papirfly

Weight Optimisation Guide

TACTIC Display Ads

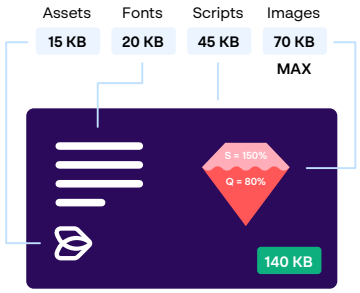
How does weight optimisation work?

HTML ads combine scripts, texts, images and videos to create dynamic and interactive advertising content. Ads are styled with CSS for layout and design and enhanced with JavaScript for interactivity and animation.

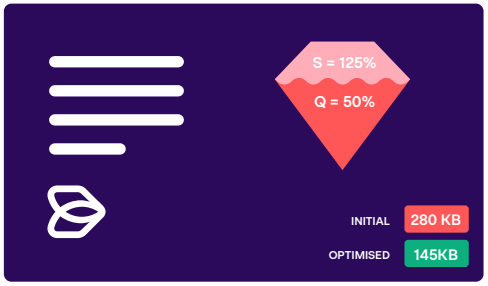
As the resolution of the display ad increases, so does the size of the raster graphics within it, leading to an increase in the total ad package weight. The template effectively compresses text and vector elements, leaving little room for further optimisation. Therefore, the only remaining method to reduce the package weight is to decrease the image quality and/or density.

The most efficient way to meet strict advertising inventory requirements is to **progressively decrease the quality and density of the raster graphics**, balancing image weight across a set of display ad sizes.

Larger ad resolution + lower image **quality** + lower image **density** = **reduced package weight**



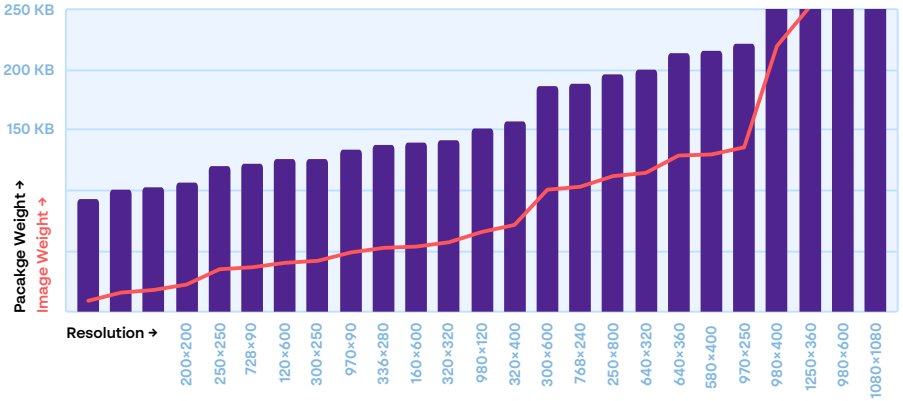
Ad resolution:	480×240
Dry ad weight:	80 KB
Image quality:	80%
Image density:	150%
Image resolution:	720×360
Image weight:	**60 KB**



	Initial →	Optimised
Ad resolution:		960×480
Dry ad weight:		80 KB
Image quality:	80%	50%
Image density:	150%	100%
Image resolution:	1440×720	960×480
Image weight:	200 KB	**65 KB**

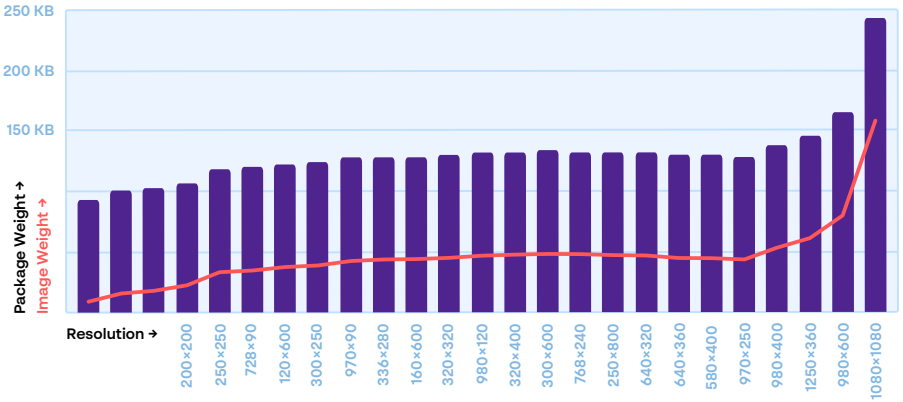
Non-optimised display ads

The quality and density of the images are **consistent** across all sizes. The weight growth is linearly dependent on the resolutions of the ad.



Optimised display ads

The quality and density of the images are **progressively adjusted** to reduce the weight of the display ad in larger sizes. The larger the resolution, the greater the optimisation value.t

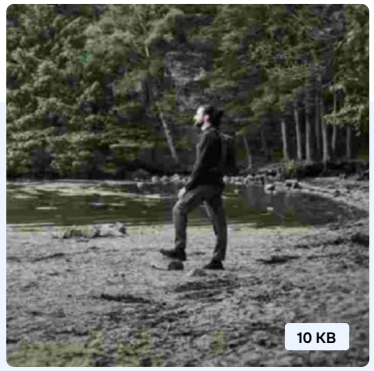


What is the optimal image quality?

Every image used in the display ad undergoes processing to reduce the overall package size.

If you're using multiple background images in the ad and simultaneously facing strict weight restrictions from the publisher, you'll need to **find a compromise between quality and package size**. You have full control over the quality output with several controllers available in the application.

Examples of image processor output across image quality and density configurations

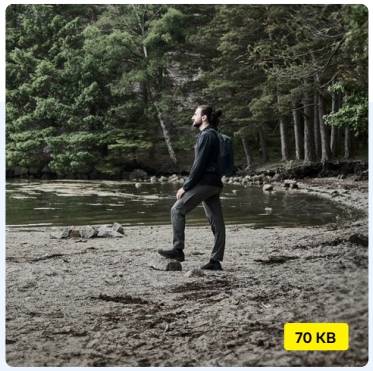


Quality:	**20%**
Density:	100%
Sharpness:	0

Low Quality

Not recommended for use.

Noticeable artifacts with significant color loss. The image is blurred and unappealing, and its file size is the smallest possible.

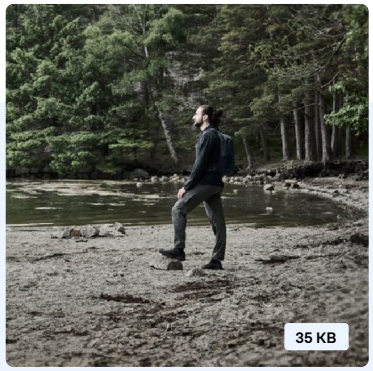


Quality:	**100%**
Density:	100%
Sharpness:	0

Maximum Quality

Not recommended for use.

There's no noticeable difference in appearance when compared to the High Quality variant. However, the file size is significantly larger.

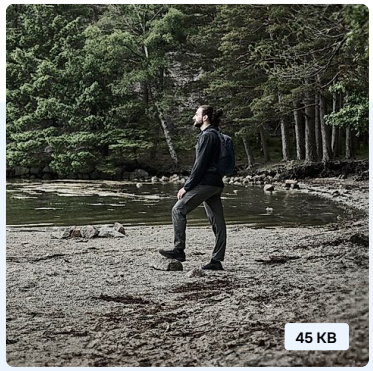


Quality:	80%
Density:	100%
Sharpness:	0

High Quality

Default quality configuration. Fits up to **3 images** within 150 KB package weight restriction.

This configuration strikes the best balance between quality and file size. The image retains its quality without any losses, has moderate sharpness, and the weight is acceptable.

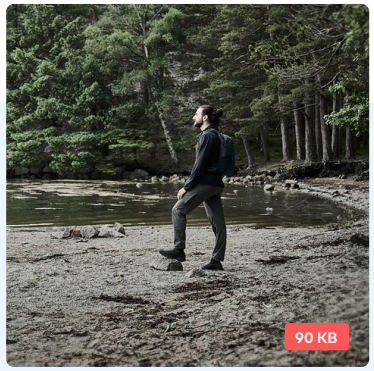


Quality:	80%
Density:	100%
Sharpness:	**1**

High Quality + Sharpness

Recommended for scenarios where **heightened sharpness** is a priority. Fits up to **2 images** within 150 KB package weight restriction.

The image's sharpness is enhanced using a filter, making it appear much sharper. However, this also increases its file size.



Quality:	80%
Density:	**200%**
Sharpness:	0

High Quality + Double Density

Recommended when **exceptional quality** is a necessity. Fits **1 image** within 150 KB package weight restriction.

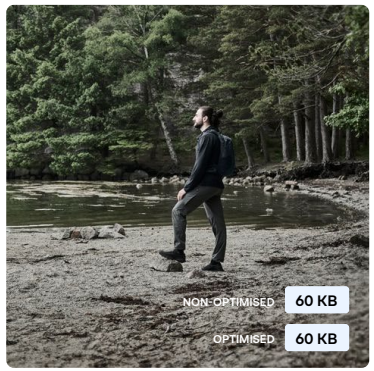
The image's sharpness naturally increases due to its higher resolution and detail density, resulting in a larger file size.

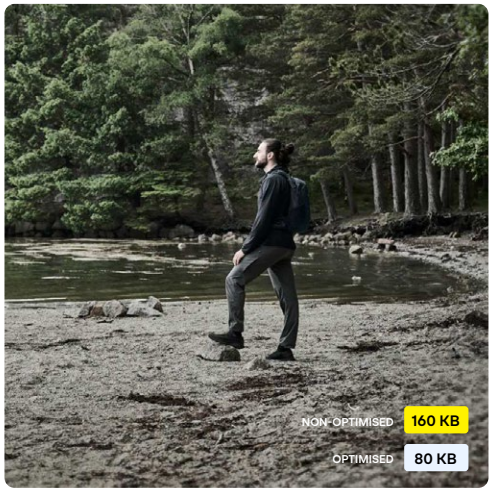
What is progressive weight optimisation?

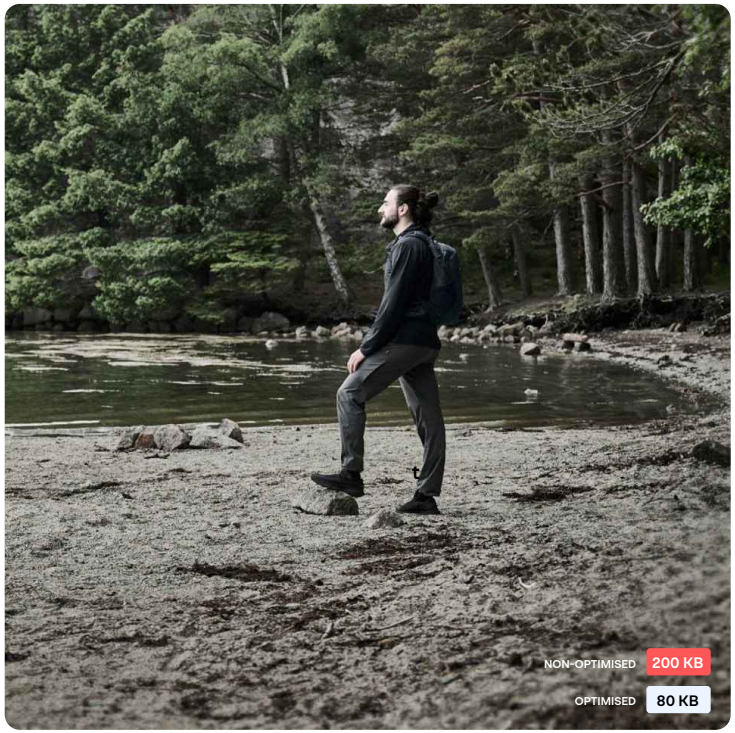
If you have numerous sizes in your display ad set, individually adjusting the image quality for each can be time-consuming. To save time, use the optimisation feature to reduce the package size across all sizes at once.

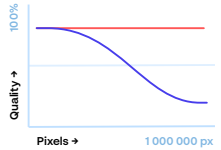
Progressive weight optimisation: Assists in **balancing the display ad weight** **across multiple sizes at once by progressively reducing quality and/or density** for larger image resolutions. The higher the optimisation value, the more compression is applied to larger images.

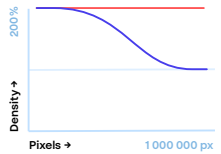
Examples of image quality configurations

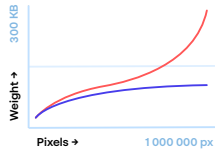












		280 KB	320 KB
		100 KB	100 KB
Resolution:	320×320	560×560	640×640	800×800	920×920
Pixels:	~ 100 000	~ 300 000	~ 400 000	~ 650 000	~ 850 000
Initial quality:	80%	80%	80%	80%	80%
No need to optimise image		**Image should be slightly optimised**		**Image should be noticeably optimised to lower ad package weight**	
Adjusted quality:	80%	**Adjusted quality:**	**45%**	**Adjusted quality:**	**35%**	**25%**	**20%**
Save on weight:	0%	Save on weight:	~ 200%	Save on weight:	~ 250%	~ 280%	~ 320%

What is automatic weight alignment?

The automatic weight alignment feature will help you fit your display ad package size within advertising inventory requirements. If you need to slightly reduce an ad package size, this feature will automatically handle it for you.

Automatic weight alignment: This feature assists in reducing the weight of the display ad by decreasing image quality step by step, until the total ad package size is less than the specified value. **It is effective for reductions up to 25% of the initial package size.**

Simple display ads

One or two frames

No need to align weight

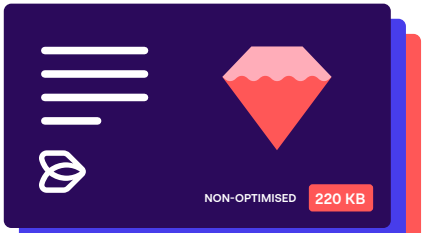
Initial ad package fits the 150KB weight limit.

Needs modarate alignment to meet requirements

The initial ad package is automatically optimised by about 10% to fit the 150KB weight limit.

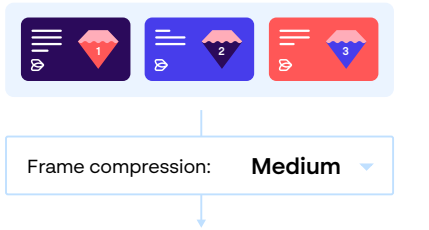
Complex display ads

More than two frames



Too many images in the frame sequence to meet requirements

There are too many images to meet the 150KB weight limit, even with the lowest quality possible.



Reduction in the number of images required to meet requirements

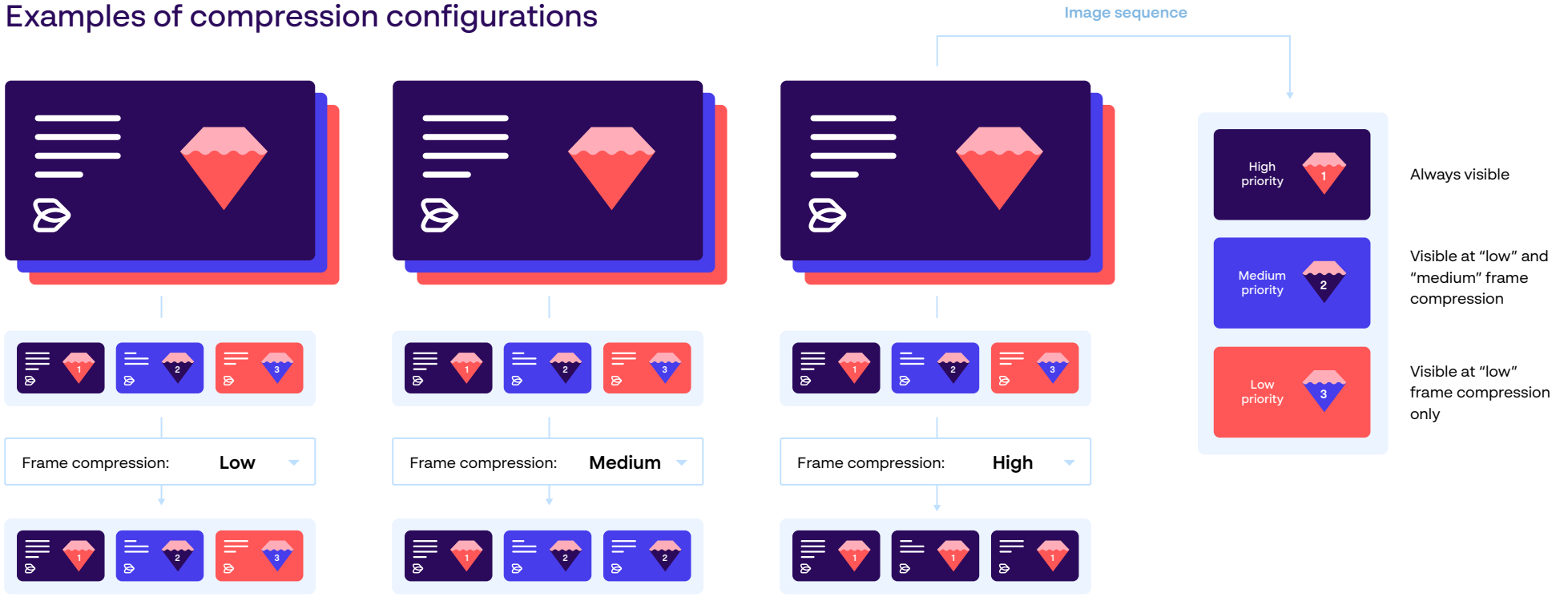
The ad package fits the 150KB weight limit when using 2 background images instead of 3.

What is a frame compression tool?

If your display ad has many frames and you're having trouble fitting within the ad package weight requirements, the frame compression tool can help you reduce the number of background images without removing actual frames from the animation sequence.

Frame compression tool: This feature assists in reducing the number of images in the sequence without deleting the actual frames. Images that are not prioritised will be replaced with those marked as higher priority. **This ultimately allows for a reduction in the number of images loaded into the banner, significantly reducing the display ad package weight.**

Examples of compression configurations



No modifications to the sequence

Display ad package weight will most likely exceed 150KB.

One of the three images replaced

The image with "low" priority will be replaced by the image that has "medium" priority. The overall ad package weight will be moderately reduced.

Two of the three images replaced

The "low" and "medium" priority images will be replaced by the image that has "high" priority. The overall ad package weight will be significantly reduced.

What are the most common practices?

The table below demonstrates average display ad weight and image optimisation values according to the resolution and the number of frames in the sequence.

Items marked in yellow can be automatically fitted into the 150KB ad package weight limit using **the automatic weight alignment tool**.

Items marked in red cannot fit into the 150KB weight limit without adjustments to the display ad sequence, **the frame compression tool** must be used.

Ad size	Pixels	Image quality	Image density	Image resolution	Image weight	Ad weight	Ad weight	Ad Weight
320×50	16 000	80%	200%	640×100	10 KB	**90 KB**	**100 KB**	**134 KB**
320×100	32 000	80%	200%	640×200	18 KB	**98 KB**	**116 KB**	**134 KB**
250×250	62 500	80%	190%	475×475	30 KB	**110 KB**	**140 KB**	**170 KB**
728×90	65 520	80%	189%	1383×171	35 KB	**115 KB**	**150 KB**	**185 KB**
300×250	75 000	80%	186%	558×465	39 KB	**119 KB**	**158 KB**	**197 KB**
970×90	87 300	78%	179%	1736×161	40 KB	**120 KB**	**160 KB**	**200 KB**
160×600	96 000	76%	175%	280×1050	41 KB	**121 KB**	**162 KB**	**203 KB**
980×120	117 600	70%	166%	1626×200	42 KB	**122 KB**	**164 KB**	**206 KB**
300×600	180 000	53%	138%	414×828	42 KB	**121 KB**	**164 KB**	**206 KB**
640×320	204 800	47%	127%	813×406	42 KB	**122 KB**	**164 KB**	**206 KB**
580×400	232 000	39%	115%	667×460	42 KB	**122 KB**	**164 KB**	**206 KB**
970×250	242 500	37%	110%	1067×275	42 KB	**122 KB**	**164 KB**	**206 KB**
980×600	588 000	16%	100%	980×600	53 KB	**133 KB**	**186 KB**	**239 KB**
1080×1080	1 166 400	16%	100%	1080×1080	104 KB	**192 KB**	**288 KB**	**392 KB**

In this example image **quality optimisation ratio** is set to **8**, image **density optimisation ratio** is set to **8**. All the values in the table are indicative and may vary depending on the specific display ad.
Display ad weight calculator: https://docs.google.com/spreadsheets/d/1A-cYnLaLnOQEKYXFuk2BKkCqk83J-_pg-PFrrjUUajM/