

# ASPECT RATIO CHEAT SHEET

## v2.4

Finding the right resolution for a specific aspect ratio can be challenging. To simplify this, we've created a cheat sheet listing resolutions you can use when exporting content for various aspect ratios and frame sizes. If you notice any errors or have suggestions for updates, please let us know.

Note: Resolutions are rounded down to the nearest even number to ensure compatibility with video encoding standards. This prevents issues like partial pixels or problems with field encoding.

The latest version of this cheat sheet is available at [unravel.com.au/aspect-ratio-cheat-sheet](http://unravel.com.au/aspect-ratio-cheat-sheet)

### Cinema DCP 4K

Aspect Ratio	Resolution
Flat (1.85)	3996 x 2160
Scope (2.39)	4096 x 1716
Full Container (1.90)	4096 x 2160

### Cinema DCP 2K

Aspect Ratio	Resolution
Flat (1.85)	1998 x 1080
Scope (2.39)	2048 x 858
Full Container (1.90)	2048 x 1080

### 8K

Aspect Ratio	Resolution
1.33 (4:3)	8192 x 6144
1.37 (Academy)	8192 x 5956
1.5 (3:2)	8192 x 5460
1.66 (5:3)	8192 x 4914
1.78 (16:9)	8192 x 4608
1.85	8192 x 4428
1.90	8192 x 4320
2.00	8192 x 4096
2.35	8192 x 3486
2.37	8192 x 3456
2.39 (DCI Scope)	8192 x 3432
2.40	8192 x 3412
2.44	8192 x 3356

### 8K - UHD

Aspect Ratio	Resolution
1.33 (4:3)	7680 x 5760
1.37 (Academy)	7680 x 5584
1.5 (3:2)	7680 x 5120
1.66 (5:3)	7680 x 4608
1.78 (16:9)	7680 x 4320
1.85	7680 x 4150
1.90	7680 x 4042
2.00	7680 x 3840
2.35	7680 x 3268
2.37	7680 x 3240
2.39 (DCI Scope)	7680 x 3216
2.40	7680 x 3200
2.44	7680 x 3146

### 6K

Aspect Ratio	Resolution
1.33 (4:3)	6144 x 4608
1.37 (Academy)	6144 x 4468
1.5 (3:2)	6144 x 4096
1.66 (5:3)	6144 x 3686
1.78 (16:9)	6144 x 3456
1.85	6144 x 3320
1.90	6144 x 3232
2.00	6144 x 3072
2.35	6144 x 2614
2.37	6144 x 2592
2.39 (DCI Scope)	6144 x 2574
2.40	6144 x 2560
2.44	6144 x 2518

### 5K

Aspect Ratio	Resolution
1.33 (4:3)	5120 x 3840
1.37 (Academy)	5120 x 3722
1.5 (3:2)	5120 x 3412
1.66 (5:3)	5120 x 3072
1.78 (16:9)	5120 x 2880
1.85	5120 x 2766
1.90	5120 x 2700
2.00	5120 x 2560
2.35	5120 x 2178
2.37	5120 x 2160
2.39 (DCI Scope)	5120 x 2144
2.40	5120 x 2132
2.44	5120 x 2098

### 4K

Aspect Ratio	Resolution
1.33 (4:3)	4096 x 3072
1.37 (Academy)	4096 x 2978
1.5 (3:2)	4096 x 2730
1.66 (5:3)	4096 x 2456
1.78 (16:9)	4096 x 2304
1.85	4096 x 2214
1.90	4096 x 2160
2.00	4096 x 2048
2.35	4096 x 1742
2.37	4096 x 1728
2.39 (DCI Scope)	4096 x 1716
2.40	4096 x 1706
2.44	4096 x 1678

### 4K - UHD

Aspect Ratio	Resolution
1.33 (4:3)	3840 x 2880
1.37 (Academy)	3840 x 2792
1.5 (3:2)	3840 x 2560
1.66 (5:3)	3840 x 2304
1.78 (16:9)	3840 x 2160
1.85	3840 x 2074
1.90	3840 x 2020
2.00	3840 x 1920
2.35	3840 x 1634
2.37	3840 x 1620
2.39 (DCI Scope)	3840 x 1608
2.40	3840 x 1600
2.44	3840 x 1572

### 3K

Aspect Ratio	Resolution
1.33 (4:3)	3072 x 2304
1.37 (Academy)	3072 x 2234
1.5 (3:2)	3072 x 2048
1.66 (5:3)	3072 x 1842
1.78 (16:9)	3072 x 1728
1.85	3072 x 1660
1.90	3072 x 1620
2.00	3072 x 1536
2.35	3072 x 1306
2.37	3072 x 1296
2.39 (DCI Scope)	3072 x 1286
2.40	3072 x 1280
2.44	3072 x 1258

### 2K

Aspect Ratio	Resolution
1.33 (4:3)	2048 x 1536
1.37 (Academy)	2048 x 1488
1.5 (3:2)	2048 x 1364
1.66 (5:3)	2048 x 1228
1.78 (16:9)	2048 x 1152
1.85	2048 x 1106
1.90	2048 x 1078
2.00	2048 x 1024
2.35	2048 x 870
2.37	2048 x 864
2.39 (DCI Scope)	2048 x 858
2.40	2048 x 852
2.44	2048 x 838

### 1080p

Aspect Ratio	Resolution
1.33 (4:3)	1920 x 1440
1.37 (Academy)	1920 x 1396
1.5 (3:2)	1920 x 1280
1.66 (5:3)	1920 x 1152
1.78 (16:9)	1920 x 1080
1.85	1920 x 1036
1.90	1920 x 1010
2.00	1920 x 960
2.35	1920 x 816
2.37	1920 x 810
2.39 (DCI Scope)	1920 x 804
2.40 (Blu-Ray Scope)	1920 x 800
2.44	1920 x 786

### 720p

Aspect Ratio	Resolution
1.33 (4:3)	1280 x 962
1.37 (Academy)	1280 x 930
1.5 (3:2)	1280 x 852
1.66 (5:3)	1280 x 768
1.78 (16:9)	1280 x 720
1.85	1280 x 690
1.90	1280 x 672
2.00	1280 x 640
2.35	1280 x 544
2.37	1280 x 540
2.39 (DCI Scope)	1280 x 536
2.40 (Blu-Ray Scope)	1280 x 532
2.44	1280 x 524

### 576p (PAL Standard Definition)

Aspect Ratio	Resolution (Square Pixels 1.0)	Resolution (PAL Widescreen 1.46 Pixel Aspect Ratio)	Resolution (PAL DV 1.09 Pixel Aspect Ratio)
1.33 (4:3)	768 x 576	--	720 x 576
1.78 (16:9)	1024 x 576	720 x 576	--

### 480p (NTSC DV SD)

Aspect Ratio	Resolution (Square Pixels 1.0)	Resolution (PAL Widescreen 1.46 Pixel Aspect Ratio)	Resolution (PAL DV 1.09 Pixel Aspect Ratio)
1.33 (4:3)	640 x 480	--	720 x 480
1.78 (16:9)	853 x 480	720 x 480	--

### 480p (NTSC D1 SD)

Aspect Ratio	Resolution (Square Pixels 1.0)	Resolution (PAL Widescreen 1.46 Pixel Aspect Ratio)	Resolution (PAL DV 1.09 Pixel Aspect Ratio)
1.33 (4:3)	648 x 486	--	720 x 486
1.78 (16:9)	864 x 486	720 x 486	--

## A NOTE ON SCOPE ASPECT RATIOS

You'll often hear people mention 2.35:1, 2.39:1, and 2.40:1, but today, they're usually referring to 2.39:1.

- 2.35:1 was common in films before 1970.
- 2.40:1 is just 2.39:1 rounded up incorrectly.
- 2.39:1 is the modern standard, often tied to Digital Cinema Scope (calculated as  $2048/858 = 2.39$ ).

Sometimes, though, 2.40:1 is specifically required—like for Blu-Ray scope content (1920 x 800). Because of this, we've included all three variants in this document.

**Our Advice:** For anything between 2.35:1 and 2.44:1, check with your delivery destination (e.g., Blu-Ray, 2K DCP at 2048 x 858, 4K DCP at 4096 x 1716) and use their exact specs. It's better to match their expectations than to argue about what's "correct."

We base our 2.39:1 calculations in this document on the cinema-standard Scope ratio (2048/858). This keeps things practical, especially if you're targeting cinematic delivery.