HASSELBLAD H3DII 39MS

With the introduction of the H3DII-39MS, Hasselblad further refines the concept of high-end full-frame DSLR cameras. The H3DII-39MS, complements the fourth generation H3DII high-end DSLR, with multi-shot functionality: the ultimate choice for still life studio photography. Moiré free images that exhibit a level of sharpness, resolution and color fidelity that you have to experience to believe are now attainable. This capability incorporated with the unparalleled abilities of the H3DII produce an unbeatable combination in the world of digital medium format photography today. The H3DII-39MS includes H3DII's UltraFocus architecture giving access to the newest HCD 28mm lens, designed and optimized solely for digital image capture. Software features including Digital Auto Correction lifts image quality to a level yet unseen in digital photography, including automatic correction for chromatic aberration, distortion and vignetting.

Non-compromising details and colors

The multi-shot technology realizes the capture of still life subjects with all details represented in true detail and color resolution. By capturing a sequence of 4 shots, each offset by a one pixel increment, every point on your set is rendered with its true red, green and blue color components. In this way, true detail and true color are acquired without interpolation of any kind. For stills photography it simply does not get better.

When used outdoors or on location, the H3DII-39MS can perform normal single-shot mode photography too.

Ultra-Focus and Digital Auto Correction for image perfection

Using the Ultra-Focus engine of H3DII-39MS the full HC/HCD lens program is further enhanced, bringing a new level of sharpness and resolution. Hasselblad's Digital Auto Correction for color aberration, distortion and vignetting is then added.

The design of the 28mm HCD lens has been optimized for the actual 36×48mm area of the sensor to make it more compact and to work in conjunction with DAC.

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 thanks 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.

HASSELBLAD H3DII 39MS

View-camera work

The H3DII-39MS has been designed to allow the digital capture unit to be detached and used on a view camera by way of an H system adapter. In this configuration the digital capture device can work with electronic shutters from e.g. Rollei and Schneider, either stand-alone using the flash sync signal from the shutter or tethered to a computer with full control of the electronic shutter from the computer.

Medium format digital capture

In digital photography, the advantages of larger format cameras have become even more obvious. The 6×4.5 cm window allows the Hasselblad H3DII-39MS 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. An interchangeable waist-level viewfinder, the HVM, is available for the entire range of H system cameras.

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.

GPS recording accessory

Hasselblad's Global Image Locator (GIL) is an accessory for any H-based Hasselblad digital capture product. Using the GIL device all images captured outdoors are tagged with GPS coordinates, time and altitude. 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.

Modes of operation and storage

The Hasselblad H3DII-39MS offers a choice of storage devices: CF cards or a computer hard drive. With these two 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.

Phocus software for the professional

Phocus provides an advanced software toolbox that has been especially designed to achieve optimum workflow and absolute image perfection from Hasselblad raw image files.

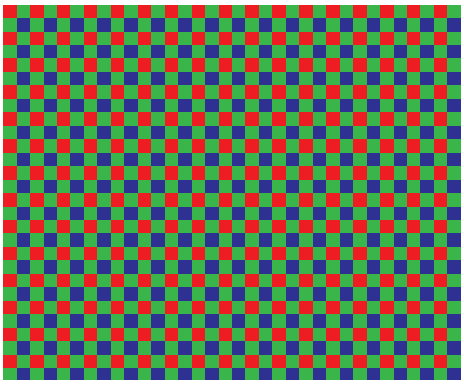
With the H3DII-31 camera system Phocus provides:

- Uncompromising Image Quality
- Special extended camera controls with which to operate your H3DII-31 camera. These features, such as live video for easier shot set-up and workflow, or the ability to control the lens drive for focusing when the camera is in a remote position or when the digital capture unit is mounted on a view camera, bring an entirely new level of flexibility to the way you shoot.
- Moiré Removal Technology automatically applied directly on the raw data, leaving image quality intact and eliminating the need to carry out special masking selections or other manual procedures, saving hours of tedious post-production work.
- Flexible Workflow. The Phocus GUI features easy-to-use options that allow you to customize your set-up to suit a range of different workflow situations, such as choice of import source, browsing/comparison functions, file management, image export in a number of file formats, pre-setting of options for upcoming shoots, and much, much more.
- New Metadata (GPS, HTS 1.5 etc). The extended metadata included in all Phocus images provides for accurate and detailed cataloging and indexing, easy image management, and includes added GPS data functionality in order to allow a range of new functions. Phocus links GPS data directly to Google Earth, for example, making geographic reference a snap and image storage and retrieval much easier. With the HTS 1.5, all settings are stored as metadata in the image file for full function with DAC lens corrections.
- Perfect Viewing Quality. The Phocus Viewer delivers image viewing quality that matches every detail of what you will see later in Photoshop. In addition, the Phocus Viewer allows you to customize layout and composition to suit your current or desired work flow, providing a wide range of options including full view, compare, browse, horizontal, or vertical view, and so on. You can have multiple folders open simultaneously for side-by-side viewing, comparison, and selection.

HASSELBLAD H3DII 39MS

Single Shot

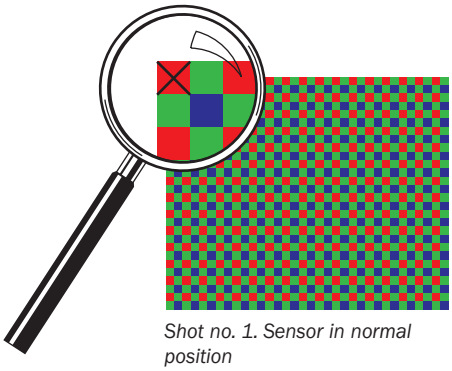
The key to the single shot quality from a CCD sensor is due to the use of a Bayer Mosaic filter. This is a specific layout that is used in conjunction with software to interpret the colour data from the sensor. A single-shot system delivers one colour per pixel, and the remaining two channels must be estimated and calculated using a bestguess strategy. This is done in Hasselblad cameras by using algorithms that optimize colour rendition and sharpness without disturbing the perception of the human eye by the artefacts always present in raw single shot captures.



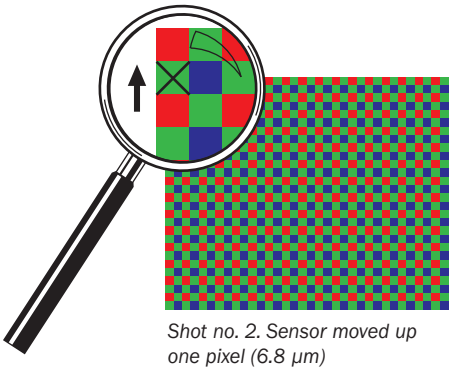
Bayer mosaic pattern

Multi Shot

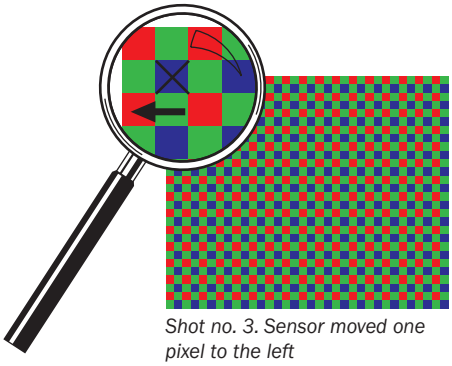
High precision piezo motors control movements of the sensor in one pixel increments. By combining four shots, each offset by one pixel, the true colours, Red, Green and Blue of each point are obtained. The result is full colour information from the sensor with no artefacts like moiré, common with single shot capture.



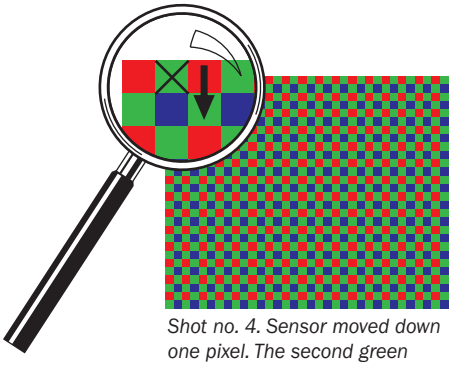
Shot no. 1. Sensor in normal position



Shot no. 2. Sensor moved up one pixel (6.8 µm)



Shot no. 3. Sensor moved one pixel to the left



Shot no. 4. Sensor moved down one pixel. The second green image is used to determine lighting and subject stability

HASSELBLAD H3DII 39MS

Actual image sample

The image of the armour was taken in both 1-shot and 4-shot mode to illustrate the increase in quality that the 4-shot mode produces.

Due to the fact that no guess-work has to be carried out, fine details in the subject are now rendered much better. The 4-shot image also completely lacks the color moiré that can appear in very small details.

Detail in 1-shot mode

Detail in 4-shot mode

HASSELBLAD H3DII 39MS

Technical specification

DIGITAL FEATURES	
Sensor size	39 Mpixels (5412×7212 pixels)
Sensor dimensions	36.7×49.0 mm
Image size	RAW 3FR capture 50 MB on average. TIFF 8 bit: 117 MB
File format	Lossless compressed Hasselblad RAW 3FR
Shooting mode	Single shot / Multi shot (4×)
Color definition	16 bit
ISO speed range	ISO 50, 100, 200, 400 and 800
Image storage	CF card type U-DMA (e.g. SanDisk extreme IV) or tethered to Mac or PC
Color management	Hasselblad Natural Color Solution
Storage capacity	2 GB CF card holds 40 images on average
Capture rate	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	Phocus for Mac and Windows
Platform support	Macintosh: OSX. Windows: XP (32 and 64 bit), Vista (32 and 64 bit).
Host connection type	FireWire 800 (IEEE1394b)
View camera compatibility	Yes, Mechanical shutters controlled via flash sync. Electronic shutters can be controlled from Phocus.
Operating temperature	0 - 45 ˚C / 32 - 113 ˚F
Dimensions	Complete camera w. HC80 mm lens: 153 × 131 × 207 mm [W × H × D]
Weight	2450 g (Complete camera w. HC80 mm lens, Li-Ion battery and CF card)

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 39MS

Connectivity diagram

Optional viewfinders

HV 90x viewfinder

HVM waist-level viewfinder

Tilt/Shift

HTS 1.5. For use with HCD28, HC35, HC50, HC80 and HC100 (including extension tubes)

Accessories

GIL GPS receiver

H3DII Camera

HVD90x viewfinder (included)

Sensor unit (included)

Camera body

Optional V system lenses

CF lens adapter (DAC function unavailable)

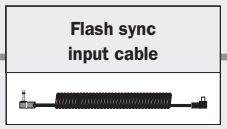
Lenses

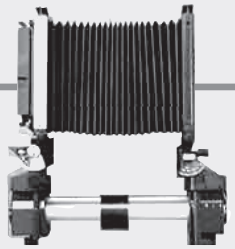
All HC/HCD lenses, including extension tubes and converter

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

Schneider Shutter Control ES

Rollei electronic shutter

HASSELBLAD H3DII 39MS

H3DII-MS 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	HCD 4-5.6/35-90mm Aspherical	All C-type lenses from the V system with optional CF lens adapter

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