58	68	78	88	97
6K 2:1		31	41	51	61	72	82	92	102
6K WS		36	49	61	73	85	97	109	122
6K HD		31	41	52	62	73	83	93	104
6K 6:5	31	46	61	77	92	107	123	138	153
5K	28	42	56	70	84	98	112	126	140
5K 2:1	30	44	59	74	89	103	118	133	148
5K WS	35	52	70	88	105	123	140	157	175
5K HD	30	45	60	75	89	104	120	134	149
5K 6:5	44	66	88	110	133	155	177	199	222
4K	44	66	88	109	131	153	175	197	218
4K 2:1	46	69	92	115	138	161	185	207	230
4K WS	55	82	109	136	164	191	218	246	274
4K HD	47	70	93	117	140	163	187	210	232
4K 6:5	69	104	138	172	207	242	277	310	347
3K	78	117	156	195	232	272	310	351	389
3K WS	97	145	195	242	291	339	389	436	488
2K	175	262	351	436	524	613	702	778	873
2K WS	218	327	436	543	655	758	873	993	1108



DATA RATES GB PER HOUR @ 24 FPS

	2:1	3:1	4:1	5:1	6:1	7:1	8:1	9:1	10:1
8K				1054	878	753	659	586	527
8K 2:1				1000	833	714	625	555	500
8K WS			1054	843	703	602	527	469	422
8K HD				988	824	706	618	549	494
8K 6:5			834	667	556	477	417	371	334
7.5K				934	778	667	583	519	467
7.5K 2:1				879	732	628	549	488	439
7.5K WS			927	741	618	530	463	412	371
7.5K HD				892	743	637	558	496	446
7K			1009	807	673	577	505	448	404
7K 2:1			957	765	638	547	478	425	383
7K WS		1076	807	646	538	461	404	359	323
7K HD			946	757	631	541	473	420	378
7K 6:5		851	639	511	426	365	319	284	255
6.5K			876	701	584	501	438	390	351
6.5K 2:1			825	660	550	471	412	367	330
6.5K WS		928	696	557	464	398	348	309	278
6.5K HD		1054	791	633	527	452	395	351	316



DATA RATES GB PER HOUR @ 24 FPS									
	2:1	3:1	4:1	5:1	6:1	7:1	8:1	9:1	10:1
6K		988	741	593	494	424	371	329	297
6K 2:1		937	703	562	469	402	351	312	281
6K WS		791	593	474	395	339	297	264	237
6K HD		927	695	556	463	397	348	309	278
6K 6:5	938	626	469	375	313	268	235	209	188
5K	1030	686	515	412	343	294	257	229	206
5K 2:1	976	651	488	391	325	279	244	217	195
5K WS	824	549	412	329	275	235	206	183	165
5K HD	965	644	483	386	322	276	241	215	193
5K 6:5	652	434	326	261	217	186	163	145	130
4K	659	439	329	264	220	188	165	146	132
4K 2:1	625	417	312	250	208	179	156	139	125
4K WS	527	351	264	211	176	151	132	117	105
4K HD	618	412	309	247	206	177	154	137	124
4K 6:5	417	278	209	167	139	119	104	93	83
3K	371	247	185	148	124	106	93	82	74
3K WS	297	198	148	119	99	85	74	66	59
2K	165	110	82	66	55	47	41	37	33
2K WS	132	88	66	53	44	38	33	29	26