

# Formats and Resolutions Overview of ARRI digital motion picture cameras

## ALEXA MINI LFP

SUP 7.1 and higher

Recording Codec	Recording Format	Sensor Active Image Area (photosites)		Recording File Container Size (pixel)		Recording File Image Content (pixel)		Sensor Image Area (mm)		Sensor Image Area (inch)		Image Circle (mm)	Image Circle (inch)	Frame Size in MB	Frame Size in Byte	Max. FPS
535 16:9, 4:3 & 3:2																
ProRes	2.8K 535 16:9 - HD	2880	1620	1920	1080	1920	1080	23.76	13.37	0.935	0.526	27.26	1.073	-	-	100
ProRes	2.8K 535 4:3 - 2.8K	2880	2160	3072 <sup>1</sup>	2160	2880	2160	23.76	17.82	0.935	0.702	29.70	1.169	-	-	75
ProRes	3.2K 535 16:9 - 3.2K	3200	1800	3200	1800	3200	1800	26.40	14.85	1.039	0.585	30.29	1.193	-	-	60
ARRIRAW	3.4K 535 3:2 - 3.4K	3424	2202	3424	2202	3424	2202	28.25	18.17	1.112	0.715	33.59	1.322	11.5	11.529.544	60
LF 1:1																
ProRes	2.8K LF 1:1 - 2.8K	2880	2880	3072 <sup>1</sup>	2880	2880	2880	23.76	23.76	0.935	0.935	33.60	1.322	-	-	60
ARRIRAW	2.8K LF 1:1 - 2.8K	2880	2880	2880	2880	2880	2880	23.76	23.76	0.935	0.935	33.60	1.322	12.4	12.445.696	60
LF 16:9																
ProRes	3.8K LF 16:9 - HD	3840	2160	1920	1080	1920	1080	31.68	17.82	1.247	0.702	36.35	1.431	-	-	90
ProRes	3.8K LF 16:9 - 2K	3840	2160	2048	1152	2048	1152	31.68	17.82	1.247	0.702	36.35	1.431	-	-	90
ProRes	3.8K LF 16:9 - UHD	3840	2160	3840	2160	3840	2160	31.68	17.82	1.247	0.702	36.35	1.431	-	-	60
ARRIRAW	3.8K LF 16:9 - UHD	3840	2160	3840	2160	3840	2160	31.68	17.82	1.247	0.702	36.35	1.431	12.7	12.661.672	60
LF 2.39:1																
ProRes	4.5K LF 2.39:1 - 4.5K	4448	1856	4480 <sup>2</sup>	1856	4448	1856	36.70	15.31	1.445	0.603	39.76	1.565	-	-	60
ARRIRAW	4.5K LF 2.39:1 - 4.5K	4448	1856	4448	1856	4448	1856	36.70	15.31	1.445	0.603	39.76	1.565	12.6	12.603.304	60
LF 4.3K & Open Gate																
ProRes	4.3K LF 16:9 - HD	4320	2430	1920	1080	1920	1080	35.64	20.05	1.364	0.789	40.89	1.576	-	-	75
ProRes	4.3K LF 16:9 - UHD	4320	2430	3840	2160	3840	2160	35.64	20.05	1.364	0.789	40.89	1.576	-	-	48
ProRes	4.5K LF 3:2 Open Gate - 4.5K	4448	3096	4480 <sup>2</sup>	3096	4448	3096	36.70	25.54	1.445	1.006	44.71	1.760	-	-	40
ARRIRAW	4.5K LF 3:2 Open Gate - 4.5K	4448	3096	4448	3096	4448	3096	36.70	25.54	1.445	1.006	44.71	1.760	20.9	20.876.584	40

<sup>1</sup> clip padding: 96px left and right;

<sup>2</sup> clip padding: 16px left and right;

## ALEXA LFP

SUP 4.3

Recording Codec	Recording Format	Sensor Active Image Area (photosites)		Recording File Container Size (pixel)		Recording File Image Content (pixel)		Sensor Image Area (mm)		Sensor Image Area (inch)		Image Circle (mm)	Image Circle (inch)	Frame Size in MB	Frame Size in Byte	Max. FPS
LF 16:9																
ProRes	HD	3840	2160	1920	1080	1920	1080	31.68	17.82	1.247	0.702	36.35	1.431	-	-	60
ProRes	2K	3840	2160	2048	1152	2048	1152	31.68	17.82	1.247	0.702	36.35	1.431	-	-	60
ProRes	4K UHD	3840	2160	3840	2160	3840	2160	31.68	17.82	1.247	0.702	36.35	1.431	-	-	60
ARRIRAW	4K UHD	3840	2160	3840	2160	3840	2160	31.68	17.82	1.247	0.702	36.35	1.431	12.7	12.661.672	90
LF 2.39:1																
ProRes	Scope 4.5K	4448	1856	4480 <sup>1</sup>	1856	4448	1856	36.70	15.31	1.445	0.603	39.76	1.565	-	-	100
ARRIRAW	Scope 4.5K	4448	1856	4448	1856	4448	1856	36.70	15.31	1.445	0.603	39.76	1.565	12.6	12.603.304	150
LF Open Gate																
ProRes	OG 4.5K	4448	3096	4480 <sup>1</sup>	3096	4448	3096	36.70	25.54	1.445	1.006	44.71	1.760	-	-	60
ARRIRAW	OG 4.5K	4448	3096	4448	3096	4448	3096	36.70	25.54	1.445	1.006	44.71	1.760	20.9	20.876.584	90

<sup>1</sup> clip padding: 16px left and right;

## ALEXA SXT

SUP 2.1

Recording Codec	Recording Format	Sensor Active Image Area (photosites)		Recording File Container Size (pixel)		Recording File Image Content (pixel)		Sensor Image Area (mm)		Sensor Image Area (inch)		Image Circle (mm)	Image Circle (inch)	Frame Size in MB	Frame Size in Byte	Max. FPS
16:9 mode																
ProRes	HD	2880	1620	1920	1080	1920	1080	23.76	13.37	0.935	0.526	27.26	1.073	-	-	120
	2K	2880	1620	2048	1152	2048	1152	23.76	13.37	0.935	0.526	27.26	1.073	-	-	120
	3.2K	3200	1800	3200	1824 <sup>1</sup>	3200	1800	26.40	14.85	1.039	0.585	30.29	1.193	-	-	72
	4K UHD	3200	1800	3840	2160	3840	2160	26.40	14.85	1.039	0.585	30.29	1.193	-	-	50
ARRIRAW	2.8K	2880	1620	2880	1620	2880	1620	23.76	13.37	0.935	0.526	27.26	1.073	7.2	7.218.472	120
	3.2K	3168	1782	3168	1782	3168	1782	26.14	14.70	1.029	0.579	29.99	1.181	8.7	8.688.136	120
4:3 mode																
ProRes	2.8K	2880	2160	2944 <sup>3</sup>	2176	2880	2160	23.76	17.82	0.935	0.702	29.70	1.169	-	-	60
ARRIRAW	2.8K	2880	2160	2880	2160	2880	2160	23.76	17.82	0.935	0.702	29.70	1.169	9.6	9.551.272	96
6:5 mode																
ProRes	2K Anamorphic	2560	2146	2048	858	2048	858	21.12	17.70	0.831	0.697	27.56	1.085	-	-	96
	4K Cine Anamorphic	2560	2146	4096	1716	4096	1716	21.12	17.70	0.831	0.697	27.56	1.085	-	-	60
ARRIRAW	2.6K	2592	2160	2592	2160	2578	2160	21.38	17.82	0.842	0.702	27.84	1.096	8.6	8.618.152	96
Open Gate mode																
ProRes	3.4K	3424	2202	3456 <sup>4</sup>	2202	3424	2202	28.25	18.17	1.112	0.715	33.59	1.322	-	-	60
	4K Cine	3414	2198	4096	2636	4096	2636	28.17	18.13	1.109	0.714	33.50	1.319	-	-	48
ARRIRAW	3.4K	3424	2202	3424	2202	3424	2202	28.25	18.17	1.112	0.715	33.59	1.322	11.5	11.529.544	90

<sup>2</sup> clip padding: 24px bottom

<sup>3</sup> clip padding: 32px left and right; 16px bottom

<sup>4</sup> clip padding: 16px left and right

# Formats and Resolutions Overview of ARRI digital motion picture cameras

## AMIRA® & ALEXA MINI

SUP 6.1

Recording Codec	Recording Format	Sensor Active Image Area (photosites)		Recording File Container Size (pixel)		Recording File Image Content (pixel)		Sensor Image Area (mm)		Sensor Image Area (inch)		Image Circle (mm)	Image Circle (inch)	Frame Size in MB	Frame Size in Byte	Max. FPS
MPEG-2 (AMIRA only)	HD	2880	1620	1920	1080	1920	1080	23.76	13.37	0.935	0.526	27.26	1.073	-	-	59.94
	516 HD	1600	900	1920	1080	1920	1080	13.2	7.425	0.520	0.292	15.14	0.596	-	-	200
	HD	2880	1620	1920	1080	1920	1080	23.76	13.37	0.935	0.526	27.26	1.073	-	-	200
	HD Ana.*	1920	2160	1920	1080	1920	1080	15.84	17.82	0.624	0.702	23.84	0.939	-	-	120
	2K	2868	1612	2048	1152	2048	1152	23.66	13.30	0.932	0.524	27.14	1.069	-	-	200
	2.39:1 2K Ana.*	2560	2145	2048	858	2048	858	21.12	17.70	0.831	0.697	27.55	1.085	-	-	120
	4:3 2.8K*	2880	2160	2944 <sup>5</sup>	2160	2880	2160	23.76	17.82	0.935	0.702	29.70	1.169	-	-	50
	3.2K	3200	1800	3200	1800	3200	1800	26.40	14.85	1.039	0.585	30.29	1.193	-	-	60
MXF/ARRIRAW	4K UHD	3200	1800	3840	2160	3840	2160	26.40	14.85	1.039	0.585	30.29	1.193	-	-	60
	16:9 HD Ana. (OG 3.4K)*	3424 <sup>5</sup>	2202	1920	2160	1920	2160	15.84	17.82	0.624	0.702	23.84	0.939	11.5	11.529.544	30
	2.39:1 2K Ana. (OG 3.4K)*	3424 <sup>5</sup>	2202	2560	2145	2560	2145	21.12	17.70	0.831	0.697	27.55	1.085	11.5	11.529.544	30
	2.8K	2880	2160	2880	1620	2880	1620	23.76	17.82	0.935	0.702	29.70	1.169	7.2	7.218.472	48
	4:3 2.8K (OG 3.4K)*	3424 <sup>5</sup>	2202	2880	2160	2880	2160	23.76	17.82	0.935	0.702	29.70	1.169	11.5	11.529.544	30
	Open Gate 3.4K*	3424	2202	3424	2202	3424	2202	28.25	18.17	1.112	0.715	33.59	1.322	11.5	11.529.544	30

<sup>5</sup> clip padding: 32px left and right

<sup>6</sup> for all (OG 3.4K) formats: active image size determined by metadata, recording always full Open Gate (3424x2202)

## ALEXA 65

SUP 4.0

Recording Codec	Recording Format	Sensor Active Image Area (photosites)		Recording File Container Size (pixel)		Recording File Image Content (pixel)		Sensor Image Area (mm)		Sensor Image Area (inch)		Image Circle (mm)	Image Circle (inch)	Frame Size in MB	Frame Size in Byte	Max. FPS
ARRIRAW	4K UHD	3840	2160	3840	2160	3840	2160	31.68	17.82	1.247	0.702	36.35	1.431	12.7	12.661.672	60
	4.3K	4320	2880	4320	2880	4320	2880	35.64	23.76	1.403	0.935	42.83	1.686	18.7	18.882.472	60
	LF Open Gate	4448	3096	4448	3096	4448	3096	36.70	25.54	1.44	1.01	44.71	1.76	20.9	20.876.584	60
	5.1K	5120	2880	5120	2880	5120	2880	42.24	23.76	1.663	0.935	48.46	1.908	22.1	22.338.472	60
	Open Gate	6560	3100	6560	3100	6560	3100	54.12	25.58	2.131	1.007	59.86	2.357	30.5	30.724.072	60

## ALEXA XT

SUP 11.1

Recording Codec	Recording Format	Sensor Active Image Area (photosites)		Recording File Container Size (pixel)		Recording File Image Content (pixel)		Sensor Image Area (mm)		Sensor Image Area (inch)		Image Circle (mm)	Image Circle (inch)	Frame Size in MB	Frame Size in Byte	Max. FPS
16:9 mode																
DNxHD	HD (1920x1080)	2880	1620	1920	1080	1920	1080	23.76	13.37	0.935	0.526	27.26	1.073	-	-	120 <sup>1</sup>
	HD (1920x1080)	2880	1620	1920	1080	1920	1080	23.76	13.37	0.935	0.526	27.26	1.073	-	-	120 <sup>1</sup>
ProRes	2K (2048x1152)	2868	1614	2048	1152	2048	1152	23.66	13.32	0.932	0.524	27.15	1.069	-	-	60
	3.2K (3164x1778)	3168	1782	3200 <sup>1</sup>	1782	3164	1778	26.14	14.70	1.029	0.579	29.99	1.181	-	-	30
ARRIRAW	2.8K	2880	1620	2880	1620	2880	1620	23.76	13.37	0.935	0.526	27.26	1.073	7.0	7.008.640	120
4:3 mode																
ProRes	2K (2048x1536)	2868	2152	2048	1536	2048	1536	23.66	17.75	0.932	0.699	29.58	1.165	-	-	48
ARRIRAW	Cropped	2592	2160	2592	2160	2578	2160	21.27	17.82	0.837	0.702	27.75	1.092	8.4	8.402.176	96
	Full	2880	2160	2880	2160	2880	2160	23.76	17.82	0.935	0.702	29.70	1.169	9.3	9.341.440	90
Open Gate mode																
ARRIRAW	OpenGate	3424	2202	3424	2202	3414	2198	28.25	18.17	1.112	0.715	33.59	1.322	11.3	11.319.712	75

<sup>1</sup> clip padding: 18px left and right; 2px top and bottom

<sup>2</sup> max. speed may vary depending on the codec's flavour; High speed license needed (otherwise max. speed is 60fps)

## ALEXA®

SUP 11.1

Recording Codec	Recording Format	Sensor Active Image Area (photosites)		Recording File Container Size (pixel)		Recording File Image Content (pixel)		Sensor Image Area (mm)		Sensor Image Area (inch)		Image Circle (mm)	Image Circle (inch)	Frame Size in MB	Frame Size in Byte	Max. FPS
16:9 mode																
DNxHD	HD (1920x1080)	2880	1620	1920	1080	1920	1080	23.76	13.37	0.935	0.526	27.26	1.073	-	-	55
ProRes	HD (1920x1080)	2880	1620	1920	1080	1920	1080	23.76	13.37	0.935	0.526	27.26	1.073	-	-	120 <sup>1</sup>
	2K (2048x1152)	2868	1614	2048	1152	2048	1152	23.66	13.32	0.932	0.524	27.15	1.069	-	-	60
ARRIRAW (external)	2.8K	2880	1620	2880	1620	2880	1620	23.76	13.37	0.935	0.526	27.26	1.073	7.0	7.008.640	60
4:3 mode																
ProRes	2K (2048x1536)	2868	2152	2048	1536	2048	1536	23.66	17.75	0.932	0.699	29.58	1.165	-	-	48
ARRIRAW (external)	2.8K	2880	2160	2880	2160	2880	2160	23.76	17.82	0.935	0.702	29.70	1.169	9.3	9.341.440	60

<sup>1</sup> max. speed may vary depending on the codec's flavour; High speed license needed (otherwise max. speed is 60fps)