

Technologies Explained – IXUS 300 HS

EMBARGO: 11th May 2010, 05:00 BST

10.0 MP High Sensitivity CMOS sensor

With 10 Megapixels of resolution, it's possible to capture subjects in fine detail and print up to size A3+. This back-illuminated sensor has been designed to let more light enter its photo-cells, increasing its sensitivity in low light conditions. The improved light receptivity of the sensor provides image data with reduced noise, accurately reproducing the ambience of dimly-lit environments.

f/2.0, 28mm, 3.8x wide-angle lens

This genuine Canon lens features a wide f/2.0 maximum aperture, allowing twice as much light on to the sensor as a regular f/2.8 lens. This makes it possible to avoid blurred images in darker conditions by using shutter speeds that are faster to those achieved by most other cameras. This wider aperture also allows for a shallower depth of field effect to be obtained that can be used for more artistic compositions.

HS System

The IXUS 300 HS is the first Canon compact camera to feature the new HS System, which represents a powerful combination of a high sensitivity sensor and high-performance DIGIC 4 picture processing. Designed to provide excellent image quality and advanced low light performance, the HS System implementation in this model can produce results with up to 60% less noise when compared with previous models.

The advanced performance offered by the HS System has resulted in significant improvements in the camera's capabilities:

- **Wider ISO range** – Capable of significant noise reductions, the HS System can leverage the improved performance of its higher ISO settings in order to capture the ambience of any scene with exceptional image quality. The maximum ISO speed employed at full resolution has been raised to ISO 3200 (ISO 1600 in previous comparable products) while Auto mode now has an extended ISO range up to ISO 1600, enabling users to take pictures using available light without having to manually extend the ISO speed.
- **Low Light** – The HS System truly excels in low light conditions and is able to preserve the atmosphere of the moment in dark scenes. Common low light problems such as capturing well exposed subjects against almost invisible,

dark, night-time backgrounds or capturing blurred subjects due to slower shutter speeds can now easily be conquered. The ISO range is further extended using Low Light mode, reducing camera shake and subject blur in even darker conditions. Shooting at a reduced 2.5 Megapixel resolution, the camera chooses from an ISO speed between 125 and 6400, allowing users to capture a scene as they see it. The IXUS 300 HS can also shoot continuously at a rapid 6.0 shots per second in Low Light mode.

- **Dynamic Range** – The increased sensitivity of the HS System allows it to capture a wider dynamic range with greater variation in brightness when compared to the results of previous models.
- **High Speed** – The HS System, combined with a CMOS sensor, powers this camera's high speed functions. The IXUS 300 HS is able to continuously shoot up to 3.7 shots per second at full 10.0MP resolution, or up to 8.4 shots per second in High Speed Burst mode at 2.5MP resolution. A Super Slow Motion Movie mode is also supported; capturing movies at 240 frames per second (fps) and playing images back at 30fps for a spectacular slow motion effect. The bundled software also supports multi-speed playback, allowing the footage to be viewed both at real or slow motion speed.

DIGIC 4 Processor

Canon's DIGIC 4 (Digital Imaging Core) processor manages all of the camera's primary functions to optimise operating efficiency. Advanced image processing algorithms deliver superb image detail and colour reproduction with accurate white balance and minimal noise. High speed processing results in outstanding responsiveness, rapid auto focus and extended continuous shooting ability.

Optical Image Stabilizer (3-stops)

Canon's highly-effective optical Image Stabilizer (IS) technology prevents image blur by dramatically reducing the effects of camera shake. In situations where image blur due to camera shake is more likely – such as in darker conditions or when shooting with the zoom extended – the optical Image Stabilizer can help images remain sharp through minute vibration gyros which detect camera movement caused by hand shake. These signals are processed by a single-chip IS controller, which discriminates between hand shake and intentional camera movements. Signals are then sent to the IS unit, which

moves one of the lens elements accordingly to re-align the light rays and cancel out the effects of camera shake.

Smart Auto with Scene Detection Technology

Smart Auto mode uses Scene Detection Technology to determine the shooting scene by analysing subject brightness, contrast, distance and overall hue. The camera then selects the scene type from 22 variables, applying the best settings for optimum results. In Smart Auto mode, a colour icon indicating the type of scene detected – and the lighting conditions of the scene – is shown on the LCD monitor. Smart Auto also includes i-Contrast technology, which optimises the dynamic range (brightness variation) of each shot by reducing underexposure (hidden detail in dark areas) and preventing overexposure (washed out highlights).

Smart Flash Exposure

The Smart Flash Exposure feature intelligently controls the power and usage of the onboard flash to ensure natural results in a variety of conditions. By using focusing distance as well as shooting scene information, an optimum balance between the ambient light of the scene and flash power is achieved. When shooting in very bright conditions, shadows which can appear on a subject's face are detected by the camera and flash can be used to eliminate them. When shooting at close distances, overexposure is avoided by sensing how reflective the subject is, as well as reducing the flash power to compensate for the close shooting distance.

Face Detection Technology

Face Detection Technology makes it easier than ever to produce superb people shots. This advanced system quickly and accurately detects faces in a scene and then optimises camera settings so that everyone looks their best. With the ability to detect up to 35 faces in one frame, it's great for group photos as well as portraits.

The IXUS 300 HS features the following Face Detection Technologies:

- Face Detection AF: Sets the focus on faces in people shots – not just the closest subject.
- Face Detection AE: Optimises exposure for faces in all lighting conditions – useful for backlit scenes or indoor shooting.
- Face Detection FE: Guards against washed-out faces when using the camera's flash – perfect for close-up shots in restaurants, clubs or other dimly lit locations.

- **Face Detection WB:** Optimises white balance for natural-looking skin tones which remain true to life regardless of skin colour and lighting conditions.
- **Red-Eye Correction:** Automatically eliminates the unwanted effects of flash photography immediately after the shot is taken. At the touch of a button in playback, natural-looking eyes can be instantly restored.

Smart Shutter

Canon's Smart Shutter mode uses Face Detection Technology to allow users to take both group shots and self-portraits more easily and in a more relaxed way. The shutter can be triggered remotely in three different ways:

- **Smile Detection:** Triggers the shutter when the camera detects a smiling face within the frame.
- **Wink Self-Timer:** Triggers the shutter two seconds after the subject in the frame has winked, removing the need for a remote control.
- **FaceSelf-Timer:** Allows perfect group shots or self portraits by automatically triggering the shutter two seconds after a new face has entered the frame.

PureColor II G LCD screen

The 7.5 cm (3.0"), 230K dot, PureColor II G LCD screen has been designed to enhance the capture and playback of images and video. The screen is constructed with a tempered glass layer, making it stronger, with improved contrast and wide colour reproduction. The thin PureColor II G screen also offers an ultra-wide viewing angle, making it easier to shoot from awkward angles or share images with others. Its 16:9 wide aspect ratio allows users to more easily capture and view HD movies on the LCD, filling the entire screen for the best possible on-camera playback experience.

HD movies with stereo sound and HDMI

HD movie recording with stereo sound allows the user to shoot movies at 720p quality which can later be viewed on an HDTV screen via the HDMI mini connection port. The HDMI mini connection ensures there is no loss of quality when playing back stills or movies.

Touch-sensitive scroll wheel

The IXUS 300 HS is equipped with a touch-sensitive scroll wheel, offering a quick and efficient way to navigate camera features. Users can rapidly scroll through large libraries of images and various shooting modes, and the highly responsive wheel also enables users to preview the available modes before making a selection.

Hints & Tips

Easy, on-screen Hints & Tips make the IXUS 300 HS easy to use and help users understand the camera's extensive list of features. Instead of a completely icon-based menu system, the user interface also features a short explanation of each feature and its benefits – allowing users of all levels to enjoy using the camera without frustration.

Fish-eye Effect and Miniature Effect

The IXUS 300 HS features Fish-eye Effect and Miniature Effect – two new shooting modes that enable users to experiment with their images. Fish-eye Effect allows users to shoot with the effect of a fish-eye lens, with three levels of distortion (weak, medium and strong) available to choose from, adding a new and creative dimension to every image where the effect is used.

Miniature Effect gives the impression of selected focus, which, when applied to landscapes, creates images with a model-like appearance. Users can shoot with designated portions of the top and bottom of an image blurred while the rest of the image remains in focus, resulting in landscapes that appear to be of model-scale. The focus area can be moved and sized to suit user requirements, and the effect also be achieved in vertical shooting, with right and left portions of the image blurred.

SDXC Card Support

The IXUS 300 HS supports the latest SDXC memory cards, providing up to 2TB of storage. With SDXC memory cards, more content can be stored on a single card than ever before and movies and images can be shot without having to change cards.