

# PHOTOSHOP IMAGE SIZE

Image size can be quite confusing at first, but once the numbers and terms are understood it all becomes simple and straight forward.

The first term is **Pixel Dimensions**. This relates to the image size, in pixels, as captured by the camera. A typical file from a 12,000,000 pixel, 12mb, camera will be 4288 pixels by 2848 pixels, which in simple terms means that the image is made up of small dots (pixels) which is 4288 dots long and 2848 dots high. If you multiply 4288 X 2848 to calculate the total number of dots you get a figure of 12,212,224 which equates to the 12mb file size.

The **File Size**, in this case 12mb, will indicate how much space it will take up when stored on a memory card. If the file is saved as a JPEG it will become smaller as the JPEG file type will compress it.

It is worth noting that when the file is opened in Photoshop, its size will increase by approximately three times. This is because the colour information will be turned into three Channels (Red, Green and Blue). Therefore our original 12mb file will become approximately 34mb.

At this stage we know the dimensions of the file, **4288 X 2848**, but at what size can it be printed out? This is set by the **Resolution** which will determine the **Document Size**.

The **Resolution** in pixels/inch will determine the print quality and size. The higher the resolution the better quality the print will be. For the highest quality the resolution should be 300 pixels/inch, which means every linear inch of the print consists of 300 pixels. Printing at a resolution of 300 pixels/inch will set the **Document Size**. The document size is how large the print will be. In this case if we printed out our 4288 X 2848 at 300 pixels/inch the size of the print will be 14" by 9.5". It is not worth going any higher than 300 pixels/inch as the extra detail will not be seen.

If a larger print is to be made then the resolution will have to be reduced, however if the resolution is reduced too much then print quality will decline. As a guide, the lowest resolution for acceptable print quality is 180 pixels/inch.

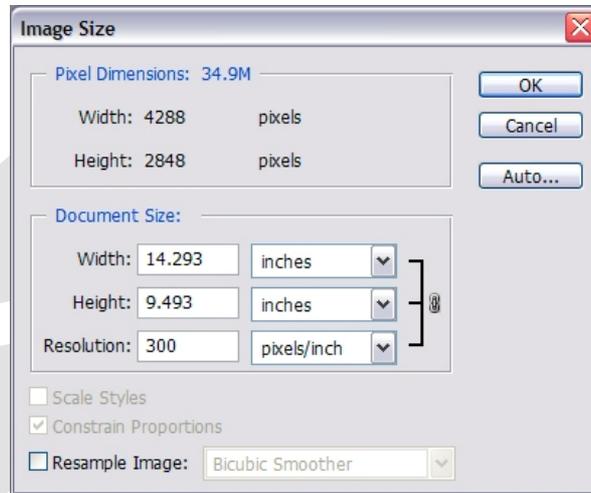
## Resolution and Document Size

Our 12mp 4288 pixel X 2848 pixel will print out as the following:

<b>Resolution</b>	<b>Size in inches</b>	<b>"A" Size (aprox)</b>
300 pixels/inch	14 X 9.5	A4
240 pixels/inch	18 X 12	A3
180 pixels/inch	24 X 16	A2

**In Photoshop these details can be found and set in Image Size.**

Just follow the path: **Image > Image Size** This will show the following dialogue box:



This box contains all the information previously referred to in the introduction.

At the top under **Pixel Dimensions** the file size is shown (34.9mb) along with the Width and Height in Pixels.

Below this the **Document Size** can be set. Working in inches or cm, this can be changed from the drop down, the Document size can be set in **pixels/inch** by typing in the required figure into the **Resolution box**. As can be seen above, at a **Resolution of 300 pixels/inch** the print will be 14.3" X 9.5". If you wanted to size the image to print on to A3 media (16.5" X 12"), type 16 (which will allow for a small border for mounting) into the **Width** box and the **Height** and **Resolution** will be calculated. After doing this check that the Resolution remains above 180 to ensure an acceptable print quality.

**Note that:**

- Scale Styles** should be **Unticked**
- Constrain Proportions** should be **Ticked**
- Resample Image** should be **Unticked**

