

Formats and Resolutions Overview of ARRI digital motion picture cameras

ALEXA MINI LF

SUP 7.0 and higher

| Format | Resolution | Active Image Resolution (pixels) | | Container Resolution (pixels) | | Sensor Resolution (photosites used) | | Sensor Image Area (mm) | | Sensor Image Area (inch) | | Sensor Diameter (mm) | Sensor Diameter (inch) | Frame Size in MB | Frame Size in Byte | Maximum Possible Speed |
|---------------------|------------------------------|----------------------------------|------|-------------------------------|------|-------------------------------------|------|------------------------|-------|--------------------------|-------|----------------------|------------------------|------------------|--------------------|------------------------|
| 535 16:9, 4:3 & 3:2 | | | | | | | | | | | | | | | | |
| ProRes | 2.8K 535 16:9 - HD | 1920 | 1080 | 1920 | 1080 | 2880 | 1620 | 23.76 | 13.37 | 0.935 | 0.526 | 27.26 | 1.073 | - | - | 100 |
| ProRes | 2.8K 535 4:3 - 2.8K | 2880 | 2160 | 3072 ² | 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 16:9 | | | | | | | | | | | | | | | | |
| ProRes | 3.8K LF 16:9 - HD | 1920 | 1080 | 1920 | 1080 | 3840 | 2160 | 31.68 | 17.82 | 1.247 | 0.702 | 36.35 | 1.431 | - | - | 90 |
| ProRes | 3.8K LF 16:9 - 2K | 2048 | 1152 | 2048 | 1152 | 3840 | 2160 | 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 ² | 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 | 1920 | 1080 | 1920 | 1080 | 4320 | 2430 | 35.64 | 20.05 | 1.364 | 0.789 | 40.89 | 1.576 | - | - | 75 |
| ProRes | 4.3K LF 16:9 - UHD | 3840 | 2160 | 3840 | 2160 | 4320 | 2430 | 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 ² | 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 |

¹ clip padding: 96px left and right;

² clip padding: 16px left and right;

ALEXA LF

SUP 4.3

| Format | Resolution | Active Image Resolution (pixels) | | Container Resolution (pixels) | | Sensor Resolution (photosites used) | | Sensor Image Area (mm) | | Sensor Image Area (inch) | | Sensor Diameter (mm) | Sensor Diameter (inch) | Frame Size in MB | Frame Size in Byte | Maximum Possible Speed |
|--------------|------------|----------------------------------|------|-------------------------------|------|-------------------------------------|------|------------------------|-------|--------------------------|-------|----------------------|------------------------|------------------|--------------------|------------------------|
| LF 16:9 | | | | | | | | | | | | | | | | |
| ProRes | HD | 1920 | 1080 | 1920 | 1080 | 3840 | 2160 | 31.68 | 17.82 | 1.247 | 0.702 | 36.35 | 1.431 | - | - | 60 |
| ProRes | 2K | 2048 | 1152 | 2048 | 1152 | 3840 | 2160 | 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 ¹ | 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 ¹ | 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 |

¹ clip padding: 16px left and right;

ALEXA SXT

SUP 2.1

| Format | Resolution | Active Image Resolution (pixels) | | Container Resolution (pixels) | | Sensor Resolution (photosites used) | | Sensor Image Area (mm) | | Sensor Image Area (inch) | | Sensor Diameter (mm) | Sensor Diameter (inch) | Frame Size in MB | Frame Size in Byte | Maximum Possible Speed |
|----------------|--------------------|----------------------------------|------|-------------------------------|-------------------|-------------------------------------|------|------------------------|-------|--------------------------|-------|----------------------|------------------------|------------------|--------------------|------------------------|
| 16:9 mode | | | | | | | | | | | | | | | | |
| ProRes | HD | 1920 | 1080 | 1920 | 1080 | 2880 | 1620 | 23.76 | 13.37 | 0.935 | 0.526 | 27.26 | 1.073 | - | - | 120 |
| | 2K | 2048 | 1152 | 2048 | 1152 | 2880 | 1620 | 23.76 | 13.37 | 0.935 | 0.526 | 27.26 | 1.073 | - | - | 120 |
| | 3.2K | 3200 | 1800 | 3200 | 1824 ² | 3200 | 1800 | 26.40 | 14.85 | 1.039 | 0.585 | 30.29 | 1.193 | - | - | 72 |
| | 4K UHD | 3840 | 2160 | 3840 | 2160 | 3200 | 1800 | 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 ³ | 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 | 2048 | 858 | 2048 | 858 | 2560 | 2146 | 21.12 | 17.70 | 0.831 | 0.697 | 27.56 | 1.085 | - | - | 96 |
| | 4K Cine Anamorphic | 4096 | 1716 | 4096 | 1716 | 2560 | 2146 | 21.12 | 17.70 | 0.831 | 0.697 | 27.56 | 1.085 | - | - | 60 |
| ARRIRAW | 2.6K | 2578 | 2160 | 2592 | 2160 | 2592 | 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 ⁴ | 2202 | 3424 | 2202 | 28.25 | 18.17 | 1.112 | 0.715 | 33.59 | 1.322 | - | - | 60 |
| | 4K Cine | 4096 | 2636 | 4096 | 2636 | 3414 | 2198 | 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 |

² clip padding: 24px bottom

³ clip padding: 32px left and right; 16px bottom

⁴ clip padding: 16px left and right

Formats and Resolutions Overview of ARRI digital motion picture cameras

AMIRA® & ALEXA MINI

SUP 6.1

| Format | Resolution | Active Image Resolution (pixels) | | Container Resolution (pixels) | | Sensor Resolution (photosites used) | | Sensor Image Area (mm) | | Sensor Image Area (inch) | | Sensor Diameter (mm) | Sensor Diameter (inch) | Frame Size in MB | Frame Size in Byte | Maximum Possible Speed |
|---------------------|---------------------------|----------------------------------|------|-------------------------------|------|-------------------------------------|-------|------------------------|-------|--------------------------|-------|----------------------|------------------------|------------------|--------------------|------------------------|
| | | | | | | | | | | | | | | | | |
| MPEG-2 (AMIRA only) | HD | 1920 | 1080 | 1920 | 1080 | 2880 | 1620 | 23.76 | 13.37 | 0.935 | 0.526 | 27.26 | 1.073 | - | - | 59.94 |
| ProRes | 516 HD | 1920 | 1080 | 1920 | 1080 | 1600 | 900 | 13.2 | 7.425 | 0.520 | 0.292 | 15.14 | 0.596 | - | - | 200 |
| | HD | 1920 | 1080 | 1920 | 1080 | 2880 | 1620 | 23.76 | 13.37 | 0.935 | 0.526 | 27.26 | 1.073 | - | - | 200 |
| | HD Ana.* | 1920 | 1080 | 1920 | 1080 | 1920 | 2160 | 15.84 | 17.82 | 0.624 | 0.702 | 23.84 | 0.939 | - | - | 120 |
| | 2K | 2048 | 1152 | 2048 | 1152 | 2868 | 1612 | 23.66 | 13.30 | 0.932 | 0.524 | 27.14 | 1.069 | - | - | 200 |
| | 2.39:1 2K Ana.* | 2048 | 858 | 2048 | 858 | 2560 | 2145 | 21.12 | 17.70 | 0.831 | 0.697 | 27.55 | 1.085 | - | - | 120 |
| | 4:3 2.8K* | 2880 | 2160 | 2944 ⁵ | 2160 | 2880 | 2160 | 23.76 | 17.82 | 0.935 | 0.702 | 29.70 | 1.169 | - | - | 50 |
| MXF/ARRIRAW | 3.2K | 3200 | 1800 | 3200 | 1800 | 3200 | 1800 | 26.40 | 14.85 | 1.039 | 0.585 | 30.29 | 1.193 | - | - | 60 |
| | 4K UHD | 3840 | 2160 | 3840 | 2160 | 3200 | 1800 | 26.40 | 14.85 | 1.039 | 0.585 | 30.29 | 1.193 | - | - | 60 |
| | 16:9 HD Ana. (OG 3.4K)* | 1920 | 2160 | 1920 | 2160 | 3424 ⁵ | 2202 | 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)* | 2560 | 2145 | 2560 | 2145 | 3424 ⁵ | 2202 | 21.12 | 17.70 | 0.831 | 0.697 | 27.55 | 1.085 | 11.5 | 11,529,544 | 30 |
| | 2.8K | 2880 | 1620 | 2880 | 1620 | 2880 | 2160 | 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)* | 2880 | 2160 | 2880 | 2160 | 3424 ⁵ | 2202 | 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 | |

⁵ clip padding: 32px left and right

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

ALEXA 65

SUP 4.0

| Format | Resolution | Active Image Resolution (pixels) | | Container Resolution (pixels) | | Sensor Resolution (photosites used) | | Sensor Image Area (mm) | | Sensor Image Area (inch) | | Sensor Diameter (mm) | Sensor Diameter (inch) | Frame Size in MB | Frame Size in Byte | Maximum Possible Speed |
|---------|--------------|----------------------------------|------|-------------------------------|------|-------------------------------------|------|------------------------|-------|--------------------------|-------|----------------------|------------------------|------------------|--------------------|------------------------|
| | | | | | | | | | | | | | | | | |
| 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

| Format | Resolution | Active Image Resolution (pixels) | | Container Resolution (pixels) | | Sensor Resolution (photosites used) | | Sensor Image Area (mm) | | Sensor Image Area (inch) | | Sensor Diameter (mm) | Sensor Diameter (inch) | Frame Size in MB | Frame Size in Byte | Maximum Possible Speed |
|----------------|------------------|----------------------------------|------|-------------------------------|------|-------------------------------------|------|------------------------|-------|--------------------------|-------|----------------------|------------------------|------------------|--------------------|------------------------|
| | | | | | | | | | | | | | | | | |
| 16:9 mode | | | | | | | | | | | | | | | | |
| DNxHD | HD (1920x1080) | 1920 | 1080 | 1920 | 1080 | 2880 | 1620 | 23.76 | 13.37 | 0.935 | 0.526 | 27.26 | 1.073 | - | - | 120 ¹ |
| ProRes | HD (1920x1080) | 1920 | 1080 | 1920 | 1080 | 2880 | 1620 | 23.76 | 13.37 | 0.935 | 0.526 | 27.26 | 1.073 | - | - | 120 ¹ |
| | 2K (2048x1152) | 2048 | 1152 | 2048 | 1152 | 2868 | 1614 | 23.66 | 13.32 | 0.932 | 0.524 | 27.15 | 1.069 | - | - | 60 |
| | 3.2K (3164x1778) | 3164 | 1778 | 3200 ¹ | 1782 | 3168 | 1782 | 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) | 2048 | 1536 | 2048 | 1536 | 2868 | 2152 | 23.66 | 17.75 | 0.932 | 0.699 | 29.58 | 1.165 | - | - | 48 |
| ARRIRAW | Cropped | 2578 | 2160 | 2592 | 2160 | 2592 | 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 | 3414 | 2198 | 3424 | 2202 | 3424 | 2202 | 28.25 | 18.17 | 1.112 | 0.715 | 33.59 | 1.322 | 11.3 | 11,319,712 | 75 |

¹ clip padding: 18px left and right; 2px top and bottom

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

ALEXA®

SUP 11.1

| Format | Resolution | Active Image Resolution (pixels) | | Container Resolution (pixels) | | Sensor Resolution (photosites used) | | Sensor Image Area (mm) | | Sensor Image Area (inch) | | Sensor Diameter (mm) | Sensor Diameter (inch) | Frame Size in MB | Frame Size in Byte | Maximum Possible Speed |
|--------------------|----------------|----------------------------------|------|-------------------------------|------|-------------------------------------|------|------------------------|-------|--------------------------|-------|----------------------|------------------------|------------------|--------------------|------------------------|
| | | | | | | | | | | | | | | | | |
| 16:9 mode | | | | | | | | | | | | | | | | |
| DNxHD | HD (1920x1080) | 1920 | 1080 | 1920 | 1080 | 2880 | 1620 | 23.76 | 13.37 | 0.935 | 0.526 | 27.26 | 1.073 | - | - | 55 |
| ProRes | HD (1920x1080) | 1920 | 1080 | 1920 | 1080 | 2880 | 1620 | 23.76 | 13.37 | 0.935 | 0.526 | 27.26 | 1.073 | - | - | 120 ¹ |
| | 2K (2048x1152) | 2048 | 1152 | 2048 | 1152 | 2868 | 1614 | 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) | 2048 | 1536 | 2048 | 1536 | 2868 | 2152 | 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 |

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