HASSELBLAD H3DII

With the introduction of the H3DII, Hasselblad further refines the concept of high-end full-frame DSLR cameras. The H3DII, the fourth generation of our digital H series, features a bright 3" LCD and a new, intuitive user interface. The H3DII is the ultimate choice for any serious photographer.

The H3DII has been developed around a new digital camera engine which produces increased lens performance and a new level of image sharpness. By focusing solely on digital camera architecture, Hasselblad is able to offer photographers the full benefits of professional medium-format digital cameras as well as the ease-of-use found in the best 35mm DSLRs.

The H3D/H3DII architecture has also made possible the 28mm lens, designed and optimized solely for digital image capture. Image quality is lifted to a level yet unseen in digital photography, including automatic digital correction for chromatic aberration, distortion and vignetting. You can see for yourself by checking out the image quality at www.hasselblad.com/products/hasselblad-star-quality. The result is flexibility and ease-of-use for the professional photographer, including the freedom to choose between eye-level and waist-level viewfinders and on-the-fly classification of images.

Hasselblad's Natural Color Solution delivers out-of-the-box image quality only achievable in a true digital camera system. The H3DII camera is currently available with three different sensor models, offering full-frame 48mm image capture with a resolution of 39 Mpixel/22 Mpixel, or near full-frame capture with the new 31 Mpixel model.

The H3DII-39 and its counterpart H3DII-22 are both full-frame 48mm DSLR's using the sensor format 36×48mm. These cameras operate at up to ISO400 with a capture speed of up to 1.4 seconds per capture. The H3DII-22 and H3DII-39 are the preferred choice of professional commercial photographers.

The H3DII-31 features a 31 Mpixel sensor measuring 33×44mm and enhanced with micro-lenses to boost ISO rating by one stop to a new maximum of ISO800. As with its fellow H3D models, the H3DII-31 makes use of a new high speed capture architecture for the fastest possible operation, with the H3DII-31 capturing at the rate of 1.2 seconds per capture, working either mobile or tethered to a computer. The combination of these features makes the H3DII-31 the natural choice for the professional mobile photographer.

Ultra-Focus and Digital Auto Correction for image perfection

The H3DII system allows information from the lens and exact capture conditions to be fed to the camera processor for ultra-fine-tuning of the auto-focus mechanism, taking into account the design specifications of the lens and the optical specifications of the sensor. In this way the full HC lens program is even further enhanced, bringing a new level of sharpness and resolution. Digital correction for color aberration and distortion is also added. "Digital Auto Correction" (DA C), is an APO-chromatic correction of the images based on a combination of the various parameters concerning each specific lens for each specific shot, ensuring that each image represents the best that your equipment can produce.

Based upon these techniques, we have now expanded our lens program with a 28mm lens that has been especially developed for the H3DII. The design of this lens has been optimized for the actual 36x48mm area of the sensor to make it more compact and to work

HASSELBLAD H3DII

in conjunction with DAC. This is a critical part of the capturing perfect images from this extraordinary lens. The achievement is clear: DAC increases the resolution of the image and with a perfect pixel definition, the basis for the image rendering is optimized.

The highly renowned HC/HCD lens line uses central lens shutters, which adds flexibility by allowing flash to be employed at shutter speeds up to 1/800s. The central shutter also improves image quality by reducing camera vibration. And tanks to the large format of the H System cameras, there is a considerably shallower depth of field range, making it much easier to utilize selective focus to creative effect.

Large format digital capture

In digital photography, the advantages of large format cameras have become even more obvious. The 6×4.5 cm window allows the Hasselblad H3DII to use the largest image sensors currently available in digital photography – up to more than twice the size of a 35mm camera sensor. Consequently the sensor holds more and larger pixels, which deliver the highest possible image quality in terms of moiré-free color rendering without gradation break-ups in even the finest lit surfaces.

A choice of bright viewfinders

One of the important traditional advantages of the medium format is the extra-large and bright viewfinder image, enabling extremely precise compositions and easy operation in dim lighting. The H3D comes with a new HVD 90x viewfinder designed for full performance over the large 36x48mm sensor of H3DII-39/22. On the H3DII-31 the focus screen indicates the slight crop of the sensor format. Hasselblad has added an interchangeable waist-level viewfinder, the HVM, for the entire range of H system cameras. The bright and large viewfinder image is ideal for creative composing and the photographer is able to shoot in the fashion that suits them most; maintaining eye contact with the model, or gaining impact by shooting from a point lower than eye-level, for example.

Unique Hasselblad Colors

The new Hasselblad Natural Color Solution (HNCS) enables you to produce outstanding and reliable out-of-the-box colors, with skin tones, specific product colors and other difficult tones reproduced easily and effectively. In order to incorporate our new unique HNCS and DAC features we have developed a custom Hasselblad raw file format called 3F RAW (3FR). This file format includes lossless image compression, which reduces the required storage space by 33%. The 3FR files can be converted into Adobe's raw image format DNG ('Digital Negative'), bringing this new technology standard to the professional photographer for the first time. In order to utilize DAC and optimize the colors of the DNG file format, conversion from 3FR must take place through FlexColor.

GPS Recording Flexibility

Hasselblad's Global Image Locator (GIL) is an accessory to any H-based Hasselblad digital capture product. Using the GIL device all images captured outside are tagged with GPS coordinates, time and altitute. This data is key to a number of future applications involving image archiving and retrieval. One example is the direct mapping of images within the coming Phocus software to Google Earth.

Instant Approval Architecture

Building on the success of its Audio Exposure Feedback technology, Hasselblad has created Instant Approval Architecture (IAA), an enhanced set of feedback tools, designed to liberate the photographer to focus on the shoot rather than the selection process. IAA triggers audible and visual signals for each image captured, notifying the photographer immediately of its classification status. The information is recorded both in the file and in the file name, providing a quick and easy way to classify and select images, in the field or back home. IAA is a Hasselblad trademark and Hasselblad has a patent pending on the invention.

Extra large enhanced displays on the new Hasselblad products provide a realistic, high quality and perfect contrast image view, even in bright sunlight.

Model comparision

	Pixels	Sensor format	ISO range	Capture speed	HC lens factor	HCD28 Equivalent focal length
H3DII-31	31 million	33.1×44.2mm	ISO 100 - 800	1.2 sec/capture	1.3	31mm
H3DII-22	22 million	36.7×49.0mm	ISO 50 - 400	1.4 sec/capture	1.1	28mm (full-frame)
H3DII-39	39 million	36.7×49.0mm	ISO 50 - 400	1.4 sec/capture	1.1	28mm (full-frame)

HASSELBLAD H3DII

Three modes of operation and storage

The Hasselblad H3DII offers a choice of storage devices: portable CF cards, the flexible ImageBank-II or a computer hard drive. With these three operating and storage options, you are able to select a mode to suit the nature of the work in hand, whether in the studio or on location.

FlexColor workflow for the professional photographer

FlexColor offers an image processing workflow that gives the highest degree of control in tethered operation, with tools like overlay masking to help bring productivity to advanced set composition. FlexColor allows the photographer to manipulate color temperature and compare image details across multiple images. FlexColor processes the raw 3FR files generated by the Hasselblad . FlexColor runs natively on both Macintosh and Windows computers and allows you to provide free copies to all your co-workers and production partners.

Free upgrade to the world's most advanced image processing software!

Over the years, the image processing engine in Hasselblad's FlexColor software has evolved into a powerful raw converter. The upcoming release of Phocus by Hasselblad adds an entirely new processing engine – featuring a range of new techniques and features and the power to support the latest Hasselblad camera developments and to enable groundbreaking new levels of image quality. Flexcolor users will be eligible for a free upgrade to Phocus when it is made available at the end of 2007. Check back on **www.hasselblad.com** for exact release dates.

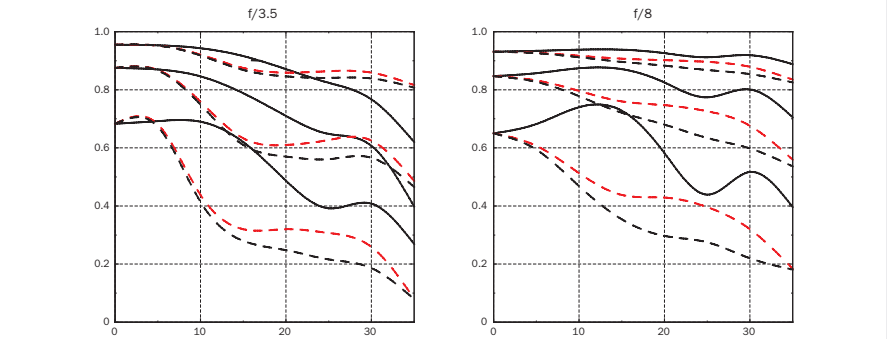
Modular design for flexibility

To further increase usability, the H3DII has been designed to allow the digital capture unit to be detached and used on a view camera by way of an adapter. When used in this manner, the unit is controlled by the flash sync signal from the view camera shutter.

MTF before and after DAC

The red dotted lines indicate the improvement made by the DAC chromatic aberration correction.

Example: HC 35mm



Technical specification

SPECIFICATIONS DIGITAL FEATURES			
	H3DII-22	H3DII-31	H3DII-39
Sensor size	22 Mpixels (4080×5440 pixels)	31 Mpixels (4872×6496 pixels)	39 Mpixels (5412×7212 pixels)
Sensor dimensions	36.7×49.0 mm	33.1×44.2 mm	36.7×49.0 mm
Image size	RAW 3FR capture 30 MB on average. TIFF 8 bit: 66 MB	RAW 3FR capture 40 MB on average. TIFF 8 bit: 95 MB	RAW 3FR capture 50 MB on average. TIFF 8 bit: 117 MB
File format	Lossless compressed Hasselblad RAW 3FR		
Shooting mode	Single shot		
Color definition	16 bit		
ISO speed range	ISO 50, 100, 200 and 400	ISO 100, 200, 400 and 800	ISO 50, 100, 200 and 400
Image storage	CF card type U-DMA (e.g. SanDisk extreme IV), ImageBank-II or tethered to Mac or PC		

HASSELBLAD H3DII

Technical specification, continued

SPECIFICATIONS DIGITAL FEATURES			
	H3DII-22	H3DII-31	H3DII-39
Color management	Hasselblad Natural Color Solution		
Storage capacity	2 GB CF card holds 66 images on average	2 GB CF card holds 50 images on average	2 GB CF card holds 40 images on average
Capture rate	1.4 seconds per capture 41 captures per minute	1.2 seconds per capture 42 captures per minute	1.4 seconds per capture 39 captures per minute
Color display	Yes, 3 inch TFT type, 24 bit color, 230 400 pixels		
Histogram feedback	Yes		
IR filter	Mounted on CCD sensor		
Acoustic feedback	Yes		
Software	FlexColor (included; for Mac and PC)		
Platform support	Macintosh: OSX. PC: NT, 2000, XP, XP64, Vista and Vista64.		
Host connection type	FireWire 800 (IEEE1394b)		
View camera compatibility	Yes, controlled via flash sync. Electronic shutters must be controlled from local panel.		
Operating temperature	0 - 45 ˚C / 32 - 113 ˚F		
Dimensions	Complete camera w. HC80 mm lens: 153 × 131 × 213 mm [W × H × D]		
Weight	2290 g (Complete camera w. HC80 mm lens, Li-Ion battery and CF card)		

SPECIFICATIONS CAMERA FEATURES	
Camera type	Large sensor full format DSLR
Lenses	Hasselblad HC lens line and HCD 28 with integral central lens shutter.
Shutter speed range	32 seconds to 1/800 second
Flash sync speed	Flash can be used at all shutter speeds.
Viewfinder options	• HVD 90x: 90° eye-level viewfinder w. diopter adjustment (-5 to +3.5D). Image magnification 3.1 times. Integral fill-flash (G.No. 12 @ ISO100). Hot shoe for SCA3002-system flashes from Metz™. • HV 90x: 90° eye-level viewfinder w. diopter adjustment (-4 to +2.5D). Image magnification 2.7 times. Integral fill-flash (G.No. 12 @ ISO100). Hot shoe for SCA3002-system flashes from Metz™. • HVM: Waist-level viewfinder
Focusing	Autofocus metering with passive central cross-type sensor. Ultra focus digital feedback. Instant manual focus override. Metering range EV 1 to 19 at ISO 100.
Flash control	Automatic TTL centre weighted system. Uses built-in flash or flashes compatible with SCA3002 (Metz™). Output can be adjusted from -3 to +3EV. For manual flashes a built-in metering system is available.
Exposure metering	Metering options: Spot, Centre Weighted and CentreSpot. Metering range Spot: EV2 to 21, Centre Weighted: EV1 to 21, CentreSpot: EV1 to 21
Power supply	Rechargeable Li-ion battery (7.2 VDC / 1850 mAh). Optional cassette for 3 CR-123 Lithium batteries included.
Film compatibility	No

HASSELBLAD H3DII

Connectivity diagram

Optional viewfinders

HV 90x viewfinder

HVM waist-level viewfinder

Optional storage

ImageBank-II 100 GB External storage

H3DII Camera

HVD90x view-finder (included)

Sensor unit (included)

Camera body

Optional V system lenses

CF lens adapter (DAC function unavailable)

Lenses

All HC lenses, including HCD 28, extension tubes and converter

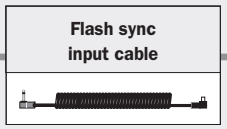
Accessories

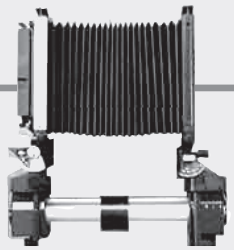
GIL GPS receiver

Large format cameras

Any shutter with X sync

View camera adapter for Hasselblad H cameras (not available from Hasselblad)





Any view camera with Hasselblad H adapter

Horseman ISS electronic shutter

Schneider Shutter Control ES

Rollei electronic shutter

HASSELBLAD H3DII

H3DII lens range

		
HCD 4/28mm	HC 3.5/35mm	HC 3.5/50mm
		
HC 2.8/80mm	HC 2.2/100mm	HC Macro 4/120mm
		
HC 3.2/150mm	HC 4/210mm	HC 4.5/300mm
		
HC 3.5-4.5/50-110mm	HC 1.7X converter	All C-type lenses from the V system with optional CF lens adapter

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