

Canon EOS 7D Press Release

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Taken from a Chinese Website (google translation):

To lead the trend of digital single-lens reflex Canon EOS 7D Release

A new generation of digital SLR cameras, EOS 7D achieved in about 18 million effective pixel high-definition, under, up to about 8 / second continuous shooting speed. And the wisdom of carrying high-speed auto-focusing system, and many other new features. EOS 7D is owned by high-performance Canon has long been dependent on a variety of core technology research and development. These high-end technology merges with each other so that the performance upgrades, functionality and ease of use reached a high degree of integration. Next, let's side of the attention to these techniques, the side through the EOS 7D of the seven pairs of performance to explore its advantages. EOS 7D listing dates are expected by the end of September 2009.

One of seven pairs of about 18 million effective pixel + ISO 12800 and the highest point of the double-effect low-noise high-quality high-pixel image sensor and can demonstrate a more sophisticated image. EOS 7D can be shown with the visual impact of the image, it is because of its approximately 18 million effective pixel APS-C size CMOS image sensors. With the development of semiconductor technology and image processing technology advances, EOS 7D not only reached about 18 million effective pixel, but also achieved a low noise performance of the fine image. Its onboard CMOS image sensor is a Canon developed its own products. CMOS wafer process into a more sophisticated production process, not only solved the cause of the high pixel area of each pixel to narrow the problem, but also uses a higher photoelectric conversion efficiency of the new photodiode. In improving the pixel sensitivity at the same time, the transistors within a pixel was modified to achieve a higher S / N (signal to noise) ratio. In order to effectively improve the condensing rate, in addition to using non-gap micro-lens technology, also used to reduce the micro-lens to the photodiode from the new technologies, successful beyond the rate of the previous condenser. EOS 7D commonly used ISO sensitivity of 100-6400, extended ISO sensitivity up to 12800. Image signal transmission is the sequence of the single-channel high-speed reading, while in 8-channel high-speed reading. Compared with the EOS 50D is about 1.3 times faster to achieve about 8 / s high-speed continuous shooting. Low-voltage power supply of high-speed amplifiers and a variety of energy-saving measures adopted to achieve the low power consumption. In addition, replacement of lens and mirror, shutter and other movements generated when the dust sensor also used the corresponding integrated dust removal measures; while carrying from the camera hardware and software, two aspects with dust of the "EOS Integrated Cleaning System" in the dust function very thoughtful consideration. Shutter unit and a body covered with debris could not easily produce the special material; even accidentally into the dust, you can also make the image by using ultrasonic sensors in front, low-pass filter to vibrate and shake off the dust. Low-pass filter made of fluorine coating the surface, be it hard to shed the dust that has a high viscosity or a damp dust all have a very good dust effects.

7 pairs of the two DIGIC 4 + DIGIC 4 image processor, dual-digit achieve 8 / s DIGIC 4 pairs of high-speed continuous shooting of digital imaging processors to achieve through the eight-channel high-speed from the image sensor to read out, with about 18 million pixel a large information quickly and precision handling. Carrying two high-performance digital image processor, DIGIC 4, capable of a variety of data parallel processing, even an effective plan of about 18 million yuan can be achieved up to about 8 / s burst of high-speed image processing. Capture images of the analog-digital conversion are 14-bit (16384 colors) for, even if high-speed in-camera processing analog-digital conversion will not reduce the number of bits. EOS 7D is not only equipped with a dual DIGIC 4, and equipped with two newly developed to convert analog signals to digital signals, high-speed 4-channel analog-digital conversion front-end modules, and dual DIGIC 4 combinations of high-speed parallel processing circuits. Based on these technologies, not only to achieve high-speed processing of image data will be used ISO sensitivity up to 6400, and maintain low noise image effects. In addition the effect of automatic optimization of brightness is also further enhanced. The amount of light surrounding the lens correction, processing is completely able to adapt to primitive and shooting speeds are improved. If you use compatible with UDMA (Ultra Direct Memory Access) memory cards, then store the image data can also be high-speed. EOS 7D color style through "Picture Style" to achieve. In addition to the default camera 6 (Standard, Portrait, etc.), the Canon is also based on the user need to provide a 7 "Picture Style Files" (nostalgia, dawn and dusk, etc.), a total of 13 kinds of photo styles. Moreover, the user can also style on top of an existing photo to fine-tune handling. In addition, users can use the camera with the software "Picture Style Editor", to produce their own original Picture Style file. Preset white balance can be carried out from 9 kinds of choices, and depending on the shooting of its intent to fine-tune. EOS 7D is the ability to plan for about 18 million yuan, up to about 8 / second continuous shooting speed, to conduct high-speed image processing of these complex models. Which is precisely to provide protection for these new dual DIGIC 4 Digital Image Processor.

7 pairs of the three central F2.8 + F5.6 8 to the double cross, all 19 points cross-type AF system for high-resolution digital SLR cameras, the ability to accurately capture the various scenarios of Pi Sheti high-performance auto-focus system is

even more important. EOS 7D carrying as many as 19 of the automatic focus, and to increase the focus of each of the focus accuracy. 19 pairs of focus corresponding to F5.6 beam used in all cross-type AF sensors. Will be used to detect vertical lines of horizontal linear AF sensor used to detect horizontal lines with vertical linear AF sensor was cross-shaped arrangement, thereby achieving a high Pi Sheti capture capabilities. Central focus is on relative to F5.6-beam cross-type AF sensors, the direction of the ramp to configure the corresponding F2.8 beam more accurate cross-type AF sensors. Through the central 8 to the double cross AF sensors work together to achieve high-speed and high precision co-coke. Tracking Pishe Ti AI Servo AF feature on the EOS 7D also been a substantial evolution. Beishe Ti is not only a tracking camera and the distance, in the Pi Sheti relatively parallel to the camera for vertical or horizontal movement of the scenes, it is also able to automatically switch the focus to the track (19 points AF pm). Moreover, the focus will also be displayed automatically track the situation, so you can be assured through the viewfinder of the Pi Sheti track. In the EOS 7D, the automatic focus selection methods and systems have also been a substantial evolution. In the original manually select one point of the "single-point auto-focus," based on the increase in the "fixed-point auto-focus," "automatically expand the focus." Fixed-Point Auto Focus AF range than single-point AF smaller, more precise co-coke. Automatic focus of expansion is that, when the Pi Sheti deviate from the manual of choice due to movement of the focus, it will automatically start the selected adjacent pairs of auto-focus focus focus to support. In addition, EOS 7D also has a "regional auto-focus," which is the 19 auto-focus is divided into five regions of the user can select any one of focus from one area to focus. Not only that, can simultaneously use of all 19 AF points "automatic select: 19 points Auto Focus," has also been strengthened. Whether in the aspects of the camera's high-definition or high-speed aspects of the implementation of appropriate countermeasures. It is the support of their newly developed AF sensor and the corresponding calculation engine. AF sensor unit in the optical auto-focus on the accuracy is enhanced. Structure using durable construction and materials. For the AF-related information processing, to take specific processor and the camera auto-focus with the central processing unit distributed processing approach, providing a fast and accurate auto-focus.

7 pairs of the four used vision rate of 100%, 100% of the dual-magnification optical viewfinder 100% of

EOS 7D optical viewfinder apparatus the rate of about 100% of the vision about a fold (100%) magnification at the same time with a 29.4 ° viewing angle and 22 mm eye point, the optical properties of the ancient EOS single-lens reflex camera also in the forefront. Vision rate of about 100 percent through the optical viewfinder observed range and scope of the actual shooting are basically the same, it can be very precise composition. The viewfinder is about 1-fold (100%) magnification with the optical performance beyond the professional models. Together with about 29.4 ° wide viewing angle, can be observed with the professional EOS-1D Mark III model basically the same size of the viewfinder image, to enjoy the fun of shooting. Because it is 22mm high eye point, so even if wearing glasses and rarely appears viewfinder viewfinder image is blocking the view of the situation so that the whole viewfinder image at a glance. In order to achieve the desired optical properties, EOS 7D uses the EOS-1D Mark III with the same size pentaprism. Meanwhile, in order for large pentaprism caused by chromatic aberration to compensate for eyepiece used with a high refractive index glass. These are to maintain the quality of the efforts made by the camera. In addition, EOS 7D inside the optical viewfinder is also equipped with a transparent liquid crystal panel with the back of "the wisdom of optical viewfinder for Information Display," which can be displayed on the grid focusing screen and three-dimensional electronic level and so on. Back penetrating liquid crystal panels used in new materials PNLCD (Polymer Network LCD) is a watch also has the use of display materials, this material a strong candidate as an electronic paper has been widespread concern. Under normal circumstances, the viewfinder LCD panel equipped with transparent back, after the internal amount of light will fall, but the EOS 7D injection through the prism surface and fired five had anti-reflective surface coating and other processing, to ensure that its shooting device brightness and did not carry back the time of penetration-type LCD panel brightness of the same. This will not only clear way to watch the viewfinder image, operate also brings convenience. Using the optical viewfinder when shooting, three-dimensional electronic level by automatically focus the camera flashes to show the level of vertical and tilt around the state. Even in the eye without leaving the viewfinder cases, a confirmation screen immediately before and after the standard vertical and inclined state of the hand-held camera is very convenient feature.

7 pairs of the five test brightness + color and automatically focus on the information layer 63 area metering sensor

EOS 7D's "63 area metering sensor layer" can quickly respond to changes brought about by Pi Sheti scene brightness and color changes and considered in the development of fully automatic focus with 19 of the linkage. Use of new sensors iFCL wisdom of a comprehensive metering system, not simply the brightness of the Pi Sheti detection, also Pishe Ti colors, and types of light sources are also calculated. And to consider from 19 auto-focus to be focusing on information, so that various scenarios can be suitable for metering. iFCL smart metering system is integrated i = intelligent (smart), F = Focus (AF information), C = Color (color information), L = Luminance (brightness information) English acronym as a way to demonstrate its advanced nature. Metering sensor by detecting the color information, you can easily make the original red line appears underexposed Beishe Ti becomes bright and vivid, to get closer to the natural effect of the human eye can see. In addition, because the screen throughout the 63 district and 19 AF points corresponding to a region, so the information from the auto-focus can be locked in the main Pi Sheti the size of the screen and places, thus can lose focus volume to determine the exposure value. Region through the use of 63 metering E-TTL II metering function is also to be evolved. In this way, the flexibility to use the camera distance information to complete a more accurate auto-exposure shooting. EOS 7D exposure compensation range has been significantly

improved to achieve a ± 5 level, can more easily achieve the effect of a stronger effect of high-profile or low-key performance. Against night or when shooting buildings, etc., such as screen brightness contrast, there can be consciously shoot more than one underexposed and overexposed photos, through the synthesis of a computer for processing, which means it makes shooting HDR (high dynamic range) and so the material has become more convenient. Using different exposure values automatically Continuous shooting multiple photos of the AEB (auto exposure bracketing) settings range has also been expanded.

7 pairs of the six pairs of shape and sound and body design

EOS 7D's body shape by using a continuous spherical surface of the ultra-streamlined design of plastic. Fuselage shell using light weight, high rigidity and electromagnetic shielding effect of magnesium alloys. Surface coating used with the EOS digital SLR camera EOS-1D series of top-coating materials and processes the same. In addition, EOS 7D also has a water droplet dust structure, magnesium alloy external components into a high-precision joints construction, battery storage, memory card slot cover, as well as operation buttons and so on around the sealing components used to protect the camera's internal. Designed to take into account the body can increase the satisfaction of the owner of the design and make a good body shot more reassuring solidity. The shutter button is used with the EOS-1D series of the same type of buttons. Half-press the shutter button and press the shutter button completely different, operate handy. EOS 7D comparable to professional-grade camera with waterproof performance drops dust. In addition, as the main structure of the internal, EOS 7D has a rigid stainless steel frame and high-strength engineering plastics made of mirror box. One inside and outside the fuselage structure to improve the strength of the camera. EOS 7D inherits the EOS 5D Mark II's basic structure, using a durability test more than 150,000 times the shutter unit. Shutter unit using non-contact magnetic levitation method to remove the physical contact area, well suppressed by the adsorption of dust and grease caused by fault movements, as well as lower accuracy. In addition, EOS 7D also used to bounce right moment the main reflector and sub-mirror to mirror the newly developed braking braking bodies, so that the stability of high-speed continuous shooting action. To AI Servo AF functions to more high-precision auto-focus at the same time, inhibit mirror components is a crash, guaranteed to produce crisp, neat, with a metallic shutter sound. In this way, not only the appearance, sound also is very careful, in the sense of touch and hearing, both given full consideration.

7 pairs of seven to support real-time image display and EOS Full HD video shot pairs of elections now, real-time display video filming and EOS camera functionality has become an advanced EOS Digital SLR cameras, the essential function. As a digital SLR camera new image expression, its importance is increasingly not be ignored. EOS 7D of these functions were improved. On the back of the LCD monitors used with a 160° wide viewing angle (the direction of the upper and lower left) and high-definition, 92 million points of new LCD monitors “3.0Prime; clear display LCD Monitor II-type “, its internal structure has been re-development, using the new technology. the impact on the back of LCD monitors an important factor in visibility can be said that outside light reflection. clearly indicated that type II LCD monitor using optical elastic material, eliminating the protective layer and the LCD panel from among the refractive index of air layer caused by the change reflected. so that the refractive index approximation, eliminating the intense external light reflection. As a result, not only improved the LCD monitor when shooting outdoors visibility, menus, and captured images can also be more clearly displayed. machines were set up a dedicated body of “real-time display / video capture switch” and the corresponding “start / stop button”, and video when shooting in manual mode can be carried out under the control of exposure. In addition, can be realized per second 30/25/24 frames, resolution 1920 x 1080 pixel full HD movie capture, the use of high-definition picture quality (1280 x 720 pixel resolution) and standard-definition (640 x 480 pixel resolution) is able to 60/50 frames per second shooting. the shooting and the general PAL video formats (resolution 720 x 576 pixel, 25 frames / sec) compared to television programs, a higher quality, play a more fluid, and can support an external microphone stereo recording. Also can display grid lines and three-dimensional electronic level. Whether it is real-time display film or video shoot, can a more precise composition and perspective. back of the LCD monitors, as well as the improvement of the quality of After considering the various parts of the EOS 7D real-time display and full-HD video shooting shooting function, but also reveals the advanced nature of the EOS 7D.

8 to double cross the central focus Canon 7D SLR Release

Canon APS-C's flagship release (China) Co., Ltd. released grand EOS digital SLR series, using APS-C size image sensor's flagship model “EOS 7D”. It is the Canon EOS digital SLR series, the first Take a few dollars named APS-C size cameras, known as the “7Prime; name. The camera in all aspects of performance without any compromise, the pursuit of high performance and high quality. EOS 7D equipped with many advanced features, can play a double-digit higher than the previous EOS models capture. The new use of the central 8 to double cross, all 19 points cross-type AF system, a rich selection of focus modes and a maximum of about 8 per second, high-speed continuous shooting performance can be accurately tracked Beishe Ti. Vision rate of about 100% of the viewfinder

is very suitable for intermediate to advanced users pay attention to composition, bringing a more relaxed and happy shooting experience. EOS 7D is not only a rapid response to high-speed cameras, also achieved about 18 million effective pixel. By using two high-performance DIGIC 4 Digital Image Processor composed of pairs of DIGIC 4, to ensure that the camera as a whole has a good reaction speed, and support for Full HD video capture. EOS 7D has to satisfy photography enthusiasts and professional photographers and other users demanding high performance. Listing dates are expected by the end of September 2009.

Desire to achieve a variety of photo enthusiasts, professional photographers to meet the demanding requirements of mid-range models with fever, the popularity of digital SLR cameras, the user's needs have become diversified. For photography enthusiasts mid-shoot models have higher performance requirements. All along, the Canon according to market demand for professional photographers to prepare a pinnacle of the EOS-1D series, for the photography enthusiasts prepared EOS 5D/ EOS 5D Mark II, prepared for entry-level EOS 500D, by the majority of users at different levels at home. This time, Canon respond to the many photographers want a more challenging high-performance cameras, the voice of a higher difficulty of photography and professional photographers want to have a higher performance similar to the EOS 5D camera the size of the request has been issued with Photography enthusiasts and professional photographers the two sides spoke highly of the 35mm full-frame mid-fever model "EOS 5D Mark II"; the same level, the new APS-C size quick speed flagship model EOS 7D. Accompanied by quality improvement focus accuracy requirements become more stringent, EOS 7D uses a central 8 to the double cross, all 19 points cross-type AF system. In addition, the maximum 8 / second continuous shooting speed, even for the attention of sports photographer shutter timing is also very gratifying.

EOS 7D not only in the camera specifications, are also very particular about its texture, feel, and the camera shutter sound has also been redesigned to take full account of the shooting and have fun satisfaction. EOS 7D can bring not only a beautiful quality of the camera, or a use of a new technology, high performance and good texture, through visual, tactile and auditory to the feelings of a Canon APS-C size top-level machine type, to meet the different needs of many users.

With uncompromising performance and EOS digital SLR series, the core of the new advanced systems

EOS 7D in various parts of the figure to see new technology has to meet photography enthusiasts and professional photographers, high-performance. In the high-definition, through to the award-winning Canon independent development of large CMOS image sensor to make improvements to achieve about 18 million effective pixel. In the data processing of large image engines, using EOS-1D has been successfully applied to series of pairs of DIGIC technology, the two DIGIC 4 image processor, digital image data of a large parallel processing, and about 8 Zhang / second continuous shooting speed of 126 consecutive shooting (JPEG Large / U ; Based on Canon testing using a standard Ultra DMA (UDMA) memory card). In addition, auto-focus systems, equipped with a "central-8 to double cross, all 19 points cross-type AF system," Pi Sheti in improving the capability and accuracy of capturing the same time, it also provides fixed-point auto-focus, area AF, auto-focus expanded focus area such as a rich selection mode, thereby increasing the efficiency of focus. Viewfinder achieved with the professional EOS-1D series models is about the same rate of 100% field of vision. And through the viewfinder on the back inside the transparent LCD panel display auto-focus area, three-dimensional electronic level, grid lines, and a variety of information. Able to observe through the viewfinder to focus on Pi Sheti the same time, a variety of information to confirm the camera is one of great charm. EOS 7D of the metering sensor is also a new look. Equipped with a "double-63 zone metering sensor," able to detect color information and can use 19 automatic focus-focus information, together with stable exposure. Integrated Metering Systems by iFCL wisdom (i = wisdom, F = focus of information, C = color information, L = brightness information) control, even in previously difficult to obtain an appropriate exposure scenarios can also be obtained by virtue of the new algorithm the correct exposure. As a full high-definition video capture and real-time display film it with the back of the LCD monitor also employs the new "3.0 Prime" clear display LCD Monitor II-type. "LCD monitor, compared with the original addition to the protective layer between the LCD panel gap (air layer), by controlling the light refractive index changes, effectively suppress the occurrence of reflection, which significantly increased the observability. For photography enthusiasts and professional photographers, the functional enrichment of EOS 7D can not only buy to replace the current there are models, but also very suitable as the first two cameras for purchase, and extend the use of the original camera with its own SLR camera system.

Focusing System Introduction

Central 8 to double cross, all 19 points cross-type AF system enables detection of complex Pishe Ti

EOS 7D equipped with a 19 automatic focus, its used in all cross-type sensors. The so-called cross-type sensor is the will of the vertical lines and horizontal lines tested showed cross-type sensors arranged. This is a less suffer an Beishe Ti shape and texture affect the resulting failure of co-focus system. Since these are used for the focus of the corresponding F5.6 beam sensor, therefore, can not install the camera with the lens aperture size on the impact of all the EF lens focal performance are to be combined into full play. In addition, the central upper, middle and lower three horizontal lines detection sensor showed two staggered by a double test to reduce testing errors. Substantially de-coke (large nominal) state, was arranged in two staggered AF sensors together to improve the detection rate of Pi Sheti. Moreover, the use of a higher frequency of central focus, in addition to the corresponding F5.6 was cross beam sensor arrangement, the configuration is still in its diagonal direction of the corresponding F2.8 beam cross-type sensors, which constitute the central 8 to the double cross AF sensors, capable of more precise focus. F2.8 large amplitude beam ratio F5.6 beam to detect the use of the baseline length is longer, with the ability to detect subtle errors combined ability to focus. EOS 7D equipped with a light color to be able to detect 63 district metering double-sensor autofocus system with photometric detection sensor data caused by different light sources combined focus error compensation. High-performance auto-focusing system can fully play up to about 18 million effective pixel strength, allowing users to shoot even more confidence. To be able to play a stable performance of autofocus, auto-focus optical system is also a corresponding increase in accuracy, but also adopted a strong ability to adapt to harsh environment, the construction and materials.

Using 19 AF points focus on the five kinds of automatic selection mode

EOS 7D equipped with a central 8 to the double cross, all 19 points cross-type AF sensors, to enable the effective use of this auto-focus, Canon provides the user with five kinds of automatic focus selection mode. Manual selection mode, in addition to include a "single point of focus", but also has a focus range than single-point AF Focus range of smaller "fixed-point auto-focus", and when Pi Sheti automatically from the selected focus, the selected focus point around the upper and lower pairs of secondary focus will automatically focus the "automatic extension of the focus" and a wealth of auto-focus area selection mode. In addition, the "area AF" will be 19 pairs were divided into five focus areas, from which you can select the focus area, focus will be to use the selected AF area focus on the Pi Sheti all right to detection. Priority so that composition, while Pi Sheti can accurately capture. In addition, the "19-point AF" also be able to use the central 8 to the double cross, all 19 points cross-type AF sensors of the Pi Sheti capture, increased its capacity to respond to irregular movement Pishe Ti.

Have evolved, the ability to capture more of the AI Servo AF

Able to track moving objects in AI Servo AF has been a substantial evolution. Be able to correspond through a variety of sports and shooting scenes of new AI Servo AF algorithm to achieve high-precision focus on moving objects. Not only the distance between the targeted and Pishe Ti, but also be able to select "19-point AF" or "regional auto-focus", the right frame (auto-focus area, the use of area AF for the selection of within the region) vertical and horizontal direction parallel to track the movement of Pi Sheti and can be carried out continuously on the Pi Sheti capture. In addition, the ability to set AI Servo AF automatically starts when the focal point, thereby reducing filming the first one, the co-focus position deviation probability. In the "19-point autofocus" mode, when Pi Sheti's movement did not automatically selected from the initial focus, other auto-focus will be on the track it automatically. At the same time, the current track of the Pi Sheti automatic right focus will be displayed in the viewfinder, the significantly increased peace of mind when shooting a sense of dynamic objects.

To more carefully reflect the intention of the photographer AF area selection mode

With the auto focus system, multiple functions, the various settings are also projects a more detailed evolution. Can be horizontal or vertical grip for the camera were set AF area selection mode and the use of auto-focus (regional) position. To use this feature, even if holding machine to change direction, without having to re-set the auto-focus area, with changing the direction of holding machine immediately after the filming of Pishe Ti and many other advantages. Held in the vertical plane, can differ from those used according to the user (or a handle in the next), were set. In addition, you can also customize the control buttons, respectively, of the four kinds of auto-focus-related functions (select AF area selection mode, AI Servo tracking sensitivity, AI Servo 1 / 2 images priority, AI Servo Focus Tracking mode) to register. After registration, you can also push-button operation (depth of field preview button or the lens AF stop button) when shooting a button quickly to set a good tone out these functions. EOS 7D like this can have a demand in the interim to change when necessary to set autofocus features, making it ideal for sports such as changes in intense sports photography. Moreover, EOS 7D also features the "auto-focus fine-tuning" and "can not be auto-focus lenses when driving", and many other AF-related with custom features, can be more delicate reflect the photographer's intentions.

Dual DIGIC 4, long shutter life

Dual DIGIC 4 to about 18 million effective pixel image data processing diagram of an effective plan of about 18 million yuan of the image sensor through the eight channels can quickly send a large image data, using two high-speed analog signal can be converted to digital signals of new development of four-channel analog-digital conversion front-end processing module. Through a combination of dual DIGIC 4 achieved EOS 7D, high-speed parallel processing. Its overwhelming high-speed processing capability, bringing about 18 million effective pixel, the maximum of about 8 / s high-speed continuous shooting speed. High-speed processing circuit design makes the EOS 7D even after 14-bit analog-digital conversion processing, the burst speed does not change, while achieving high quality and high reactivity, which is a major feature of it. Canon color style, which introduces its own development of "photo-style". Be able to shoot scenes and themes according to the different selection, camera pre-loaded with six kinds of photo styles for users to choose and can be set up through detailed pictures of each style, sharpness and color and so on set. Not only that, but also can be attached to "Picture Style Editor" software production, register your own Picture Style can appreciate the performance of a variety of colors. Images within the camera compensate for the "automatic brightness optimization" feature has been enhanced, regardless of whether the screen to detect facial figure, the effect is more in place, and can inhibit the high light of high-light spillover "high-light tone priority" and able to prevent caused by different lens characteristics of the screen to reduce the amount of light surrounding the phenomenon of "peripheral light quantity correction" and other features are also due to the adoption of dual DIGIC 4 to achieve a high-speed processing.

The more you use the more fascinating, with a maximum of about 8 / s, 15 million times the life of the shutter unit

EOS 7D uses a newly developed non-contact electromagnetic rotary speed electronically controlled mechanical focal plane shutter, and its basic structure inherited the EOS 5D Mark II has been successfully applied on the shutter unit. And use with the EOS-1D series of the same material, reaching about 15 million times a shutter life. Non-contact rotary solenoid shutter unit has no physical contact with the unique surface structure, with a less there because of dust, oil and were attached to, or wear down causing malfunction and accuracy advantages. EOS 7D also has a mirror brake bodies, can guarantee high-speed continuous shooting, the AI Servo AF movements and the stability of the image within the viewfinder. Suspended motor enables quiet of shooting. EOS 7D carrying out a variety of advanced control of the shutter unit also very particular about the sound moves through the material of the shutter unit repeated studies, and a new brake master mirror the adoption of such agencies to achieve the right tone mirror drive when the motion control, has finally been able to inspire enthusiasm for shooting a "neat, crisp texture with a metal shutter sound." Not only in function, the use of a sense of elegant, high-endurance shutter unit is really more you use the more fascinating.

The newly developed approximately 18 million effective pixel image sensor to achieve a high pixel low-noise point

Canon EOS 7D carrying about 18 million self-developed and effective pixel APS-C size CMOS image sensors. 8-channel high-speed data acquisition, support for up to about 8 / s high-speed continuous shooting. Image sensor size is 22.3 × 14.9 mm, shooting angle is equivalent to about 1.6 times lens focal length. With the development of CMOS semiconductor wafer process, more sophisticated manufacturing process of import, to achieve a high ISO sensitivity, low noise, high dynamic range. In addition, using a higher photoelectric conversion efficiency of a new photodiode structure, and through improved pixel transistors within the improved signal to noise ratio. Not only that, through the import of new technologies, shortening the "no-gap micro-lens" to "photodiode" the distance between the photodiode improves the efficiency of the condenser. Common ISO sensitivity range up to a 100-6400 (Extension when ISO 12800). In the most outer layer optical low-pass filter is applied to the anti-adhesion ability of the fluorine coating. In addition, on the basis EOS 7D to optimize the "self-cleaning sensor unit" to achieve an all-round dust measures.

Viewfinder and the electronic level

EOS 7D using the optical viewfinder EOS-1D series has the same rate of approximately 100% field of vision. In this way, through the viewfinder of the scope of observation to the range of the actual shooting basically the same, be able to shoot more accurate composition. In addition, EOS 7D also achieved one times (-1m-1, using the 50mm lens for infinity focus) in the viewfinder magnification, it is equally important and vision rates, indicating the performance of the other

elements of the viewfinder. Observed when using the viewfinder, can be directly observed with the naked eye when the size of the same image, you can Pische Ti confirm the details of each part. 29.4 ° viewing angle with the typical APS-C size cameras, compared to a very broad and easy to watch. These are used in relying on its professional users with the EOS-oriented top-level model — EOS-1D Mark III equivalent size of a large pentaprism achieve. Eyepiece optical components using a high-refraction glass, reduces the chromatic aberration production. In addition, the five-prism light injection and the injection plane using anti-reflective coating. Improved light transmittance, has been a bright viewfinder. The internal information viewfinder display back and thoroughly equipped with a new LCD panel constitutes a “smart information display optical viewfinder.” Apart from showing the 19 AF points, the grid can display on demand, spot metering circle, three-dimensional electronic level and so on.

To the corresponding standards and the direction of tilt before and after the three-dimensional electronic level

EOS 7D is the first EOS digital SLR camera equipped with a camera that can detect the standard and tilt before and after the “Three-dimensional electronic level” camera. Inside the camera perpendicular to the direction of optical axis configured two cameras were used to detect the level of tilt and acceleration before and after the tilt sensors. With minimum 1 ° as a unit, tilted in various directions for testing. Three-dimensional electronic level there are two kinds of display in the use of optical viewfinder for shooting to make use of automatic focus on the level of the direction of $\pm 6^\circ$, front and rear direction of $\pm 4^\circ$ tilt to display (camera horizontal shooting). Can also use the back of LCD monitors to display (real-time display photography, video shooting and shooting readiness pm). This displays a graphical water level, can the standard of the direction of 360 °, front and rear direction of $\pm 10^\circ$ of tilt testing. With the normal function of the different electronic levels, which can tilt the direction of the camera before and after testing, with the screen even when there are no lines as a reference point, it is very easy to support the deformation of buildings and other adjustments to benefits.

To stabilize the double exposure of 63 area metering sensor

EOS 7D equipped with a 19 to take advantage of automatic focus-focus information, double-layer structure Metering Sensor — 63 area metering sensor layer. In addition to carry out the same as the previous evaluation of photometric sensors, metering, partial metering, spot metering (central point), the central focus of the average metering, to gain a more accurate exposure, the metering sensor also has the detection of RGB three primary colors R and B wavelength wavelength of color measurement features, and according to available information correctly to improve the red Pische Ti prone to the phenomenon of lack of exposure. In addition, the 19 AF points correspond to a corresponding metering area, so you can refer to each of the focus in the brightness distribution and other means to lose focus and then calculate the amount of exposure value. Even in bright scenes are great differences, also get a smaller deviation of the stability of the information. Because the amount of exposure compensation extended to $\pm 5EV$, so in a variety of auto-exposure modes are more handy.

LCD screen and the fuselage Introduction

Clearly show LCD Monitor II-type structure diagram is not only a real-time display shooting, video shooting capabilities enrich the digital SLR camera on the back also makes LCD monitors becoming increasingly important. Canon will be on the back of LCD monitors as key devices into a new technology. EOS 7D has a 160 ° wide viewing angle, and 92 million points of high-precision, “3.0” clear display LCD Monitor II-type. “LCD Monitor-II clearly show the use of optical elastic material for the replacement of the original protective layer LCD monitor and LCD panel gap between the (air layer), which resolved by the protective layer and air layers of different refractive index caused by the external light reflection problems. As a result, the next day’s outdoor shooting screen LCD monitor is becoming clearer. In addition, beside the LCD monitor installed light sensors that can automatically adjust brightness with the surrounding brightness LCD monitor.

In the back of the LCD monitor performance at the same time, real-time display film / video shooting functions are to be upgraded. EOS 7D to add a dedicated start button, not only that, in real-time display film / video camera mode press the speed-control button can easily set up automatic brightness optimization, and quality / video record size; the fast mode in the AF Next, press the speed control buttons can be set to automatically focus position and auto-focus area selection mode. Moreover, the addition of menu displays real-time shooting / video capture functions tab (shot 4), a detailed menu, change the setting can not quit shooting directly. Similarly, immediate indication of the start auto focus under the shoot, regardless of AF-ON button or by pressing the shutter button is all OK. Video capture features in full HD (1920 × 1080) can choose to 30/25/24 frames per second frame rate, HD (1280 × 720) and SD (640 × 480) can select a more fluid per 60

/ 50 of the frame rate. Video recording mode can use an external microphone. Not only can experience immersive sound effects (sampling frequency: 48KHz), and because the microphone can be away from the camera, so the camera movements recorded voice will not be able to get a clear recording. In addition, the video shot using the manual mode, can have full use of the image sensors of digital SLR camera features a large, greatly expanded its depth of field control, image expression.

EOS 7D house equipped with a video camera editing functions, even in the shooting scene, no computer around, you can also right before and after the cut scene editing, you can also enjoy the slideshow of all 5-second video playback. Compatible device because the connection can use HDMI terminals, so be able to enjoy to enjoy high-definition brings the fun.

Both functionality and operability of the ultra-sleek body design

EOS 7D will design and modeling functions also as a part of it. Followed the traditional design of the EOS but also the pursuit of beauty and ease of use, eventually forming a "super-sleek" design. In particular the shape of the camera at the top of a continuous smooth surface is formed, the handle with ergonomic principles for a new design. Special attention was paid when the finger hook grip force handle the situation. Some details are also made great efforts, such as changing the decorative parts of the surface of the fuselage skin thickness. Body on the back part of the stress-speed control dial and hand-held nature of the operation of a sense of the overall design uses a single hand to bring the camera reduces the burden on the shape of the hand. The camera itself is small and lightweight, shell using electromagnetic shielding function of magnesium alloys. The adoption of sealing parts departments as well as decorative skin tight structure so that the camera has a better performance of water droplets dust. There is to take with the EOS-1D series of the same coating process, you can minimize the wear surface of the fuselage. The bottom of the camera tripod equipped with a rubber around the next hole, so that when you install PTZ stability can be improved. The button in the functionality to upgrade the same time, mainly related to the operation buttons on the LCD monitor on the left; button on the key-way deeper, operate handy; large button design, even under circumstances such as wearing gloves, is also very easy to operate. Shutter button is used with the EOS-1D series of the same type of components, semi-pressing the shutter button is fully in accordance with the distinct feeling, and

EOS 5D Mark II the same. In terms of performance, in addition to changing the location of the power switch in order to enhance operational, the can be given "three-dimensional electronic level viewfinder" and other multi-functional multi-function button to configure the main dial on the side, which can be set at any time you want to use the function . In addition, the newly added single button press RAW + JPEG, you can now quickly select picture quality according to various scenarios

Flash and accessories introduced

EOS 7D's built-in flash can be the corresponding angle 15mm lens (equivalent to 35mm to 24mm lens angle specification). As the irradiation angle designed to be wider and wider range of light exposure, so to improve the indoor shooting and so on to cope. Indicated that the amount of light flash flash index 12 (ISO 100 • m). ISO 400 under the aperture value is F4, then flash the illuminated area in front of the camera can reach to about 6 meters. EOS 7D's built-in flash also has a built-in flash function of the signal transmission can be manipulated by an external flash flash radio signals. Built-in flash light pulses sent through radio signals, and with the wireless slave function SPEEDLITE 580EX II, 580EX, 430EX II, 430EX, 420EX, etc. for signal transmission, in order to achieve alone or multi-flash flash flash only. In addition to control an external flash and built-in flash, you can also set up two light ratio, can choose to use only an external flash flash flash, or both. As long as the subordination of external flash with wireless slave function, a variety of mixed models can also be controlled.

In addition, if installed directly on the hot shoe that can be compatible with built-in flash the signal lights flash firing capability 580EX II, 430EX II, etc., you can also achieve the E-TTL II automatic flash. The flexibility to use the AF-assist light, image size automatically zoom control (270EX excluded), flash exposure lock function, color temperature information transmission function, high-speed synchronization and reflection photographic offset when the security features ISO sensitivity.

Can cope with various scenarios Camera Accessories

EOS 7D dedicated battery pack and handle BG-E7 can accommodate two cameras, with the LP-E6 batteries, thus

ensuring that about two times the battery capacity. If you use the battery clip BGM-E6, can also be used six common on the 5th (AA type) battery to drive the EOS 7D. The battery box and handle with the EOS 7D has the same dust-proof structure of water drops, design blending with the camera; also has a vertical hold videotape used in a variety of functions, with the shutter button, auto exposure lock, auto-focus area selection, automatically Jiao start, multi-function buttons and the main dial. Wireless File Transmitter WFT-E5C with the battery box and handle the same need to use the camera's tripod hole then fixed at the bottom of the camera to use. Can be wired or wireless LAN (IEEE802.11b / g and a), high-speed communications. In addition, due to have the USB terminal, you can connect a portable hard drive, GPS navigation devices and Bluetooth devices. Moreover, the same battery pack and handle the same as BG-E7 holding machine equipped with a vertical shooting buttons and dial used to ensure that BG-E7 with the same operability. The WFT-E5C can be applied to wired or wireless remote shooting and DLNA (Digital Living Network Alliance). In addition, you can have the same browser-enabled mobile devices (cell phones) for wireless transmission of information. Images via mobile devices capable of browsing, wireless remote control and even change the camera settings, and shutter release. EOS 7D is also compatible with RC-1, RC-5 wireless remote control, as well as the EOS Digital SLR's high-class models commonly used N3 series of shutter-line. There are many other exclusive use of EOS accessories, you can flexibly cope with various scenarios of the shooting.

Is expected to ship

EOS 7D Listing Date: scheduled for the end of September 2009