

*Monique Richter*

# Perfect snapshot

Can apple live up to its new camera expectations?



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Apples new iPhone Xs promises many new things surrounding its brand new camera software. The iPhone Xs introduces a **Dual camera system** that includes 2 new lenses, a 12Mp wide angle lens and a 12Mp telephoto lens. With the introduction of these lenses, photography on mobile devices is taken to all new levels. An innovative dual camera system integrates the ISP, Neural engine and advanced algorithms to unlock new creative possibilities and help capture amazing photos.

Apples promises with the new iPhone camera include a dual lens 12 megapixel camera made up of a wide angle lens with aperture of f/1.8 and a telephoto lens with f/2.8. The iPhone Xs sensor is larger than the iPhone X and measures 1.4µm. The rear camera provides a 2x optical zoom, dual optical image stabilisation (OIS), smart HDR, portrait mode, 4K video at 60fps. The front camera provides a 7 megapixel wide angle lens with f/2.2, 1080p at 60fps and portrait mode. With the iPhone Xs new telephoto lens, you can now zoom in 10x as close to an object that you would have been able



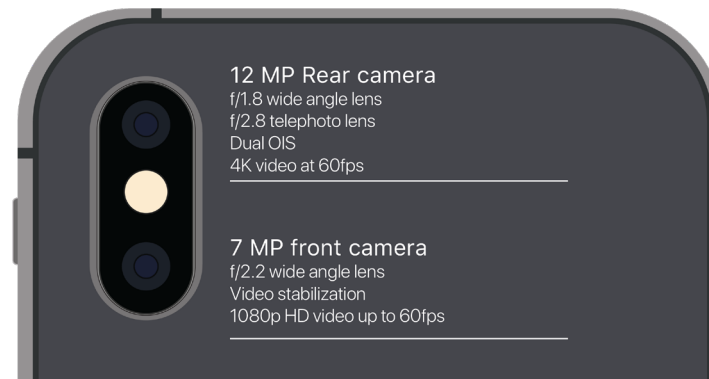
to do so on previous iPhone models. This opens up a whole new range of possibilities for iPhone users who may prefer an iPhone to a DSLR camera. Although the image quality does drop when zoomed in, the image quality is still far higher than those we have seen in the older iPhones. The new wide angle lens allows users to capture more subject within the frame than before. A wide angle lens allows you to capture more within the frame than a standard lens. When compared to the bigger iPhone XS Max, the iPhone Xs although smaller in size is found to be easier to use. The iPhone Xs is quicker to pull out of pocket and stabilise the camera to take a clear photo, then the iPhone XS Max. Along with the improved camera quality comes a **4k 60fps video** with wider stereo playback. The iPhone Xs shoots higher quality video than any other smartphone on the market and has better low light quality with extended dynamic range in video up to 30fps. The 60fps allows a smoother video than 30fps as the camera is shooting at 2x the rate.

The iPhone Xs comes with smart HDR technologies which include faster sensors, enhances ISP and advanced algorithms to bring more highlight and shadow detail to your photos. **Smart HDR** works by combining 9 photos taken in succession at differing exposures, then uses internal hardware and software to analyze photos, take the best parts of each and combines them as one single image. The result is a perfectly created image with balanced highlights and no bad shadows. The smart HDR combined with zero shutter lag allows you to freeze a moment and adds more highlight and shadow detail, resulting in sharper action shots. Apples iPhone Xs comes with **facial recognition** when uses portrait mode. The neural engine uses machine learning to analyse data from the cameras sensor and quickly distinguish faces within the frame. Also included in portrait mode is a whole new range of settings and portrait modes. When opening the camera, tap portrait mode and simply swipe across to try the different lighting effects.

The improved camera **sensor** features deeper and larger pixels to improve image fidelity and allow more light to hit the sensor to create more low-light details. This feature improves your night time photography and allows you to capture perfect night shots.

One of the new introduced features is the adjustable **depth of field**, which allows you to change the depth of field to blur the background after taking a photo. Depth of field is the zone of sharpness within a photo that will appear in focus. In some photos the zone of focus may be small (shallow

depth of field) and in others it may be large (deep depth of field). Aperture refers to the access given to light from the lens to the cameras sensors and is what controls depth of field. The size of aperture controls the amount of light entering the lens. Shallow depth of field allows your subject to stand out from the background so is good for portrait, sport and wildlife photography. Deeper depth of field is great for landscape photography and this combined with the iPhones wide angle lens means you can get a great photo with maximum amount of detail.



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Large aperture = Small f-number = Shallow (small) depth of field  
Small aperture = Large f-number = Deeper (large) depth of field

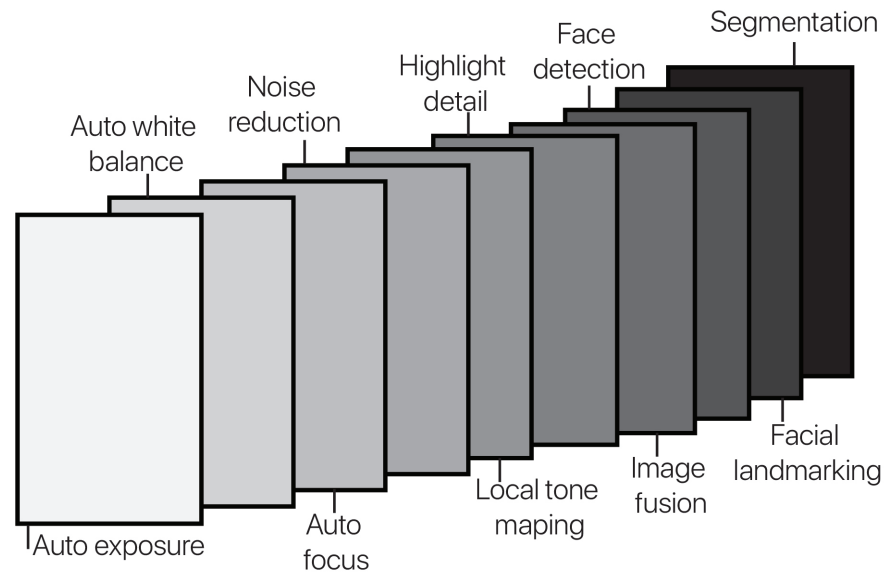
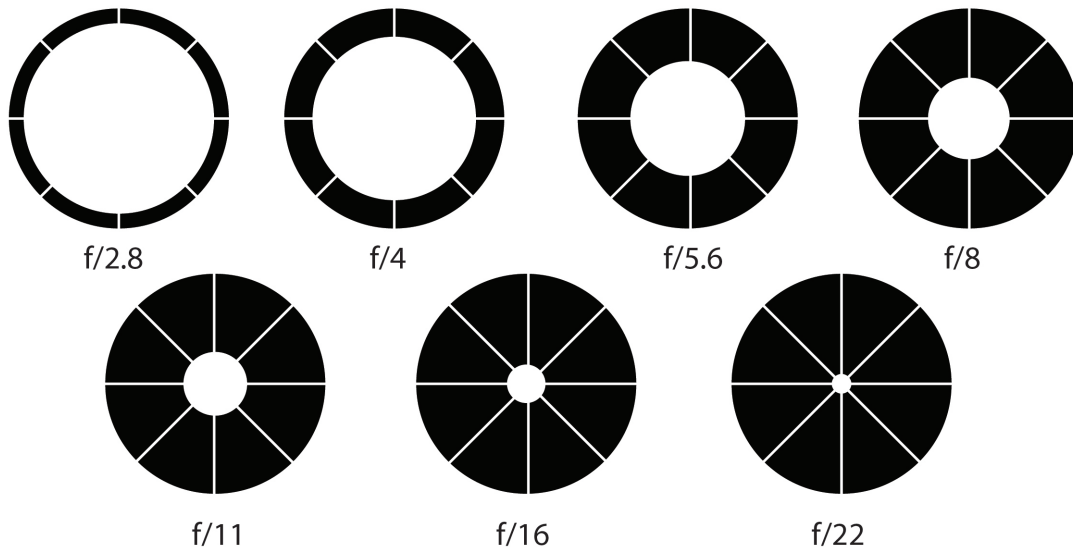


Image signal processor  
and Neutral Engine