HASSELBLAD H5D 50c Wi-Fi

The Hasselblad H5D-50c – the worlds first CMOS medium format camera – represents a huge leap forward in camera development and will break new grounds for photographers that now will be able to shoot with the ultimate in image quality regardless of lighting condition. The extremely good high-ISO performance will lift available light photography to new heights and significantly widen the usability of the Hasselblad H System cameras.
The camera is backed by a lens range of 12 extremely high performance lenses – outperforming even the iconic Carl Zeiss lenses for the classic V System. The added Wi-Fi capability provides an even more flexible camera where you can use an iPhone/iPad to control the camera and view images conveniently even on location. The H5D-50c has been developed with one goal: to produce the best image quality possible. The result is stunning and paired with the user-friendliness and wealth of functionality, it is maybe one of the best cameras ever designed. Pick it up, feel the grip, look through the viewfinder and you will have a hard time putting it down.

IMPORTANT FEATURES

- 50 Mpixel CMOS sensor with amazing image quality
- Excellent high ISO performance (ISO 100 - 6400)
- Longer shutter speeds up to 34 minutes. No extra black exposure is required.
- Faster capture rate: 1.5 frames per second
- Live Video with high frame rate
- Live View on rear display
- Built-in Wi-Fi
- Much improved camera handling
- Improved weather sealings
- True Focus auto-focus system with Absolute Position Lock and camera controls.
- A range of 12 high performing lenses with built-in central shutter.

The H5D-50c camera system has been especially designed to meet demands for both flexibility and ultimate image quality. This includes:

- the freedom to choose between eye-level and waist-level viewfinders both providing the best viewfinder image on any camera.
- the choice of combining point-and–shoot and tilt/shift to solve creative commercial challenges.
- the ability to combine working tethered and untethered to get the most of your camera system both on location and in the studio.
- the option of processing your raw images in Hasselblad's Phocus imaging toolbox, or working with your raw images directly in Adobe Photoshop Lightroom.
- Phocus Mobile application (iPhone/iPad) for camera control and image browsing tethered or on location.

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New CMOS sensor

The H5D-50c features a brand new CMOS sensor measuring 43.8 × 32.9mm - almost twice the physical size of the largest 35mm DSLR sensors. Basic ISO rating is from ISO 100 to ISO 6400. The high sensitivity of the new sensor enables completely new application areas for all professional medium format photographers. It is now totally possible to capture super high quality images even at high ISO settings making low light photography easy. This high sensitivity and fast capture speed together with the high dynamic range of 14 stops makes this camera a true all-round camera that can be used for almost any type of photography.

The H5D-50c is built around a high speed architecture that can capture full resolution images at the rate of 1.5 captures per second, working either mobile or tethered to a computer.

The combination of these features makes the H5D-50c the natural choice for the professional photographer wanting to work with the ultimate in image quality whether working in the studio with controlled lighting or on location.

Medium Format digital capture advantage

In digital photography, the advantages of large format cameras have become even more obvious. The basic 6×4.5 cm design allows the H5D-50c to use one of the largest image sensors currently available in digital photography. 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.

An impressive lens line outperforming even the Carl Zeiss icons

The highly renowned H system lens line includes 12 Auto-Focus lenses, all with central lens shutters. Range is from 24mm to 300mm, 50-110mm zoom, 35-90mm zoom, a 1.7X Converter and a dedicated wide angle Macro Converter. The built-in central shutter allows flash to be used at all shutter speeds up to 1/800s. making flash photography in daylight easy. It also improves image quality by gernerating extremely low camera vibration.

The **HTS 1.5 tilt/shift adapter** delivers an easy to use, portable tilt/shift solution for 6 H System lenses ranging from 24mm to 100mm.

The **CF lens adapter** allows use of the classic CF-lenses from the Hasselblad V-camera, with full use of their central shutters, allowing flash to be employed at shutter speeds up to 1/500s. 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 utilise selective focus to creative effect.

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 H5D-50c comes with the HVD 90x viewfinder designed for full performance over the large sensor. 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.

Built-in Wi-Fi

This allows for complete camera control from iPhone or iPad even when the camera is not connected to a computer. Using the iOS app Phocus Mobile, you can see previews, browse images and remote control the camera from your iPhone or iPad.

Digital Lens Correction and Ultra-Focus for image perfection

The H5D-50c camera 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 H System lens program is even further enhanced, bringing a new level of sharpness and resolution.

Detailed information about capture condition is also stored in the image file. This information is then used by Phocus to perform “Digital Lens Correction” (DAC), which is an automatic 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. Digital Lens Correction is available regardless if Phocus or Adobe Photoshop Lightroom is used.

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Improved handling

Many new features have been added to the H5D to make using the camera even easier than before. This includes the option to use the grip controls to control settings and operation of the sensor unit; you can control zoom, browsing and menu selection without taking your hand off the grip. The Profile handling feature allows you to store complete camera settings in memory for easy access. Seven different camera set-ups can be stored and settings from both the body and sensor unit are stored in the profile and these profiles can easily be managed through Phocus software..

Live Video and Live View

The new CMOS sensor allows for much faster operations than CCD sensors. This makes it possible to provide a much improved Live Video in Phocus but also Live View on the rear display. Both modes are perfect for composing and focus checking.

Phocus for professional level workflow

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

With the H5D-50c camera system Phocus provides:

- **Uncompromising Image Quality**
- **Extended camera control** with which to operate your H5D camera. Features, such as live video for easier shot set-up and workflow, or the ability to control the lens drive for focusing or camera settings 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.
- **The extended metadata** (GPS, etc), included in all Phocus images provides for accurate and detailed cataloguing and indexing, easy image management, and includes added GPS data functionality in order to allow a range of functions. Phocus links GPS data directly to Google Earth, for example, making geographic reference a snap and image storage and retrieval much easier.
- **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 workflow, 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. The improved Live Video function will now provide high frame rate in colour.
- **L* colour space.** The Reproduction tool will now let you select a new Hasselblad L* working space as an alternative to Hasselblad RGB.
- **Built-in calibration of Eizo monitors.** Use the built-in calibration tool for self calibrating Eizo monitors-
- **Built-in Capture Sequencer.** Control your camera from Phocus in new ways. Perform customisable bracketing sequences, self-timer, interval timer etc. directly from Phocus.
- **Phocus Mobile** app to control the camera and view images on your iPhone/iPad. Works tethered or over Wi-Fi.

Electronic spirit level

The H5D-50c has an integrated electronic spirit level to make it easy to produce a straight horizon. The spirit level is shown both in the viewfinder and on the rear LCD. You therefore don't need to take your eye from the viewfinder to check camera alignment.

Camera info on rear LCD

To improve visibility in certain situations, the rear LCD can now show a copy of the camera grip LCD where you see all relevant shooting information.

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Hasselblad's unique natural colours

Hasselblad's Natural Colour 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 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 file size by 33%. The 3FR files can be opened directly in Apple or Adobe imaging environments.

Two modes of operation and storage

The H5D-50c offers a choice of storage devices: CF cards or a computer hard drive. With these 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.

Accessories including GPS Recording Flexibility

Hasselblad's Global Image Locator (GIL) is an accessory for use with any Hasselblad H-System digital capture product. With the GIL device, all images captured outdoors are tagged with GPS coordinates, time and altittude. This data provides the key to a number of future applications involving image archiving and retrieval. One example is the direct mapping of images in Phocus software to the Google Earth application. Check out full list of accessories at: **http://www.hasselblad.com/products/lenses-and-accessories/h-system-accessories.aspx**

Options for working with tilt/shift

Two basic options are available for tilt/shift work with H5D-50c. A simple-to-use, portable adapter solution and the classic view camera solution.

The HTS 1.5 tilt/shift adapter for H5D-50c allows for portable tilt/shift with 6 of the H System lenses ranging from 24mm to 100mm. Effective focal lengths are 36 to 150mm.

Please refer to the separate datasheet on this product for details.

To further increase usability, the H5D-50c has been designed to allow the digital capture unit to be detached and used on a view camera by way of an adapter.

Please refer to the separate datasheet on Hasselblad View Camera solutions for details.

Six H System lenses including Extension Tubes can be used with the HTS 1.5: HCD24, HCD28, HC35, HC50, HC80 and the HC100.

H5D with HTS 1.5 tilt/shift adapter and a HCD 28mm lens.

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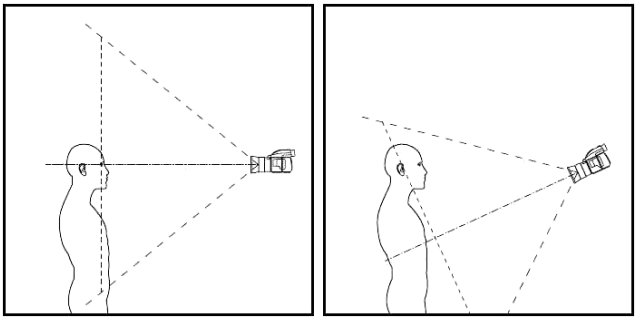
True Focus and Absolute Position Lock

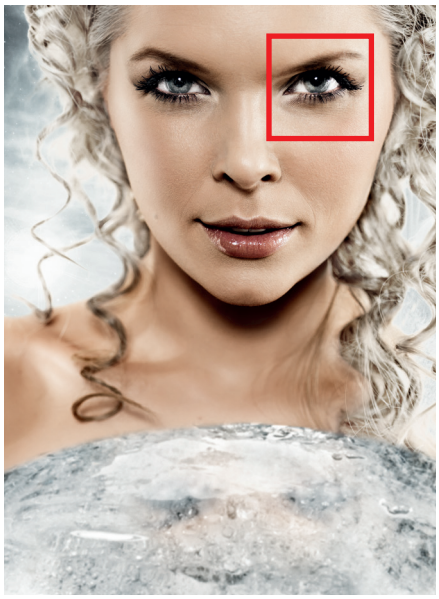
True Focus helps solve one of the most lingering challenges that faces serious photographers today: true, accurate focusing throughout the image field. Without multi-point auto-focus a typical auto-focus camera can only correctly measure focus on a subject that is in the center of the image. When a photographer 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 H5D'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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Technical specification

DIGITAL FEATURES	
Sensor type	CMOS, 50 Megapixels (8272 × 6200 pixels, 5.3 × 5.3 µm)
Sensor dimensions	43.8 × 32.9 mm
Image size	RAW 3FR capture 65 MB on average. TIFF 8 bit: 154 MB
File format	Lossless compressed Hasselblad 3FR
Shooting mode	Single shot
Color definition	16 bit
ISO speed range	ISO 100, 200, 400, 800, 1600, 3200 and 6400
Storage options	CF card type U-DMA (e.g. SanDisk extreme IV) or tethered to Mac or PC
Color management	Hasselblad Natural Colour Solution
Storage capacity	16 GB CF card holds 240 images on average
Capture rate	1.5 captures per second. 50 captures per minute
Display	3 inch TFT type, 24 bit color, 460,320 pixels
Histogram feedback	Yes (on rear display and on camera grip display)
IR filter	Mounted in front of sensor
Acoustic feedback	Yes
Software	Phocus for Mac and Windows
Platform support	Macintosh: OSX version 10.6. PC: XP/Vista/Windows 7 (32 and 64 bit)/8 [1]
Host connection type	FireWire 800 (IEEE 1394b)
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
Wi-Fi	802.11 a, b, g, n
Dimensions	Complete camera w. HC80 mm lens: 153 x 131 x 205 mm [W x H x D]
Weight	2290 g (Complete camera w. HC80 mm lens, Li-Ion battery and CF card)

[1] *Phocus 2.8 or later 64 bit only*

CAMERA FEATURES	
Camera type	Large sensor medium format DSLR
Lenses	Hasselblad H system lens line with integral central lens shutter
Shutter speed range	34 minutes 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. Image magnification 3.2 times
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 / 2900 mAh)
Film compatibility	Yes

Victor Hasselblad AB reserves the right to make changes without notice to the above specifications

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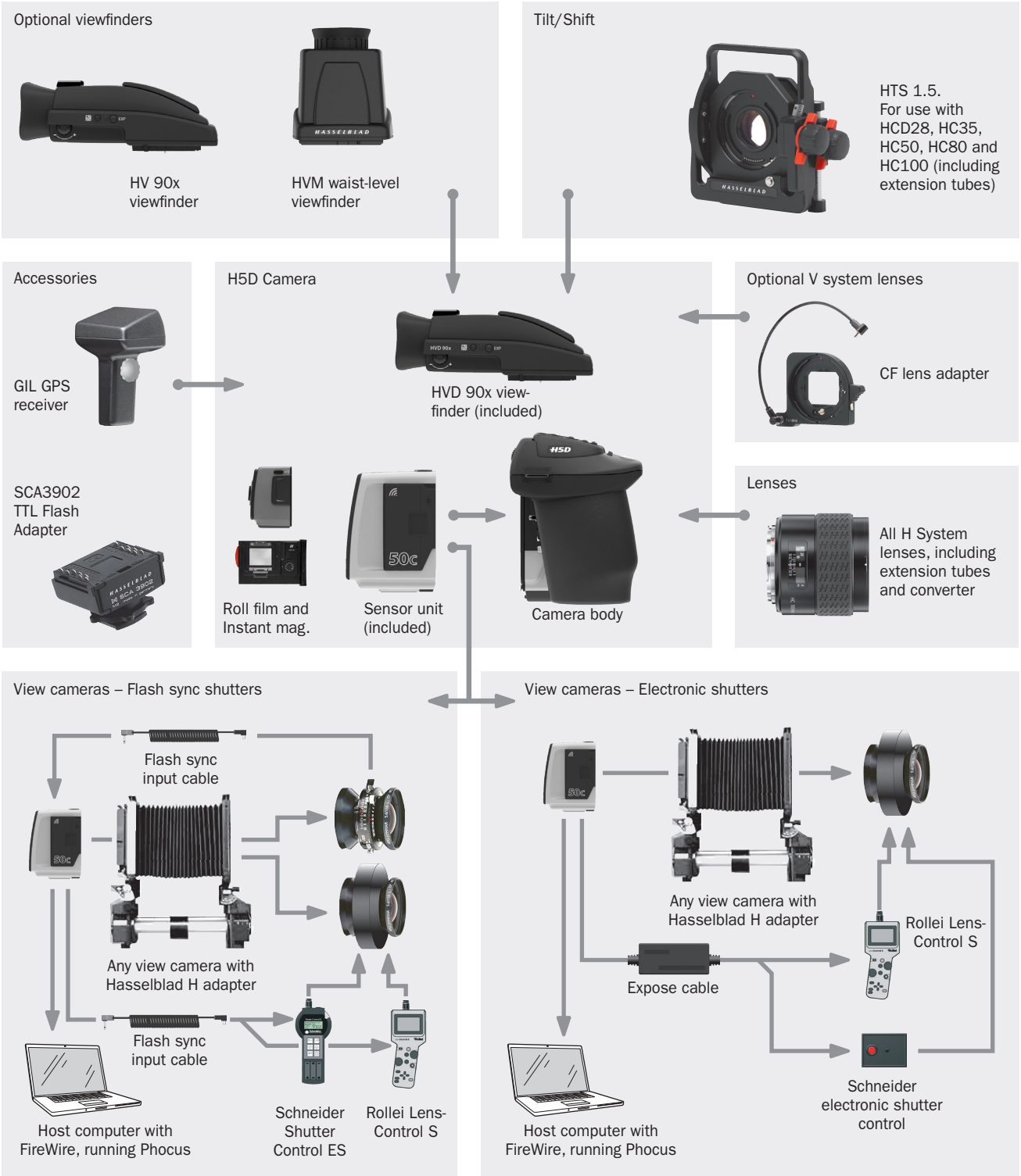
Connectivity diagram



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H5D-50c Wi-Fi lens range

HCD 4.8/24mm

HCD 4/28mm

HC 3.5/35mm

HC 3.5/50-IImm

HC 2.8/80mm

HC 2.2/100mm

HC Macro 4/120-IImm

HC 3.2/150mm

HC 4/210mm

HC 4.5/300mm

HC 3.5–4.5/50–110mm

HCD 4.0–5.6/35–90mm

Most V system C type lenses with optional CF lens adapter

Specification subject to change without notice.