

## Technologies Explained – IXUS 1000 HS

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### 10x optical zoom lens

This genuine Canon lens offers an incredible 10x zoom that is fully retracted into the IXUS 1000 HS's diminutive body. This offers users an extended focal range of up to 360mm, allowing the capture of distant subjects without needing to move. Cutting-edge Canon engineering has created a special lens design, utilising a retractable prism system which allows the lens to be completely concealed within the camera body – providing a unique blend of a high-power zoom in a highly pocketable form. This design preserves the optical performance of the first lens groups, which are the most important for high quality image capturing. The lens barrel is made from magnesium alloy - a material used in professional Canon cameras – increasing the rigidity of the construction up to 6x compared to that of typical polycarbonate (plastic) lens barrels, while ensuring it remains lightweight and well-balanced.

### 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.

### HS System

The IXUS 1000 HS is the latest 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 tested against previous comparable non-HS System 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 reduction, 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.
- **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 1000 HS is able to continuously shoot up to 3.7 shots per second at full 10.0MP resolution, or up to 8.8 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 (at 320 x 240 resolution) 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.
- **Best Image Selection** – Best Image Selection captures a sequence of five high speed shots at 2.5MP resolution and then automatically selects only the best one to be recorded in the memory card. The best image is selected according to criteria such as facial expression or subject movement. That way a user can take advantage of the camera's high speed to capture a great shot in a challenging situation, without wasting time trying to find the best image from the burst before deleting the unwanted versions.

- **Handheld Night Scene**

Designed to make it possible to capture beautiful night shots without a tripod, Handheld Night Scene uses a combination of optical and electronic (image compositing) stabilisation technologies to deliver optimum results in difficult lighting conditions. Typically, night scene shots require slow shutter speeds, which can create image blur if the camera is not mounted on a stable surface and longer exposures usually result in images with higher noise levels. With Handheld Night Scene, the camera captures a sequence of high speed shots, combining a fast shutter speed with the camera's optical Image Stabilizer to reduce the chances of blur and suppress noise levels. The camera then combines these images to create a single, low-noise, sharp image.

#### 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 (4-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 28 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). In the IXUS 1000 HS, Smart Auto is also available in Movie mode.

#### 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 1000 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 7.6 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.

## Full HD movies with stereo sound and HDMI

The IXUS 1000 HS is the first IXUS model to shoot Full HD movies in 1920x1080p (24fps) resolution, allowing users to capture video content in the highest quality. Users can utilise the quiet 10x optical zoom while filming for additional flexibility in framing subjects, and stereo sound complements the images with CD-quality audio. Movie recording can start instantly at the touch of the dedicated movie record button and Smart Auto in Movie ensures that the settings will be optimised from a range of 21 detectable movie subjects. Image Stabilization in Movie mode includes Dynamic IS, a technology inherited from Canon camcorders which significantly reduces camera shake when shooting video while moving. Users can also view their images directly on an HDTV screen via the HDMI mini connection port, with no loss of quality when playing back stills or movies.

## Creative Shooting: Super Vivid, Poster Effect, Fish-eye Effect and Miniature Effect

The IXUS 1000 HS features Poster Effect, which reduces the number of colours in the image to create an older, poster-style look from photos, without the need for a

computer. Super Vivid mode also injects new life into subjects lacking vibrancy – adding a higher level of saturation to images to provide a dramatic, enriched effect.

Fish-eye Effect and Miniature Effect enable users to experiment even more 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.

#### Miniature Effect in movies

Miniature Effect has been extended to movie recording for the first time, providing users with the ability to capture model-like perspectives of moving images up to 720p resolution. Combining Time Lapse and Miniature Effect functions, when recording with the IXUS 1000 HS, Miniature Effect's gradual blur emphasizes the perspective, while the centre of the scene stands out in relief. At the same time, selective frames are removed from the movie so that when played back at 30fps, the viewer has the impression of watching a movie of a miniature model.

#### SDXC card support

The IXUS 1000 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.

#### Eye-Fi connected functions

For users who want to transfer content wirelessly, the IXUS 1000 HS includes Eye-Fi connected functions. The IXUS 1000 HS features a dedicated Eye-Fi section in the User Interface, on-screen icons, and it disables the automatic power-down function when an Eye-Fi card is detected - allowing users to transfer content easily and without interruption.\*



\* This product is not guaranteed to support Eye-Fi card functions (including wireless transfer). In case of an issue with an Eye-Fi card, please check with the card manufacturer.

Also note that approval is required to use Eye-Fi cards in many countries or regions. Without approval, use of the card is not permitted. If it is unclear whether the card has been approved for use in the area, please check with the card manufacturer.