Canon

XL H1S
XL H1A

Exceptional Image Quality… Definitive Control… Professional Functionality.

XL H1S

Canon's XL H1S and XL H1A High Definition HDV, shoulder-mount camcorders stand out in the most demanding environments. Decades of Canon leadership in the design and manufacture of cameras and lenses for broadcast and still photography ensure optical excellence and superb image quality, while Canon's technical prowess delivers industry standard connectivity and an extraordinary level of custom control.

HDV
HDV 1080i


Canon
HDV
Canon
HDV
XL H1A

Exceptional Image Quality Only Canon Can Deliver

Genuine Canon 20x HD Video Zoom Lens III

HD Video Lens

The **XL H1S** and **XL H1A** have all the advantages of Canon's proven leadership in optical technology and optics drive HD image quality. The interchangeable **Genuine Canon 20x HD Video Zoom Lens III** (35mm equivalent 38.9–778mm) is a new high-performance L-series lens, specifically designed for HD production. Now in its third iteration, this redesigned lens incorporates two aspherical lenses, Canon's world-renowned fluorite glass and SR multi-coating technologies that produce superior image quality with excellent resolution, contrast and minimal chromatic aberration. The **L-series** designation that is identified by the distinctive red ring has become the symbol of professional lenses worldwide for its unmatched reputation as the choice of industry professionals the world over. The lens also features a new **manual iris ring** in 1/16-stop increments for exceptional exposure control and two built-in **ND (Neutral Density) filters** that reduce exposure by 1/6 (2 stops) or 1/32 (5 stops). Focus and zoom operations have also been improved so that they allow manual focusing during zooming. Design and ergonomics have further been improved such as a weightier zoom ring and an adjustable rotational angle for the zoom ring, contributing to a lens feel that many professionals prefer. **Lens Presets** also allow the operator to store any given focus or zoom point and return to that position with a single touch of a button.

Fast, Responsive, Versatile Zoom

With a newly designed ring shape and increased speed, the camera's zoom starts and stops with exceptional smoothness and provides a comprehensive array of options. The zoom can be controlled in three different ways—the lens zoom ring, grip zoom lever or handle zoom lever (for low-angle shots). It features *three widely ranging zoom speeds*, and *16 levels* of speed control. With the new Genuine Canon 20x HD Video Zoom Lens III attached, zooming speeds from wide to tele range in speeds from *5 minutes* to an astounding *1.2 sec.* at the fastest setting. Variable zoom speed operation with 16 levels of speed control is also possible through the pressure-sensitive zoom lever (rocker). Or choose from one of the 16 levels and set it so that zooming is done at a constant pace. Furthermore, starting and stopping of zoom movement is "*ramped*," avoiding "*zoom shock*" in your videos or broadcasts for a more natural effect.

SLOW	Approx. 4.3 sec. (speed: 16x) to approx. 5 min. (speed: 1x)
NORMAL	Approx. 2.0 sec. (speed: 16x) to approx. 3 min. (speed: 1x)
FAST	Approx. 1.2 sec. (speed: 16x) to approx. 60 sec. (speed: 1x)

Zoom speed can be set to NORMAL, SLOW or FAST via C.Fn-02

Comprehensive Focus Control

The XL H1S and XL H1A deliver HD, which demands precise focus. The highly responsive, independently functioning **focus ring** (with selectable operational direction) allows the videographer to focus manually even while zooming—in both Manual Focus and AF mode. *4 selectable preset focus speeds* are available along with *three settings* of sensitivity for the focus ring allowing you to set the responsiveness to your liking. **Push AF** control lets you temporarily override manual focus to quickly find critical focus, while a **Focus Limit** function (selectable to on or off) limits the focusing range of the lens such as when shooting macro. To further assist in focusing, dedicated **Peaking** and **Magnifying** controls are available. For Peaking, frequency (edge thickness) and gain (edge density) levels are adjustable. Two settings can be stored and accessed quickly with a touch of a button. By attaching the included external monitor cable to the component terminal of a monitor, the operator can also use peaking and magnify controls to check manual focus on a larger screen rather than in the finder.

Canon Interchangeable XL Lens Mount

The XL H1S and XL H1A feature the **XL mount** system that offers the added range and flexibility of using optional interchangeable lenses, including the wide-angle **Canon 6x HD Video Zoom XL 3.4–20.4mm L lens** (35mm equivalent 24.5–147mm), ideal for applications requiring a wider field-of-view. This L-series lens captures in Full HD clarity and incorporates all of Canon's legendary optical superiority. The XL lens mount also enables the use of the **Extender XL 1.6x**, which increases the focal length by 1.6x and the **EF Adapter XL**, which enables users to attach a wide array of Canon photographic **EF lenses** (only L-series is recommended)—for specialized image capture.

Extender XL 1.6x

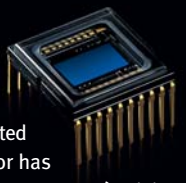
EF Adapter XL

SuperRange Optical Image Stabilizer

SuperRange OPTICAL IMAGE STABILIZER

Steady images are ensured with Canon's Optical Image Stabilizer. The system continuously compensates for shake and jitter by activating a Vari-Angle prism when the gyroscopic sensors detect camera movement. The XL H1S and XL H1A can correct a wide range of vibration because the cameras' 20x HD Video Zoom Lens III incorporates Canon's **SuperRange Optical Image Stabilizer** technology to analyze the image at the CCD sensor. The result is extraordinary camera shake correction, even at long focal lengths.

Three 1/3" Native 16:9 CCDs (1440 x 1080)



Its sophisticated **3CCD** design gives each primary color a dedicated native 16:9 sensor. Each sensor has approx. **1.67 million pixels (1440 x 1080)**, giving the XL H1S and XL H1A a high pixel count (equal to 800 TV lines of horizontal resolution). Color is rendered with exceptional accuracy, in a wide dynamic range and with virtually no color noise.

Canon DIGIC DV II HD Image Processor

DiG!C DV II

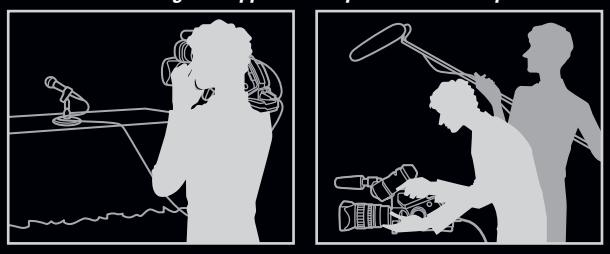
Engineered and manufactured exclusively by Canon and specifically for HD, the latest generation **DIGIC DV II HD Image Processor** delivers optimal image quality at the highest operating speeds. The DIGIC DV II HD Image Processor is designed for HD, operating at 1440 x 1080 pixels with 4:2:2 color sampling. Color reproduction is exquisitely natural, especially in skin tones and in dark or light scenes. A hybrid noise reduction system employs dual processes to create brilliantly clear HD images.

Professional Functionality for Today's Production Environments

Flexible Audio Control

The XL H1S and XL H1A allow for advanced control over all aspects of audio during recording. The camcorder is equipped with **2 built-in XLR terminals**, each with an individual sensitivity setting. Sensitivity for the XLR line input manual operation has been increased as well as the amplitude of the audio line output level being switchable between 1 Vrms and 2 Vrms at full scale for added audio quality. This allows for audio output at a maximum +6 dBV when video is recorded at the standard +4 dBu input setting. XLR and microphone sensitivity selections include +12 dB, +6 dB, 0 dB, -6 dB and -12 dB. 2-channel recording is possible via simultaneous use of the supplied microphone and XLR inputs. Automatic level control settings for both XLR channels can be set to link or remain independent to each other. The camcorder is also equipped with a **3.5mm terminal** for a camera microphone, **3.5mm stereo mini-phono jack**, and a rugged **headphone terminal** with level control. Additional audio controls include an **audio limiter** function (manual recording mode) to prevent distortion in audio signals due to sudden loud noises, a **1 kHz Reference Tone** (selectable to -12 dB, -18 dB or -20 dB), and **monitor output** selections of LR/LL/RR/monaural.

2 Channel Recording via supplied microphone and XLR inputs



XLR input sensitivity can be set for Channel 1/2 individually

Use the supplied microphone and XLR input at the same time

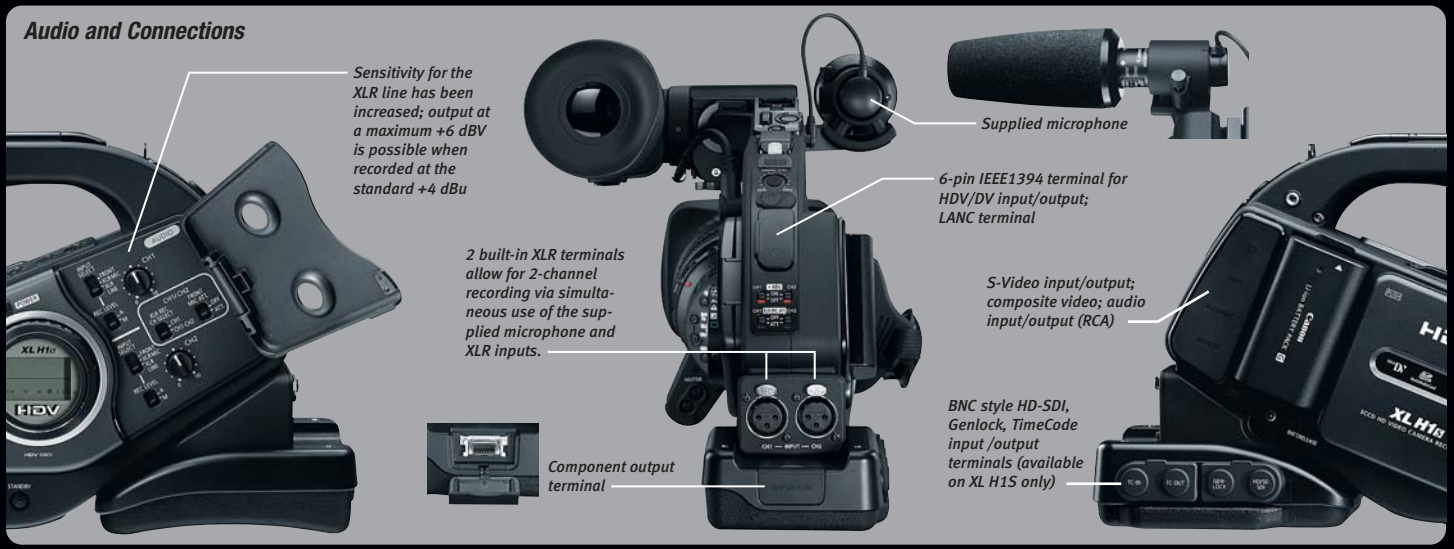
HD-SDI, Genlock and Time Code Connection Terminals (XL H1S only)

The Canon XL H1S is ready for any professional application with **HD-SDI**, **Genlock** and **Time Code Connections (BNC)**. SDI outputs conform to industry standards HD-SDI (SMPTE 299M) or SD-SDI (SMPTE 272M. The XL H1S includes embedded audio and time code. The HD-SDI output provides an uncompressed *1.485 Gbps 60i signal at 1920 x 1080 resolution with 4:2:2 color sampling*. Because a single industry standard connection carries video, audio and SMPTE (LTC) Time Code, cabling complexity is significantly reduced. This enables longer cable runs, improves the operator's mobility, and simplifies the cabling process. Genlock input enables synchronization of a multi-camera, live-switched production environment in the studio or on location. When shooting HD, it can accept either an *SD (blackburst)* or *HD (tri-level)* sync signal. A separate SMPTE Time Code Input and Output terminal accommodates time code requirements in multi-camera shoots, or when synching with other devices.

Superior Connectivity

Additional standard connectors include a resilient 6-pin IEEE1394 terminal which provides a more robust connection to external hardware, component analog video output (1080/60i or 480/60i connection), S-Video input/output, composite video output and LANC terminal. The XL H1S and XL H1A are also equipped with a Flash Accessory Shoe for use with Canon EX-series Speedlites.

Audio and Connections



Definitive Control Over Capture... Your Vision Crafted with Precision

Customization Features

The XL H1S and XL H1A provide numerous opportunities for customization. **23 image adjustments, 22 display options (40 sub-items) and 21 custom function settings (33 sub-items)** can be adjusted to fine-tune the cameras' performance and operating characteristics for different environments, different users or different jobs. Organizations that use many cameras can take advantage of this feature to easily record sets of adjustments to match up multiple units for uniform capture characteristics.

Image Enhancements

Virtually any look the operator intends to create is achievable, thanks to an extensive range of independent adjustments.

Gamma: The NORMAL gamma curve is ideal for viewing footage on TV monitors. The XL H1S and XL H1A also offer CINE 1 to create images with the quality and appearance of film for TV viewing. For images that are intended to be transferred to film, the CINE 2 setting provides an appropriate gamma curve.

Knee

Knee: To control overexposure when shooting high-brightness subjects, there are 4 settings (AUTO, HIGH, MIDDLE, LOW) that fine-tune dynamic range (knee point) adjustments in highlight areas. HIGH enables high-key shooting, while LOW protects the image from overexposure.

Black: Adjustments to dynamic range in the dark areas of the image are covered with 3 settings (STRETCH, MIDDLE, PRESS). STRETCH expands the range, providing greater shadow detail. PRESS narrows the range, increasing the deep black content of the image.

Master Pedestal: Adjustments in steps from –9 to +9 set the video reference black. Higher values brighten the darker areas of the image to reduce overall contrast.

Setup Level: Black level can be adjusted from –9 to +9.

Sharpness: Control the sharpness of the image in steps from –9 to +9.

Horizontal Detail: High, Middle and Low settings adjust the horizontal detail center frequency.

Horizontal/Vertical Detail Balance: Settings from –9 to +9 adjust the horizontal/vertical proportion of the detail correction.

Coring: Subtle noise components can be adjusted in steps from –9 to +9.

Noise Reduction 1/Noise Reduction 2: With Off, High, Middle and Low options for each, these settings deliver a variety of noise reduction methods to be tailored to numerous shooting situations and desired image qualities.

Color Matrix

Color Matrix: Correct color matrices are provided for NORMAL (images to be viewed on a TV monitor), CINE 1 (images with the quality and appearance of film as viewed on TV), and CINE 2 (images intended to be transferred to film).

Color Gain/Hue: Color Gain and Hue are adjustable from –50 to +50 and –9 to +9 respectively.

Master Red, Blue and Green Gain: Each setting is independently adjustable from –50 to +50 to provide precise control over color balance.

Six Color Matrixes: By altering two of the three primary colors, color matrixes including RG, RB, GR, GB, BR and BG (each independently adjustable from –50 to +50) provide extremely fine color control.

Display Adjustments

The XL H1S and XL H1A provide numerous opportunities to customize the menu to the user's individual preferences, maximizing convenience and efficiency.

Custom Function No.	Description
C.Fn-00	Recording Mode Icon
C.Fn-01	Camera Data 1 (F/stop and Shutter Speed)
C.Fn-02	Camera Data 2 (Exposure, White Balance, Gain)
C.Fn-03	Zoom Indicator
C.Fn-04	Focus Distance Display
C.Fn-05	ND Filter Displays
C.Fn-06	Image Effects
C.Fn-07	Focusing Assist Functions (Peaking and Magnification)
C.Fn-08	Customized Functions (Custom Function and Custom Preset)
C.Fn-09	Video Recording Standard Definition
C.Fn-10	DV Recording Mode
C.Fn-11	Frame Rate Display
C.Fn-12	Tape-Related Icons and Displays (Operation Mode, Time Code, DV Control)
C.Fn-13	Remaining Time on the Tape (Normal, Warning, Off)
C.Fn-14	Tape/Card-Related Displays (Ext. Control, Image Stabilization, Image Size/Quality)
C.Fn-15	Light Metering-Related Displays (Spot AE Point and Light Metering)
C.Fn-16	Still Images-Related Icons (Drive Mode, Flash)
C.Fn-17	Remaining Still Images on the Memory Card (Normal and Warning)
C.Fn-18	Audio-Related Displays (Mic Mode, XLR and DV Audio)
C.Fn-19	Condensation Warning Icon
C.Fn-20	Battery-Related Displays (Off, Normal, Warning)
C.Fn-21	Wireless Remote Display (Off, Normal, Warning)

Custom Functions

With a wide array of ways to customize the camcorder's operation, efficiency and uniformity of capture are ensured.

Custom Function No.	Function	Description
C.Fn-00	Shockless WB/Gain	Softens transitions when changing white balance or gain
C.Fn-01	Zoom Ring Control	Changes Zoom Ring responsiveness
C.Fn-02	Zoom Speed	Changes Zoom key speed
C.Fn-03	Focus Ring Control	Sets the sensitivity of the Focus Ring control
C.Fn-04	Buttons OPER.1	Changes the responsiveness of the buttons (Magnification and White Balance Set)
C.Fn-05	Buttons OPER.2	Changes the responsiveness of the buttons (Record Review, Bars, Fade, End Search, and Gain Set)
C.Fn-06	Rings Direction	The directional response of the Zoom, Focus, and Iris rings can be set
C.Fn-07	OPER. Direction	Changes the operation of the cursor and shutter
C.Fn-08	Iris Limit	Sets the diffraction limit (On/Off)
C.Fn-09	Photo Button	Selects function for Photo + CP Data, Photo, Magnifying and OFF
C.Fn-10	Marker Level	Intensity level of the frame overlays and markers on screen can be set—40% (gray) or 100% (white)
C.Fn-11	Focus Assist B/W Mode	Selects whether to change the display to black-and-white when Focus Assist is activated
C.Fn-12	Object Distance Units Display	Selects whether distance to object is displayed in feet or meters
C.Fn-13	Zoom Indicator	Selects whether the zoom indicator is a graphic bar or a numeric display
C.Fn-14	Color Bars	Selects EBU SD (Type 1) or ARIB Multiformat HDTV (Type 2) color bars
C.Fn-15	1kHz Tone	Selects the level of the reference audio tone—OFF, -12 dB, or -20 dB
C.Fn-16	Wireless Remote	Selects whether or not the camcorder will respond to wireless controller commands
C.Fn-17	LANC AE Shift	Exposure control selection using Canon ZR-2000 Zoom Remote Controller
C.Fn-18	Tally Lamp	Controls the function of the Tally Lamp—ON, Blink, or OFF by wireless control
C.Fn-19	LED	Selects whether and which set of LED indicators on the camcorder will be active.
C.Fn-20	Custom REC	Sets custom recording mode for character record and magnifying

Custom Presets

Store up to **9 custom presets** (sets of custom image adjustments) for instant access as needed. Custom presets can be stored on an SDHC/SD Memory Card or MultiMediaCard (along with custom functions, display settings and photos), and shared with other Canon XL H1S, XL H1A, XH G1 and XH A1 camcorders. This capability enables uniform camera setup across multiple camcorders. Three of the custom preset channels (CP7–CP9) are presets designed by Canon: CP7 optimizes images for viewing on consumer-use TV monitors by minimizing noise in dark areas and improving contrast. CP8 settings yield movie-like images when viewed on TV. CP9 settings are ideal for images that will be turned into film. Each of these channels can be reset as desired.

Custom Presets Adjustable Items	
Gamma Curve*	Color Gain
Knee Point Adjustment	Color Phase
Black Stretch/Black Press	R Gain
Master Pedestal*	G Gain
Setup Level*	B Gain
Sharpness	R-G Matrix
Horizontal Detail Frequency	R-B Matrix
Horizontal/Vertical Detail Balance	G-R Matrix
Coring	G-B Matrix
Noise Reduction 1*	B-R Matrix
Noise Reduction 2*	B-G Matrix
Color Matrix*	

**Only for video recording*

Frame Rates

The XL H1S and XL H1A can select from any combination of frame rates in **1080 HD** or **SD** (16:9 or 4:3 aspect ratio) formats. Selectable frame rates include **60i**, **30F** or **24F** as well as an optional upgrade to add **50i/25F** frame rates (performed by a Canon Factory Service Center).

Operational and Image Enhancement Control

The XL H1S and XL H1A incorporate numerous features that deliver superb control over operation and image enhancement.

Skin Tone Detail: Skin Tone Detail makes it easy to minimize imperfections without removing other details, offering fine adjustments in Hue, Chroma, Area and Y level of skin areas, plus a level adjustment for softening skin tones.

Skin Tone Detail

Iris: The Iris Limit function can be set from OFF to f/9.5. With the 20x HD Video Zoom Lens III attached, the multi-level iris control becomes available beyond the iris diffraction f number (f/9.5) all the way up to closed (Iris Limit set to OFF). It can also be controlled using LANC with the optional Canon ZR-2000.

Gain: Gain values can be fine-tuned in 0.5 dB increments from 0 to +18 dB, allowing the operator to fine tune sensitivity when shooting in low light. Additionally, -3 dB and +36 dB settings are available. The gain limit can also be set to your preference during AGC, so you can control levels judiciously, for example, when shooting in the dark. While selecting a WB or Gain setting, a new function ensures shockless transitions.

Color Correction: Color Correction allows the user to control R or B gain (-6 to +6) in 16 areas as well as selected colors set at the Hue, Chroma, Area, Y level while shooting. Selective Noise Reduction lets the user apply noise reduction to targeted color areas. The Menu selection bar uses numbers to simplify EVF Setup, Skin Detail and Color Correction.

White Balance: The camera's high-precision, through-the-lens, 128-segment white balance features an increased adjustment range of 2,000–15,000° Kelvin. White subjects are captured white, even in difficult lighting situations such as candle light. Several automatic modes also deliver accurate color in a variety of shooting situations.

Auto — The camera accurately and automatically adjusts white balance

Outdoor — White balance is adjusted for bright sunlight (5,600° Kelvin)

Indoor — White balance is optimized for incandescent lighting (3,200° Kelvin)

Color Temperature — White balance can be selected in 100° Kelvin intervals in a range of 2,000–15,000° Kelvin

Color Correction

Operational Enhancements: The camera's **Push Auto Exposure** button overrides manual aperture and gain for convenient exposure setup when shooting in Manual mode. The camera is equipped with **2 custom keys** that may be assigned to any of a wide variety of functions at the user's discretion. Buttons can also be set not to respond in the event of an accidental press. The camera can display Color Bars (one for NTSC and the other for PAL) that can be recorded and used as reference signals in playback.

Clear Scan: Clear Scan eliminates the flicker and black bands typical when shooting CRT screens. A total of 100 levels are available from 60Hz to 203.9Hz.

Program AE Modes

The camcorder's seven pre-programmed **Auto Exposure modes** cover a wide variety of shooting situations. Ideal settings produce top-quality results quickly and easily. To simplify operation, Manual Mode is now located next to OFF on the Power Dial.

Full Auto: The camera takes over for point-and-shoot simplicity, setting focus, shutter speed, aperture, gain, white balance, and AE program shift to achieve ideal results.

Auto: This mode offers all the convenience of Easy Recording, but allows the operator the option of manually changing the settings.

Shutter Priority: The user selects the shutter speed and the camera automatically selects the proper aperture for correct exposure.

Aperture Priority: The user selects the lens aperture, and the camera automatically sets the proper shutter speed for correct exposure.

Manual: This mode allows the user to select aperture and shutter speed in any combination. The viewfinder indicates the relation of selected combinations to the exposure as metered by the camera.

Spotlight: Perfect for an automatic solution to a typically tricky situation: when the subject is illuminated by a concentrated light source (such as a spotlight) and the background is relatively dark, this mode automatically adjusts exposure to compensate.

Night: As ambient light levels begin to fall, the camera uses slower shutter speeds to achieve optimal image quality.

Viewfinder

The XL H1S and XL H1A are equipped with a **2.4-inch widescreen** combination EVF/LCD monitor (approx. 215,000 pixels) for a clear, high-resolution image. Numerous functions are supplied to maximize convenience and boost the quality of capture. **Aspect guides** provide industry-standard picture formats, while **Histogram** and **EXIF** displays offer real-time brightness information for highly accurate adjustments. The operator can choose to display up to 8 characters of the **Custom Preset** name and the **SDI bit map** display may be turned on or off. **All Display** can be chosen to hide everything but the image in the viewfinder. A **Magnifying** function (operable with the Photo button) enlarges the viewfinder image, making it easier to perform fine image adjustments. Remaining memory is displayed when using **Focus Enhancements External Hard Disk Recorders**.

Enhanced Operation

Versatility and convenience are hallmarks of the XL H1S and XL H1A. Still images can be "grabbed" from footage either while shooting or during playback. These images are transferred to the SD Memory Card. The camera's power LED illuminates green when the camera is powered up and ready. Playback mode preserves the letter-box format, allowing an accurately proportioned view of captured footage. A default write and protect function prevents accidental erasures. Marker colors may be specified at the user's discretion. The XL H1S and XL H1A also support 9 languages: German, English, Spanish, French, Italian, Polish, Russian, Chinese (simplified) and Japanese.

Specifications

SYSTEM

Image Sensor: 1/3-in. CCD x 3 (horizontal pixel shift), approx. 1,670,000 pixels
Effective Pixels:
Video: [HD] approx. 1.56 megapixels (1440 x 1080)
[DV] SD/4:3 approx. 1.17 megapixels (1080 x 1080)
[DV] SD/16:9 approx. 1.56 megapixels (1440 x 1080)
Still Image: [4:3] approx. 1.17 megapixels (1080 x 1080)
[16:9] approx. 1.56 megapixels (1440 x 1080)
Lens: Interchangeable Genuine Canon 20x HD Video Zoom Lens III (Canon XL lens mount); Focal length: 5.4–108mm, f/1.6–3.5 (38.9–778mm in 35mm terms); Independent manual focus, zoom and iris rings
Image Stabilizer: SuperRange Optical Image Stabilizer (Vari-Angle Prism)
Zoom: Handle zoom: 16 fixed speed level setting available; Grip zoom: variable speed, 16 fixed speed level setting available
Video Recording System: Two rotary heads, helical scan azimuth recording
[HDV] High Definition Video 1080i
[DV] Consumer digital VCR SD system
Audio Recording System: 2-channel recording:
[HDV] MPEG-1 Audio Layer II, Bit rate: 384kbps (2CH)
[DV] PCM digital sound, 16-bit (48 kHz) or 12-bit (32 kHz)
Video Recording Media: HDV 6.35mm vapor-deposited metal tape
Recording Speed:
[HDV/DV: SP mode] 18.81mm/s
[DV: LP mode] 12.56mm/s
Maximum Recording/Playback Time (60 min. cassette):
[HDV/DV: SP mode] 60 min.
[DV: LP mode] SP: 60 min., LP: 90 min.
Fast Forward/Rewind Time: Approx. 2 min. 20 sec. (with a 60 min. tape)
Viewfinder: 2.4 in. wide, 16:9 aspect ratio TFT color, approx. 215,000 pixels
Microphone: Stereo electret condenser microphone or monaural selectable
AF System: TTL-video signal sensing system autofocus, manual focusing with focus ring
White Balance: Auto white balance, Set (2 positions), preset white balance (indoor: 3200K; outdoor: 5600K) or color temperature setting (2000–15000K)
Minimum Illumination: 24F: Auto mode: 3 lux (shutter speed 1/60, Gain +18 dB); Manual mode: 0.4 lux (shutter speed 1/4)

MEMORY CARD

Recording Media: SDHC (SD High Capacity) memory card, SD memory card, MultiMediaCard (MMC)*
Size of Images on the Card: 1920 x 1080 pixels (LW), 1440 x 1080 pixels (L), 848 x 480 pixels (SW), 640 x 480 pixels (S)
File Format: Design rule for Camera File System (DCF), EXIF 2.2** compliant, DPOF compliant
Image Compression Method: JPEG compression (Super Fine, Fine Normal)

TERMINALS

Video Terminals: Component (output only), S-Video (input/output), BNC (output only), RCA (input/output), HD/SD-SDI (XL H1S) (output only)
Audio Terminals: RCA (input/output), MIC: ø 3.5mm stereo mini-jack (unbalanced); ATT: 20 dB, -61 dBV (manual volume control at center setting and -12 dB full scale)/600 ohms; XLR: (2) (balanced) (pin1: shield; pin2: hot; pin3: cold); MIC INPUT ATT: 20 dB, -60 dBu (with manual volume control set at center setting and -18 dB full scale); Impedance: 10 kohms; LINE INPUT: Impedance 10 kohms, sensitivity +4 dBu (with manual level control set at center setting and -18 dB full scale)
HDV/DV Terminal: Compliant with IEEE1394 protocol
Headphone Terminal: ø 3.5mm stereo mini-jack, less than 50 ohm; -infinity to -12 dBV (with 16 ohm load)
LANC Terminal: ø 2.5mm stereo mini-jack
GENLOCK Terminal (XL H1S): BNC type connector, input: 1 Vp-p/75 ohms (tri-level or blackburst sync)
TIME CODE Terminals (XL H1S): BNC connector, input: 1Vp-p/75 ohms, output: 1Vp-p/75 ohms
HD/SD-SDI Terminal (XL H1S): [HD-SDI] video standard: compliant with SMPTE292M; embedded audio standard: compliant with SMPTE299M; time code standard: compliant with SMPTE RP 188 (LTC)
[SD-SDI (480/60i)] video standard: compliant with SMPTE259M; embedded audio standard: compliant with SMPTE272M; time code standard: compliant with SMPTE RP 188 (LTC)

POWER/OTHERS

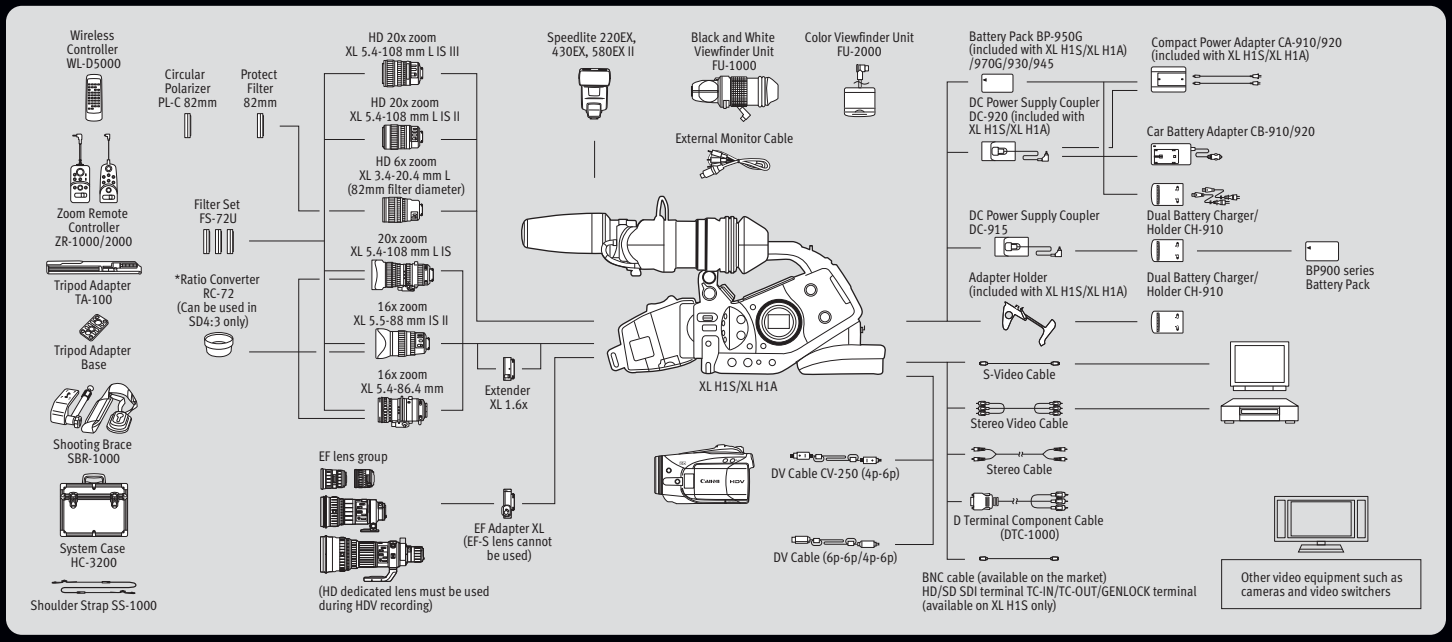
Power Supply: 7.4V DC (battery pack)
Operating Temperature & Humidity: 32–104°F/ 0–40°C, 85%
Dimensions (W x H x D): Approx. 8.9 x 8.7 x 19.5 in./226 x 220 x 496mm (excluding the grip belt)
Total Equipped Weight: [XL H1S] Approx. 8.8 lbs./3,995g [XL H1A] Approx. 8.7 lbs./3,935g (Includes Genuine Canon 20x HD Video Zoom Lens III, Lens Hood, Viewfinder Unit, Supplied Microphone, BP-950G, tape, memory card)

* *The camcorder's operations have been tested with SD memory card up to 4GB. Performance cannot be guaranteed for all memory cards.*
** *The camcorder supports EXIF 2.2 (also called "EXIF Print") EXIF Print is a standard for enhancing the communication between camcorders and printers. By connecting to an EXIF Print-compliant printer, the camcorder's image data at the time of shooting is used and optimized, yielding extremely high quality prints.*

Kit Contents:

XL H1S/XL H1A Camcorder Body, Genuine Canon 20x HD Video Zoom Lens III, Camera Dust Cap, Lens Cap, Dust Cap, Lens Hood, Lens Soft Case, FU-2000 Color Viewfinder Unit, CA-920 Compact Power Adapter with AC Cable, Microphone Unit, External Microphone Holder Adjustment Band, HDVM-E63PR Digital Video Cassette, DC-920 DC Coupler, BP-950G Battery Pack with terminal cover, SDC-32M Memory Card, WL-D5000 Wireless Controller, (2) AA Batteries (for WL-D5000), SS-1100 Shoulder Strap, DTC-1000 Component Video Cable, STV-250N Stereo Video Cable, External Monitor Cable, Tripod Adapter Base

System Chart



Canon U.S.A., Inc. One Canon Plaza, Lake Success, NY 11042 U.S.A.
Canon Canada, Inc. 6390 Dixie Road, Mississauga, Ontario L5T 1P7 Canada
Canon Latin America, Inc. 703 Waterford Way, Suite 400, Miami, FL 33126 U.S.A.
Canon Mexicana S. de R.L. de C.V. Blvd. Manuel Ávila Camacho No. 138, Piso 17
Col. Lomas de Chapultepec, C.P. 11000 México, D.F. México

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