

HASSELBLAD **H4x**

A new Camera for H1, H2 and H2F Photographers

The H4X camera body is designed as an upgrade to the current H1, H2 and H2F camera users. It is based on the H4D camera body and it provides new features such as True Focus and it works with all H System lenses. This includes the use of the HCD 28mm and the HCD 35-90mm lenses with film and with

3rd party digital backs. The H4X camera offers the same compatibility with film magazines and digital backs as does the H1 and H2 cameras. It is not compatible with any H1D, H2D, H3D or H4D digital capture unit. A complete compatibility list is included later in this document.



Wide range of high performance lenses

The H4X lens program is designed and engineered by Hasselblad to meet the highest optical performance specifications. The HC and HCD lenses cover a wide spectrum of focal lengths and feature the fastest and most precise 645 auto-focus system there is today. The unique HCD 28mm wide-angle lens and the HCD 35-90 Zoom lens have been tailored for digital use with a 36x48 mm sensor, and only a slight drop in performance is experienced at the edge of the image when working with larger sensors. The integral lens shutters allow for flash sync down to 1/800 second. The lens shutter also provides silent and vibration-free operation.

Superior Viewfinder program

The viewfinder is the most important interface between the photographer and the subject. The large and bright viewfinder of the H4X camera shows the image crisp and clear, letting you work even in dim lighting with perfect result. The HV 90X viewfinder covers the full area of the HC lens line. It also offers near 100% image view and eyesight dioptré correction. The large eyepiece also allows full image view even when wearing glasses. The HVD 90X has been optimized for digital work with the digital sensor size of 36x48mm. A waist-level viewfinder, HVM, is available as accessory.

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Advanced exposure control

The exposure can be controlled either by sophisticated exposure automation or with full manual control.

Programmable

To make the camera suit specific requirements its design includes 35 functions that can be tailored by the user. The camera features four buttons that can easily be programmed as short-cuts to the most used functions of the camera. In this way you can instantly reach your favourite function just by clicking a button.

Profiles for simplicity and safety

With the numerous functions that can be set by the user for optimal use, a demand for a fool-proof way of controlling these changes arose - and thus the "Profiles" function was born. A profile stores all the settings of the camera and can be recalled at one click of a button. This allows for quick switching to a given mode of photography, it eases set-up time, and perhaps most important, it prevents mistakes from happening.

Built-in fill flash

The viewfinder also features a compact flash. Though primarily intended to be used as fill flash it can also be used as main flash in some cases. The flash has a metric guide number of 12, but when used as fill flash with -2 stops adjustment it is equal to guide number 24.

Automatic flash

With the SCA 3902 flash adapter, any flash compatible with the SCA3002 system defined by Metz can be used. This means that you can choose from small and compact flashes for extremely portable use as well as larger and more powerful flashes when so required.

Flash metering system

The built-in flash metering system is designed to be used when working with manually controlled flashes, such as studio flashes.

Interchangeable film magazines

The film magazines for the H4X camera features inserts that can handle both 120 and 220 film. If you use Bar coded film (defined by FUJIFILM) the setting of both film type and ISO value is automatic. Film wind-on and wind-off is also automatic with all films.

Dot-Matrix displays

The grip LCD and the viewfinder LCD is of dot-matrix type. This means that the camera is able to present clear and easy-to-understand information and messages instead of fixed and sometimes not so obvious symbols.



HTS 1.5 tilt/shift adapter and a HCD 28mm lens.



5 HC/HCD lenses including Extension Tubes can be used with the HTS 1.5

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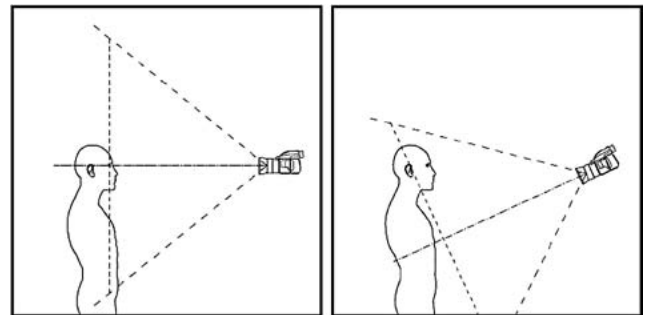
True Focus and Absolute Position Lock

True Focus helps solve one of the most lingering challenges that faces serious photographers today: true, accurate focusing throughout the image field. Without multi-point auto-focus a typical auto-focus camera can only correctly measure focus on a subject that is in the center of the image. When a photographer wants to focus on a subject outside the center area, they have to lock focus on the subject and then re-compose the image. In short distances especially, this re-composing causes focus error, as the plane of focus sharpness follows the camera's movement, perpendicular to the axis of the lens.

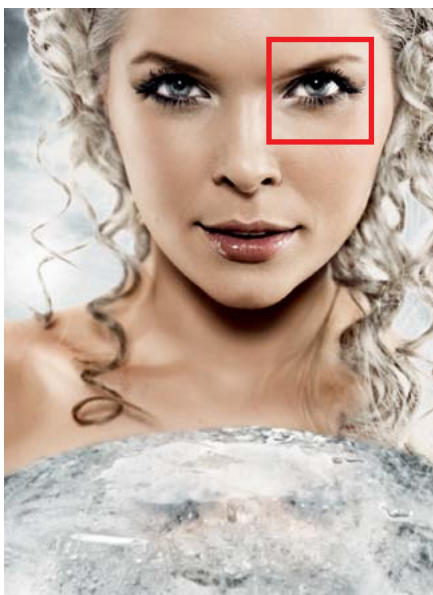
The traditional solution for most DSLR cameras has been to equip the camera with a multi-point AF sensor. These sensors allow the photographer to fix an off-center focus point on an off-center subject, which is then focused correctly. Such multi-point AF solutions are often tedious and inflexible to work with. Due to the physics of an SLR-camera, the off-center focus points that are offered are all clustered relatively close to the center of the image. To set focus outside of this center area, the photographer is still forced to focus first, and then shift the camera to reframe, with the resulting loss of focus as a result.

To overcome this problem, Hasselblad has used modern yaw rate sensor technology to measure angular velocity in an innovative way. The result is the new Absolute Position Lock (APL) processor, which forms the foundation of Hasselblad's True Focus feature.

The APL processor accurately logs camera movement during any re-composing, then uses these exact measurements to calculate the necessary focus adjustment, and issues the proper commands to the lens's focus motor so it can compensate. The APL processor computes the advanced positional algorithms and carries out the required focus corrections at such rapid speed that no shutter lag occurs. The H4D's firmware then further perfects the focus using the precise data retrieval system found on all H System lenses.



The plane of focus changes when the camera is tilted for composition.



The middle image shows the result when not using True Focus. While this image looks relatively sharp, the rightmost image where True Focus has been used, is razor sharp.

Photo: Marcel Pabst

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Full H1 and H2 functionality – and more

The H4X is designed to provide the same extensive functionality as the H1 and H2 cameras. It also adds a number of new functions such as:

- True Focus
- HCD lens compatibility
- HVD 90x viewfinder optimized for 36×48 mm format
- HV 90x-II viewfinder optimized for the film and 40.2×53.7 mm format

All these new features are available regardless if you are working with film magazines, the CF/CFH back or a compatible 3rd party digital back.

- High power AF illumination
- Number of Profiles increased to from 4 to 8
- More programmable button options



ITEM	COMPATIBLE OPERATION
Film magazines HM-16-32	Yes (also with HCD lenses)
Instant film back HMi-100	Yes (also with HCD lenses)
HC lenses	Yes
HCD lenses	Yes (Lower edge image quality and vignetting can occur for sensors larger than 36×48 mm)
CF Lens adapter	Yes
Converter H1, 7x	Yes
Extension tubes HE	Yes
HTS	Yes
GIL (GPS receiver)	No
HV 90x Viewfinder	Yes
HV 90x-II Viewfinder	Yes
HVD 90x Viewfinder	Yes
HVM Viewfinder	Yes
Flash system SCA 3902	Yes
Battery Grip rechargeable Li-ion	Yes
DC Power Grip	Yes
All focusing screens	Yes
3rd party digital backs	Yes. The same compatibility as H1 and H2 cameras

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Technical specification

Features	
Camera type	SLR type camera with interchangeable lenses, viewfinder and magazines
Lenses	Hasselblad HC and HCD lenses with integral lens shutter. Autofocus or manual focusing. All C-type lenses from the V system with optional CF lens adapter
Shutter	Electronically controlled integral lens shutter in each lens. Shutter speed range 1/800 s to 18 hours
Image format	56 x 41.5 mm (Width x Height)
Viewfinder options	<ul style="list-style-type: none"> • 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™ • HV 90x-II: 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™ • 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™ • HVM: Waist-level viewfinder
Focusing screen	Acute Matte type D with markings for spot metering area and AF sensitive area. Optional screens with grid and/or format markings available
Focusing	Automatic and manual focusing. Instant manual focus override. AF metering with passive central cross-type sensor. Metering range EV 1 to 19 at ISO100. High power white focus assist LED for low light conditions
Focusing modes	Manual with optional focus indication in viewfinder, Single shot AF and Continuous AF. Focus lock available in AF modes either with shutter release or any of the four programmable buttons. True Focus to compensate for focus shift when re-composing
Flash control	Automatic TTL-OTF 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. ISO range 16 to 6400 (excluding any exposure adjustment)
Exposure metering	Metering options (with HV 90x-II and HVD 90x): Spot, Centre Spot and Centre Weighted. Metering range Spot: EV2 to 21, Centre Weighted: EV1 to 21, CentreSpot: EV1 to 21. Exposure lock with separate button on camera
Exposure modes	Manual, Aperture priority, Shutter speed priority, Programmed and Programmed Variable
Automatic bracketing	Available with 2, 3, 5, 7 or 9 frames. 1/3, 1/2, 1, 2 or 3 EV step. Exposure sequence can be changed
Interval timer	Maximum 32 frames with film (unlimited with digital back). Interval time can be set from 1 second to 1 hour
Multi exposure	Number of exposures can be set to 2, 3, 4, 5 and no limit. Available with film only
Flash metering	Available when using manually controlled flashes
Flash sync speed	Flash can be used at all shutter speeds down to 1/800 s. Flash can be synchronized in the beginning or at the end of the exposure
Flash sync connection	TTL hot-shoe on viewfinder or standard PC connector on camera body
Digital Compatibility	All Hasselblad iexpress, CF and CFH digital backs. 3rd party backs that where compatible with the H1/H2 cameras
Camera displays	Two dot-matrix LCD's, one on the camera grip and one in the viewfinder
Power supply	Cassette for 3 CR-123 Lithium batteries included
External dimensions	Camera body: 144 x 110 x 88 mm
Weight	Camera body: 830 g

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H4X lens range

		
HCD 4/28mm	HC 3.5/35mm	HC 3.5/50-11mm
		
HC 2.8/80mm	HC 2.2/100mm	HC Macro 4/120-11mm
		
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