Canon

EOS C100

CINEMA EOS

LEAVE NO STORY UNTOLD

LEAVE NO STORY UNTOLD
– GO WHEREVER THE STORY TAKES YOU

The EOS C100 Digital Video Camera is a compact digital video camera that captures outstanding HD image quality with two channels of professional-quality audio. The EOS C100 was designed specifically as an affordable, high-performance digital cine system that supports a broad range of lower-budget film and video productions, and to introduce new users to the many advantages of Canon's Cinema EOS Lineup. The EOS C100 utilizes the same ultra-precision Super 35 imaging system found in both the EOS C500 and C300 cameras, thereby helping to ensure that the camera system originates equally high image quality, sharpness and sensitivity. The digital video camera incorporates Canon's EF lens mount and is fully compatible with the entire line of EF, EF-S and Cinema series lenses. Independent filmmakers, student filmmakers, event videographers and other video production professionals will benefit from the top-of-the-line, high-performance features, outstanding image quality and creative freedom provided by the new Canon EOS C100.

The EOS C100's industry-standard AVCHD codec records 1920 x 1080 HD video using H.264 compression at data rates up to 24 Mbps. The camera supports dual memory card slots that leverage lower-cost, easy-to-procure SDHC and SDXC media. The highly efficient AVCHD codec allows a single 32GB SD card to record almost three hours of high-quality HD at 24 Mbps, and integrates easily into post-production workflows.

The EOS C100's ergonomic design is streamlined to support one-person shoots. Weighing just 2.2 lbs. in its basic configuration, the camera utilizes a highly flexible, modular design that supports a variety of single-operator shooting styles. Innovations such as One-Shot AF and Push Auto Iris allow solo operators to spend less time checking camera settings and more time being creative.

"We're shooting on the set and what you're looking at on the monitor is so bright and vivid. And then you turn and look at the actual set, and you realize how dark it really is; it's kind of stunning."

Peter Simonite / Director of Photography for "Bart"

Left and top right: behind the scenes on the set of the documentary "Pulse"; bottom right: behind the scenes on the set of the short film "Bart." Both films were shot with the EOS C100 Digital Video Camera.

CANON CINEMA & EF LENSES
– WHAT IT TAKES TO CHANGE PERSPECTIVE

In addition to offering one of the finest and most comprehensive range of lenses – comprising more than 60 EF series prime and zoom models in a variety of user configurations – Canon's expanding lineup of dedicated Super 35mm Cinema Lenses is designed exclusively for high-end cinematography. All of these lenses share Canon's renowned accuracy, clarity and optical brilliance to bring fresh perspective to your vision and stimulate your creativity. The outstanding versatility of Canon's Cinema EOS System design philosophy is now accessible to more creators than ever before, with a wide range of optical solutions to suit virtually every need, including specialty Tilt-Shift, Macro and Fisheye lenses.

Canon Cinema Lenses

Every Canon Cinema Lens is designed to fulfill contemporary 4K production standards, further enhancing the performance of any HD imaging system. Zoom lenses feature large aspherical lens elements that help achieve sharp, consistent images for virtually all situations. A geared inner-focusing mechanism helps minimize focus-induced changes in the angle-of-view, thereby reducing focus breathing to virtually zero, while the 11-blade aperture diaphragms help ensure beautiful bokeh. Markings on both sides of the lens barrel simplify focus reading and aperture setting from behind or on either side of the camera; torque of the control rings was designed specifically to help maintain the proper amount of resistance. To enable film crews to change optics quickly and without adjusting the rig setup, each Cinema Lens shares uniform front diameter, and rotation angle for operational controls and gear positions.

Canon Cinema Prime Lenses

The flexible series of Canon Cinema Prime Lenses offers spectacular 4K-image quality and a full-frame image circle, in lightweight, compact designs. Prime Lenses feature high optical speed, produce exceptionally sharp images and superb contrast, and maintain tightly controlled focus breathing and geometric distortion. These EF-mount models offer consistent form factors and markings that have been optimized for motion-picture production, and represent the beginning of an evolving family of cinema primes. Canon Cinema Prime Lenses are also compatible – under manual operation – with all Canon EOS DSLR models, including the full-frame EOS-1D X and EOS 5D Mark III, as well as the EOS 7D and EOS 60D models that use APS-C sized image sensors.

Canon Cinema Zoom Lenses

Canon's Cinema Zoom and Compact Zoom Lenses offer extraordinary optical performance for demanding, high-end film and video productions. New optical glass materials, new optical coatings and powerful new design techniques have all been combined to offer advanced optical performance.

The wide-angle Cinema Zoom CN-E14.5–60mm T2.6 L S/SP represents a masterpiece of contemporary optical design, with a focal range that was chosen to meet a wide range of needs in movie-making and high-end television production – its resolution exceeds 4K resolution. The Cinema Zoom telephoto CN-E30–300mm T2.95–3.7 L S/SP lens rivals best-in-class zoom lenses, in a surprisingly low-weight, optomechanical housing. Both of these zoom lenses are available with PL or EF mounts.

Canon Cinema Compact Zoom Lenses offer 4K resolution in form factors that enable more flexible, less intrusive shooting. The CN-E15.5–47mm T2.8 L delivers a wide to medium range of focal lengths, while the CN-E30–105mm T2.8 L covers wide to modest telephoto shots. Both zoom lenses are ideal for Steadicam™ and hand-held shooting.

Canon EF Lenses – Securing the Essence of Your Vision

Perfected in Canon's laboratories and proven in the field, Canon EF Lenses incorporate a rare array of the world's most advanced optical, micro-electronic and manufacturing technologies. Many EF lenses utilize the advanced Canon Peripheral Illumination Correction feature, which helps to ensure beautiful, consistent color and brightness across the entire image plane. In addition to offering full compatibility with existing lenses, the EOS C100's EF mount opens up new, creative possibilities with Canon specialty lenses, including Tilt-Shift, Macro and Canon's exhilarating EF 8–15mm f/4L Fisheye USM zoom lens.

Tilt-Shift Lenses — TS-E lenses incorporate tilt and shift functions to extend the shooting advantages of technical-view cameras to the EOS system. Tilt movements alter the angle of the focal plane between the lens and image sensor, modifying depth-of-field independently of the lens aperture. Shift movements slide the lens' optical axis along the plane of the image sensor, enabling photographers to correct or alter perspective to almost any angle, and help add unimagined drama to a scene.

Macro Lenses — By revealing the finest detail and achieving extraordinary edge-to-edge accuracy at very shallow depth-of-field, macro photography can be an ultimate test of optical performance. Canon's EF specialty lenses include six, ultra-precise macro lenses and three screw-on, close-up lenses. Accompanied by the Life-Size Converter EF and two Extension Tube accessories, Canon's macro lens array provides valuable imaging options for the EOS C100 camera.

Fisheye and Fisheye Zoom Lenses — Super wide-angle and special-effects photography let you capture each subject from a unique perspective. The Canon EF 8–15mm f/4L Fisheye USM is the world's first fisheye zoom lens to create circular images with a 180-degree angle-of-view on full-frame DSLRs. With its ability to focus as close as 8 inches (0.2 meters), the Canon EF 15mm f/2.8 Fisheye lens can help realize exceptionally sharp images throughout its broad focus range.

Canon L-Series Lenses

Canon L-series Lenses are highly regarded by video professionals who demand uncompromising optical performance. These specialty lenses incorporate a number of innovative Canon technologies, including Ultra-low Dispersion (UD) glass, fluorite and aspherical lens elements, plus Super Spectra Multi Coating.

THE KEY TO SUCCESS
– OUTSTANDING IMAGE QUALITY

At the heart of the EOS C100 Digital Video Camera is Canon's Super 35 16:9 CMOS sensor, which was designed from the ground up for the Cinema EOS System to meet the exacting and uncompromised demands of the motion-picture and video industry. The sensor's large Super 35mm size lets the EOS C100 capture cinematic shallow depth-of-field imagery while maintaining the image performance attributes that professional cinematographers demand. The EOS C100 uses the same sensor design found in the EOS C500 and C300, thereby continuing Canon's legacy of imaging excellence throughout the Cinema EOS line-up.

Canon Super 35mm CMOS Image Sensor

Designed specifically to fulfill the motion-imaging needs of the cinema industry, the EOS C100's 4K CMOS image sensor deploys an innovative new approach to sensor design by using an 8.3 megapixel, single-CMOS configuration to directly originate individual RGGB/red-green-green-blue HD 1920 x 1080 video components. Data output from this native 4:4:4 sensor requires no debayering process, helping eliminate reconstruction errors. And by summing the two spatially offset green-signal components, the final green video has virtually zero aliasing and an extended dynamic range – the combination producing a remarkably sharp and clean Luma component.

Each of the EOS C100's imaging-sensor photosites are a generous 6.4 by 6.4 micrometers in area and each uses advanced microlens technology to maximize the amount of light that falls on each photosite, thereby further enhancing the camera's light sensitivity. Advanced technologies used within the Canon Super 35mm sensor endows the EOS C100 with an outstanding sensitivity across a wide ISO range of 320 to 20,000, while producing a full 12 stops of dynamic range.
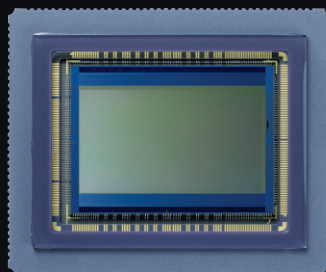
DiG!C DV III Image Processor

Taking full advantage of the enhanced image resolution offered by a Super 35 CMOS sensor, the EOS C100's purpose-built high-speed **DiG!C DV III** Image Processor helps ensure that the trio of 2-megapixel HD Video components for Red, Blue and Green converted from the large 8.3 megapixel single-sensor are accurately processed in a manner that produces excellent tonal and color reproduction. This processor's highly sophisticated and proprietary architecture supports flexible operational video control over a wide range of video image parameters that empower creative choices on-set – including the special Custom Pictures mode of operation. The **DiG!C DV III** Image Processor implements the Canon Log and the Wide DR transfer functions. Image inversion can be invoked if depth-of-field converters or other lens adapters are used. This processor also implements the Peripheral Illumination Correction feature. It includes the Canon Face Detection function which can be highly useful when shooting an individual within a crowd.

Canon EF-Mount

The interchangeable EF-mount ensures compatibility with Canon EF, EF-S and Cinema Lenses. The sophisticated electronic communication of lens and camera enables Canon's innovative Peripheral Illumination Correction, which automatically helps compensate for any lens-induced vignetting that can adversely affect the final image quality. Future lens data can be added through simple updates to the EOS C100's firmware. Autofocus recording is also available with supported lenses. And for higher-end productions, the new and expanding range of Cinema Lenses – available in prime, compact-zoom and zoom series – significantly expand the camera's range of creative possibilities.
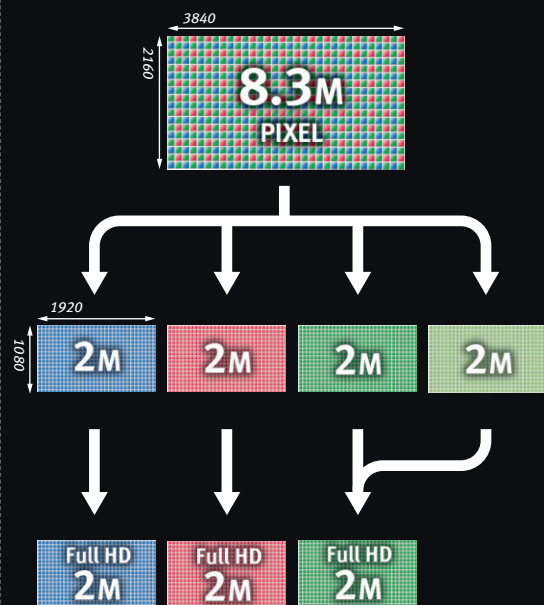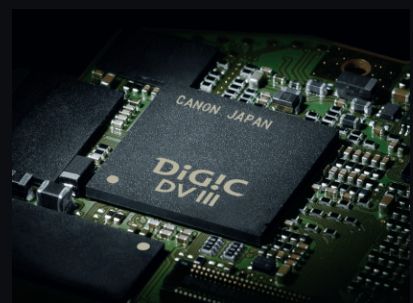
Canon Super 35mm CMOS Image Sensor

Shown at actual size: 24.6mm x 13.8mm

Canon CMOS Sensor Signal Processing

Signal processing superior to that in a 3-chip RGB system

3840
2160

8.3M
PIXEL

1920
1080

2M | 2M | 2M | 2M

Full HD 2M | Full HD 2M | Full HD 2M

### Canon DiG!C DV III Image Processor

Canon Log Gamma

The Canon Super 35mm sensor's exceptional 12-stop (800%) dynamic range cannot be contained within typical video gamma curves such as specified in Rec 709 – the ITU-R Recommendation that standardizes the production format of 16:9 HD television. To ensure full utilization of such a wide dynamic range, Canon has developed a Canon Log Gamma Curve that is specifically tailored to the EOS C100 sensor's enhanced characteristics. The Log Gamma Curve is implemented at a high bit depth and then down-converted, recording the data internally using the 8-bit AVCHD codec. This effectively retains the full dynamic range of the camera. Data files produced using this 8-bit log format are perfect for desktop post-production processing – during which image corrections, color matching and grading can be applied – thereby helping ensure a high level of creative freedom without impairing image quality. The Log Gamma Curve is specified mathematically to help streamline post-production processes that seek to restore the image sensor's linear light-transfer characteristic. (More technical information about the importance of Canon Log Curves is contained within a White Paper that can be downloaded from the Cinema EOS website: cinemaeos.usa.canon.com.)

Canon Log Gamma – ISO and Dynamic Range Specifications (Canon Log, Progressive scan)

S/N Ratio		GAIN	18% GRAY		ISO
41dB	6.7 Stops	30dB		5.3 Stops	ISO 20000
45dB	6.7 Stops	26dB		5.3 Stops	ISO 12800
50dB	6.7 Stops	20dB		5.3 Stops	ISO 6400
53dB	6.7 Stops	14dB		5.3 Stops	ISO 3200
54dB	6.7 Stops	8dB		5.3 Stops	ISO 1600
54dB	6.7 Stops	2.5dB		5.3 Stops	ISO 850
54dB	6.8 Stops	2dB		5.2 Stops	ISO 800
54dB	7.1 Stops	0dB		4.9 Stops	ISO 640
54dB	7.8 Stops	-4dB	4.2 Stops		ISO 400
54dB	8.1 Stops	-6dB	3.9 Stops		ISO 320

Canon Log Base Sensitivity → (ISO 850 row)

Canon Wide DR Gamma & Canon Log Gamma

- Normal 1
- Canon Wide DR
- Canon Log

OUTPUT / INPUT
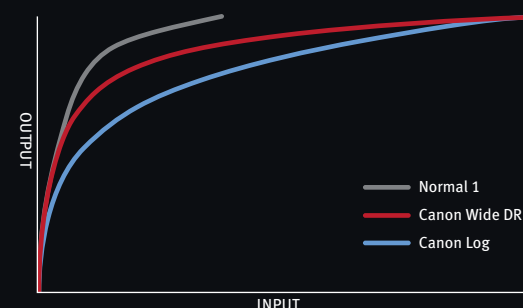
Helps ensure tonal reproduction for both highlight and lowlight regions during post-production.

Image in Wide DR Gamma

Image in Normal 1 Gamma

Canon Wide DR Gamma

To maintain many of the Log Curve's benefits, while minimizing the need for sophisticated post-production processing, the EOS C100 offers Canon's alternative new Wide Dynamic Range Gamma function. Wide DR Gamma allows the sensor's full 12-stop (800%) dynamic range to be recorded, while having the gamma correction throughout the midrange maintain a resemblance to that of Rec. 709. Because Wide DR Gamma retains a traditional IMAGE look and feel, its use helps eliminate the need for extensive color grading, thereby allowing workflows to be streamlined, yet still retaining the sought-for dynamic range. Technically, Wide DR Gamma retains the tonal range of an image, unlike the more limited normal input/output knee function that compresses the signals in high-brightness areas using gamma adjustments.

Custom Pictures

Custom Pictures is a mode that offers the ability to expedite the subsequent post-production process by facilitating a wide range of video image look and feel while shooting on-set or on location. This mode allows easy access to a large number of the EOS C100 camera's video-processing parameters, including Gamma, Black, Black Gamma, Low Key Saturation, Knee, Sharpness, Noise Reduction, Skin Detail, Selective Noise Reduction, Color Matrix, White Balance, Color Correction and Setup Level. Custom picture settings can be saved within the camera, or to an SD media card for sharing between multiple cameras.

Gamma and white-balance adjustments can be made intuitively using a series of graphical user-interface/GUI displays that show, for example, gamma curves both before and after making potential changes. Similarly, for white-balance adjustment, a color/plane display enables the direction and amount of compensation to be seen at a glance.

AVCHD Codec

Unveiled in 2006, the AVCHD codec – standing for Advanced Video Coding High Definition – has quickly become an established worldwide standard for professional HD video recording. AVCHD is based on contemporary MPEG-4 AVC/H.264 compression technology and features a maximum recording bit rate of 24 Mbps in Full HD 1920 x 1080 pixel resolution within a 4:2:0 color space on widely available SDHC and SDXC media. This highly efficient codec facilitates the extended recording durations that significantly augment the one-person shooting capabilities of the EOS C100. A single 64GB card will record for almost six hours and the EOS C100 can deploy two such cards.

As well as supporting cost-effective digital HD image capture in professional-grade video cameras, the AVCHD codec is utilized by the majority of professional non-linear editing/ NLE software from such familiar vendors as Apple®, Avid®, Adobe® and Grass Valley® – thereby expanding creative production options while saving time and money. In addition, the EOS C100 facilitates quick and easy conversion to web-based content that will be streamed in an H.264 format.

THE KEY TO ONE-PERSON OPERATION — ALL FUNCTIONALITY AT HAND

"This documentary project was going to take us to three countries in just over a week. So we really needed a camera that would allow us to really work in a 'run and gun' situation, but maximize the story we're trying to tell."

Patrick Moreau / Stillmotion Filmmaker for "Pulse"

The Canon EOS C100 includes a number of innovative features that make this digital video camera a perfect solution for one-person operation — its compact and lightweight body was designed specifically to of er enhanced mobility and comfortable, handheld shooting. Utilizing a high-rigidity, magnesium construction, the new EOS C100 camera represents just 85% of the overall volume of the EOS C300 body, with a weight of just 2.2 lbs. Designed to use standard, easy-to-replace BP-900 series external batteries, the EOS C100 features a one-push button for checking power levels.

Modular Design for Movie-style Flexibility

For ultimate, movie-style flexibility, the EOS C100 can be configured in a number of different ways, dependent upon the specific needs of the project. The EOS C100's main body can be mated with a Hand Grip or a separate Handle Unit that houses two professional-grade, XLR audio connectors as well as a built-in, high-quality stereo microphone. The Handle Unit's XLR connectors enable easy connection to wireless lavalier, boom or other professional microphones. Adding the Handle Unit helps enable talent dialog and news interviews to be captured using the integral microphone pair. The stripped down EOS C100 body might be used by itself, for example, during a 3D shoot without a mounting rig, or installed on a moving platform, such as a car, or on a long jib. The Hand Grip expedites shooting alongside a wall, or an intimate, talent-facing setup, while the Handle Unit readily supports low-angle shots.

As well as a pair of high-quality microphone elements, XLR audio connectors and a handy mic holder, the EOS C100's Handle Unit features a record-tally lamp that can be seen from both the front and rear of the camera — or turned off via the camera's user menu. For accurate manual focusing, the body incorporates a tape-measure hook and sensor surface display. And to help prevent operator error during shoots, a handy lock switch disables all controls except the critical record stop/start button. For enhanced user convenience, the latter control is located at no less than three different locations on the body, Hand Grip and Handle Unit to accommodate various camera-holding styles.

To match your preferred shooting style, the EOS C100's grip handle rotates 360 degrees in 15-degree increments and includes a useful joystick that enables quick and reliable menu selection/setting. Enhanced auto functions help streamline one-person operation when the EOS C100 is being used as the director's camera.

For self-contained, sound-in-camera shoots, the EOS C100's stereo microphone and XLR connectors enable full-fidelity 16-bit/48 kHz PCM or Dolby-encoded digital audio recording. Audio signals from the built-in microphone or audio inputs can be freely assigned for each audio channel, with individual level adjustment for extra flexibility. Automatic or full manual gain control is also available.

Behind the scenes on the set of the documentary "Pulse."

Automated Functions

A range of enhanced auto functions help to further streamline single-operator, "run-and-gun"-style shoots, enabling the use of EF and Cinema Lenses while providing simplified focusing and aperture adjustment.

The One-Shot AF mode indicates, via a frame color change, that the subject located at the center 20% of the viewing screen has been automatically and accurately focused. When using the Canon EF-S 18–135mm f/3.5–5.6 IS STM lens, continuous AF and AE recording is also maintained for a center-screen subject. (Future EF STM lenses will offer this continuous AF function.)

The Push Auto Iris mode automatically adjusts the aperture value to match image exposure during a shoot, instead of retaining the F-number selected at the start of a scene. Push Auto Iris can significantly help decrease the amount of time needed to make on-the-spot exposure corrections resulting from changing lighting, and is particularly useful for documentary and "run-and-gun"-style shoots.

Full Manual Control

The EOS C100 is a fully-manual digital cinema camera, with user control of all routine functions, including iris, shutter speed, gain, zoom, focus and audio levels — critical parameters that are required to make both technical and artistic choices during a shoot. For maximum customization, access is also provided for Custom Picture Settings, Custom Functions and Custom Display options. A waveform monitor provides detailed analysis of image brightness for setting accurate exposure values. Needle-sharp focusing can be achieved using just the high-resolution LCD monitor and EVF; two peaking modes and a magnify-focus assist that are available in both standby and record modes make it extremely easy to check and confirm critical focus.

Variable-angle LCD Viewing Screen

The EOS C100's newly-designed, 3.5-inch LCD monitor screen enables easy viewing while composing shots and playing back recorded clips. In addition to pivoting upwards 100 degrees to accommodate low-angle shooting while checking picture composition from above, the screen can also be rotated to offer more viewing options and then flipped backward to face the camera for storage while protecting it from scratches and other damage. A 0.24-inch/1.56-Megapixel color viewfinder/EVF enables DSLR-style camera shooting, letting you hold the camera firmly with a full field-of-view coverage and accurate assessment of scene composition, focus and color balance.

Edge Monitor Focus Assist

Using the same focus-assist system developed for the high-end EOS C500 and C300 models, the EOS C100's Edge Monitor shows a red and green waveform at the bottom of the LCD Display. The green waveform displays overall image focus, while the red waveform shows the focus status of three focus-check boxes. Such feedback lets you intuitively adjust focus for any scene, and then quickly change the zone of focus as necessary.

CRITICAL PROFESSIONAL FEATURES
— FOR FILM AND VIDEO SHOOTS

The Canon EOS C100 incorporates a number of key features that truly mark it as a professional HD video camcorder capable of achieving outstanding results in a range of critical situations. The camera features four, built-in neutral density filters that facilitate shooting over a wide range of scene illumination, as well as augmenting control over depth-of-field and exposure. On the record side, twin SD-format card slots are available for relay recording and media copying. Additional features include a secure HDMI cable connection, and assignable function buttons to tailor operational functionality to match individual shooting practices. A highly efficient cooling system helps to ensure reliable operation over extended shooting durations within very challenging environmental conditions.

Dual SD Card Slots for Relay Recording

User-friendly SDHC and SDXC cards represent a versatile and readily available choice of recording media for a wide range of HD video applications. The use of twin card slots for relay or continuous recording further extends the time available for continuous interviews or long-form briefings – the second SD card takes over automatically as the first one becomes full. Divided files can be re-assembled seamlessly into a single video file using the Canon-supplied Data Import Utility software application (included with camera). A 64GB card offers a remarkable 355 minutes of record time at a 24 Mbps record data rate.

Simultaneous Recording/Down-Conversion from HD to SD Format

Dual SD card slots let you create duplicate or backup files via simultaneous recording across both media – a particularly valuable feature during critical applications such as documentary interviews and special events that cannot be repeated. The EOS C100 can also be used to down-convert HD-format images to SD-format files needed for distributing via DVD, or for uploading compressed video images to a website.

Built-in ND Filter Mechanism

The EOS C100 is equipped with a versatile neutral density filter that enables four different, flag-design ND windows – "clear," two-stop, four-stop and six-stop values – to be placed manually in front of the CMOS sensor using a cam mechanism. A dust-resistant design helps to ensure a reliable operation equivalent to that offered by the high-end EOS C300, which is functionally identical aside from being power-driven.

Highly-Efficient Cooling System

To achieve more efficient cooling of critical electronic parts, the EOS C100 incorporates a new mechanical construction that helps ensure reliable, durable operation. Two separate, heat-dissipating exhaust ports help cool the CMOS image sensor and the main electronic circuit boards.
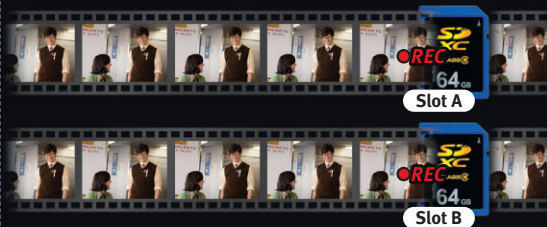
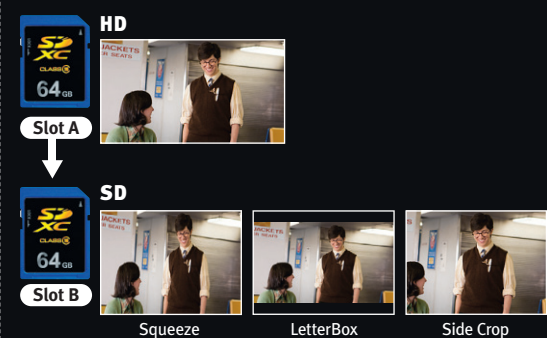### Dual SD Card Slots

Recording Bit Rate and Capacity Chart

SD Card Memory Capacity	Recording Bit Rate (Variable Bit Rate)		
	1920 x 1080		1440 x 1080
	24 Mbps	17 Mbps	7 Mbps
2GB	10 min.	15 min.	35 min.
4GB	20 min.	30 min.	70 min.
8GB	40 min.	60 min.	140 min.
16GB	85 min.	125 min.	285 min.
32GB	175 min.	250 min.	575 min.
64GB	355 min.	500 min.	1150 min.

Simultaneous Recording
Records video to two SD cards at once.

REC 64 GB
Slot A

REC 64 GB
Slot B

Down-conversion from HD to SD

HD
64 GB
Slot A

SD
64 GB
Slot B

Squeeze   LetterBox   Side Crop

Assignable Function Buttons

Button	Default Value
1 - 6	NOT DEFINED
7 - 8	MAGNIFICATION
9	PEAKING
10	ZEBRA
11	WFM
12	PUSH AUTO IRIS
13	ISO/GAIN
14	SHUTTER
15	ONE-SHOT AF

Enables user settings for allocating most frequently used functions to 15 buttons.

Assignable Function Buttons

To help streamline activities during demanding video shoots, many of the EOS C100's frequently used functions have been assigned to an array of 15 buttons, 6 of which can be programmed by the user to handle specific operations.

Other Enhancements

Initialize Cards During Recording – New SD-format media can be initialized in one drive slot, while the second card continues to record video in the other.

Pre REC – Approximately three seconds of video images are constantly recorded to the EOS C100's internal buffer memory, helping ensure that you never miss a unique shooting opportunity on location.

Black Balance Adjustment – Unbalances in RGB video black levels that might arise during extended shooting in high ambient temperature situations are automatically corrected by capping the camera and initiating a simple procedure.

Remote Terminal – Designed to be fully Local Application Control Bus/LANC-compatible, the EOS C100 can be remotely controlled during situations where you cannot secure access to use controls and functions, or when using a tripod handle or jib arm that places the camera body beyond convenient reach.

AFTER THE SHOOT
— STREAMLINING WORKFLOWS IN POST

The EOS C100 is designed from the ground up to blend seamlessly into your existing file-based workflows, including external video monitors, recording systems and non-linear editors. Use of the industry-standard AVCHD file format provides full compatibility with consumer/professional editing software, ensuring near-universal industry support and dramatically reducing post-production complexity. Multiple recording modes, resolutions and frame rates help ensure that the EOS C100 can accommodate a range of creative shooting requirements. Uncompressed 4:2:2, 8-bit HD images – with integral time code for accurate audio/video synchronization – is also output via an HDMI Type A interface.

"For the documentary portion, we really wanted a very nice, clean, well-lit, punchy image. When we got to the produced portion, we wanted that to be a bit saturated, slightly surreal – and we actually played with the toning a little bit more. We used the extended dynamic range profile which allowed us to then...really take it to either direction."

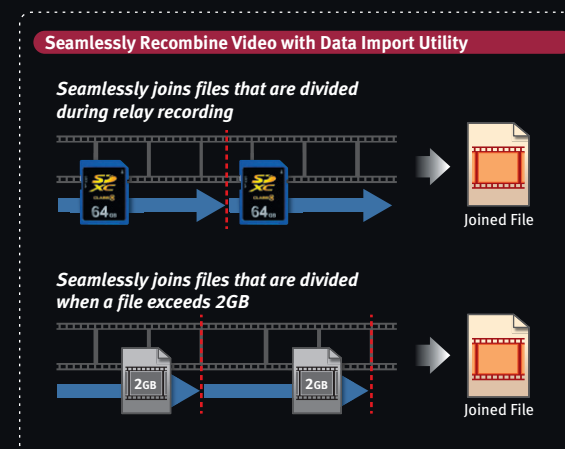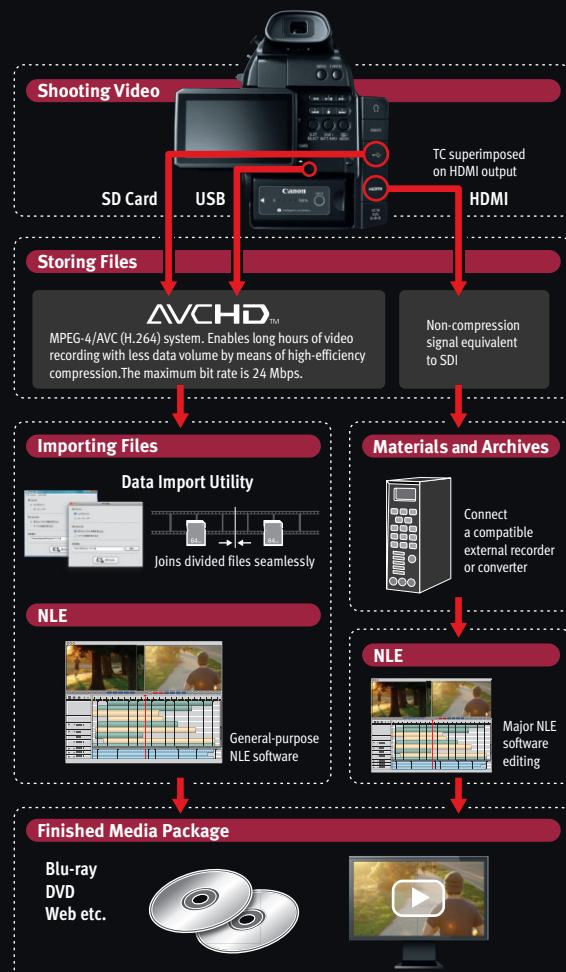**Patrick Moreau** / Stillmotion Filmmaker for "Pulse"

Editing Workflow – Industry-standard AVCHD File Format

The Advanced Video Coding High Definition/AVCHD file-compression standard lets you make video recordings in Full HD for many hours, but requires far less SD-format media and disk space than other file formats. Since AVCHD is based on high-quality MPEG-4 AVC/H.264 data compression, such files are fully compatible with a large number of consumer and professional NLE software from Apple®, Avid®, Adobe®, Grass Valley® and other brands, letting you work within current editing and post-production environments without having to change methodologies. Multiple recording modes, resolutions and frame rates mean that the EOS C100 can flexibly adapt to virtually any production requirements. Three recording data rates are selectable, ranging from 7 Mbps to a maximum rate of 24 Mbps.

HDMI Output with Integral Time Code

In addition to outputting AVCHD-format files to its pair of SD slots, the EOS C100 can deliver high-definition video signals in uncompressed 4:2:2 format via a standard HDMI digital output for external recording, live viewing or playback on an external monitor. To streamline the attachment of external recorders, flat-panel display and other devices, the EOS C100's HDMI output also carries multiplexed, 2:3 pull-down markers and SMPTE-format time code. The latter can be used when synchronizing downstream audio and video systems, or to accurately locate video segments during post-production. A locking connector helps ensure a more secure and robust attachment of compatible HDMI cables.

Shooting Video

TC superimposed on HDMI output

SD Card | USB | HDMI

Storing Files

AVCHD MPEG-4/AVC (H.264) system. Enables long hours of video recording with less data volume by means of high-efficiency compression. The maximum bit rate is 24 Mbps.

Non-compression signal equivalent to SDI

Importing Files

Data Import Utility

Joins divided files seamlessly

Materials and Archives

Connect a compatible external recorder or converter

NLE

General-purpose NLE software

NLE

Major NLE software editing

Finished Media Package

Blu-ray
DVD
Web etc.

Data Import Utility

The Canon-supplied Data Import Utility software application, available in both Windows- and Macintosh-compatible formats, lets you seamlessly recombine video data that was divided when a file exceeded the 2GB limit, or join files that were created during relay-recording mode. To further help reduce your workload during editing, the import utility automatically recognizes divided media as a single, continuous file.

Seamlessly Recombine Video with Data Import Utility

Seamlessly joins files that are divided during relay recording

64GB → 64GB → Joined File

Seamlessly joins files that are divided when a file exceeds 2GB

2GB → 2GB → Joined File

Supported OS
• Win 7 (64/32bit) • Win Vista (64/32bit) • Win XP (SP3)
• Mac OS 10.7 • Mac OS 10.6

OUR CONTINUING COMMITMENT TO
SERVICE, SUPPORT AND EDUCATION

Motion-picture and video production is not just an artistic endeavor. It's also a business, with targeted budgets, profit requirements and inevitable deadlines. Professionals want to know they are dealing with professionals; while dealing with Canon, you can count on a proven creative partner. Our service is world-class, with Canon support programs specially customized to meet your needs. And, to help ensure that you remain current with new technologies and techniques, our educational commitment spans the range of live and online resources.

## Dedicated Service for Professionals

The Canon Hollywood Professional Technology & Support Center was established to bring our world-class service directly to motion-picture studios, the television industry, plus independent producers and videographers. Located in the heart of Hollywood, CA, our facility is staffed with expert technicians who are fully prepared to take care of all your Cinema EOS products. We can accurately adjust cameras and lenses, repair both cinema and still-photography equipment, and meet the needs of professionals like yourself who are working with tight and often inflexible deadlines.

With our industry-leading turnaround times and substantial service-parts inventories, we aim to get you back in action fast. And while working on location, you can count on Canon's nationwide service centers for factory-quality repairs and available 24/7 Call Center support. And this is just part of our two-way relationship with you, the end user. Canon not only makes certain that all of your equipment is functioning perfectly when delivered, but we also use your valuable feedback and suggestions to help develop new and even better products. In fact, the Cinema EOS system was developed as a direct result of such industry feedback.

Support Programs Customized for Your Needs

Cinematographers, production companies, film schools and other industry professionals can take advantage of optional service programs tailored to meet their specialized needs. We offer service partnerships for full-service dealers as well as rental houses, thereby providing additional flexibility to Canon's industry partners. We tailor our custom training packages to the needs of your specific film and TV productions, with expert staff available to deliver training at our Hollywood facility or on location throughout the USA. Whether you require fast repair turnaround times, loaner equipment or equipment maintenance, Canon has a program to keep your business and equipment up and running. We will be expanding these important service offerings as the Cinema EOS production community expands.

You can learn more at: **pro.usa.canon.com/support**.
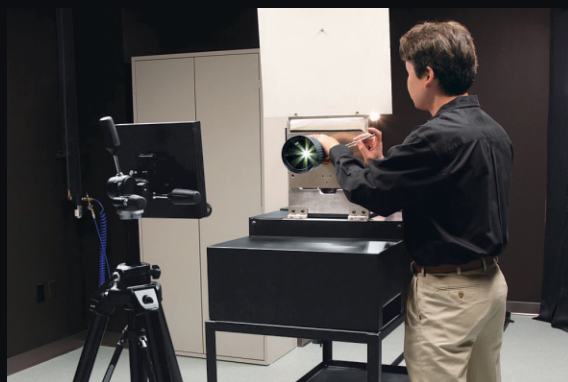
Unsurpassed Educational Resources

Education is another important cornerstone of Canon's commitment to professional cinematographers. Whether working online, at a production lot or as part of a remote shoot, we are here to provide you with all the essential resources that you need to remain current and keep your creative passion alive.

Canon Live Learning (CLL) seminars and workshops are conducted nationwide and in our Hollywood Professional Technology and Support Center, with classes taught by both industry experts as well as Canon's renowned and experienced Explorers of Light. Covering a wide range of still and cinematic topics, ranging from techniques through equipment selection to in-depth system configuration, CLL events offer professionals and enthusiasts alike the opportunity to sharpen their skills in a number of immersive hands-on settings.

Schedules are available at: **usa.canon.com/canonlivelearning**.

The **Canon Digital Learning Center**, our web-based education and information portal, is targeted at busy, working professionals. It is widely recognized for its depth of available information, which is presented in a friendly, compelling format. The Canon Digital Learning Center's comprehensive online resources include tutorials, interviews, QuickGuides and downloadable White Papers; it continues to grow with the addition of information in support of the new Cinema EOS family of video products. Available assets range from comprehensive system FAQs, technical articles by professional cinematographers, interactive menu and button simulators to tutorials, sample videos, behind the scenes and much more. And because the Canon Digital Learning Center is tablet friendly, our encyclopedic online materials are always accessible 24/7 via the internet, anywhere in the world. Think of it as the "Anytime, Anywhere" resource for professionals, enabling you to hit the set running with the confidence and know-how to make the very most of the Cinema EOS system.

Learn more at: **learn.usa.canon.com**

EOS C100 SPECIFICATIONS

IMAGING SENSOR
Effective Pixels: 3840 x 2160 pixels; Approx. 8.29 megapixels
Total Pixels: 4206 x 2340 pixels; Approx. 9.86 megapixels
Sensor Type: CMOS
Sensor Size: Super 35; 24.6 x 13.8 (28.2mm diagonal); 6.4 μm cell pitch
Scanning System: Progressive
Number of Sensors: 1
Filter: RGB Primary Color Filter (Bayer Array)
Imaging Processor: DIGIC DV III

LENS SYSTEM
Interchangeable Lens System: EF-mount for compatibility with EF, EF-S and EOS EF Cinema lens systems.
Zoom/Focus Preset: Not Available
Shockless Zoom: Not Available
Digital Teleconverter: Not Available
ND Filter: Mechanical ND filter system with option of clear, 2, 4, and 6 stops
Iris: Manual setting in 1/2-step increments, 1/3-step increments or fine
Push Auto Iris Control
Peripheral Illumination Correction: Available

EXPOSURE AND METERING
Exposure Modes: Manual
Push Auto Iris Control (metering system selection/AE shift possible)
Metering Modes: Available (Standard Center Weighted, Spotlight, Backlight)
Gain: Normal Setting -6 dB to 30 dB
Fine Setting 0 dB to 24 dB in 0.5 dB increments
ISO: 320 to 20,000 in 1/3 stop increments
Auto Gain Control (AGC): Not Available
Shockless Gain: Not Available
Exposure Compensation/AE Shift: Available
Shutter Modes: 3 Modes: OFF; Speed; Angle; Slow Shutter; Clear Scan
Speed setting can be set in 1/2 or 1/3 stop increments
Shutter Speed Range:
59.94i: 1/60 to 1/2000 in 1/4 or 1/3 stops; SLS: 1/4, 1/8, 1/15, 1/30; CS: 59.94 Hz – 250.27 Hz
PF30: 1/30 to 1/2000 in 1/4 or 1/3 stops; SLS: 1/4, 1/8; CS: 29.97 Hz – 250.27 Hz
23.98p/PF24: 1/24 to 1/2000 in 1/4 or 1/3 stops; SLS: 1/3, 1/6, 1/12; CS: 23.97 Hz – 250.27 Hz
50i: 1/50 to 1/2000 in 1/4 or 1/3 stops; SLS: 1/3, 1/6, 1/12 1/25; CS: 50.00 Hz – 250.78 Hz
PF25: 1/25 to 1/2000 in 1/4 or 1/3 stops; SLS: 1/3, 1/6, 1/12; CS: 25.00 Hz –250.78 Hz
Shutter Angle Settings:
59.94i: 360, 240, 216, 180, 120, 90, 60, 45, 30, 22.5, 15, 11.25
PF30: 360, 240, 216, 180, 120, 90, 60, 45, 30, 22.5, 15, 11.25
23.98p/PF24: 360, 345.6, 288, 240, 180, 172.8, 144, 120, 90, 86.4, 72, 60, 45, 30, 22.5, 15, 11.25
50i: 360, 300, 240, 180, 150, 120, 90, 60, 45, 30, 22.5, 15, 11.25
PF25: 360, 300, 240, 180, 150, 120, 90, 60, 45, 30, 22.5, 15, 11.25
Iris (Aperture) Range: Lens Dependent

FOCUS
Focus System: Manual; One-Shot AF
Autofocus System: Available; AF is dependent on interchangeable lenses
TTL-Video Signal Sensing System
AF Metering Area: Fixed at center of screen (4% of the screen)
AF Modes: One-Shot AF
*The focusing operation is disabled at shutter speeds slower than 1/8 in 59.94 Hz mode and 1/6 in 50 Hz mode

RECORDING/CODEC
Signal System: 59.94/50 Hz
Compression: MPEG-4 AVC/H.264
Color Space: 4:2:0 internal recording
Maximum Bit Rate: 24 Mbps
Canon Log: Available
Recording Options:

Mode	Resolution	Frame Rate
24 Mbps LPCM	1920 x1080	60i/PF30/PF24/24p/50i/25p
24 Mbps	1920 x 1080	60i/PF30/PF24/24p/50i/25p
17 Mbps	1920 x1080	60i/PF30/PF24/24p/50i/25p
7 Mbps	1440 x 1080	60i/PF30/PF24/24p/50i/25p

Recording Time:

Card Capacity (CF Card)	Bit Rate (VBR)		
	1920x1080		1440x1080
	24 Mbps	17 Mbps	7 Mbps
2GB	10 Minutes	15 Minutes	35 Minutes
4GB	20 Minutes	30 Minutes	1 Hour 10 Min.
6GB	30 Minutes	45 Minutes	1 Hour 45 Min.
8GB	40 Minutes	1 Hour	2 Hours 20 Min.
12GB	1 Hour 5 Min.	1 Hour 30 Min.	3 Hours 35 Min.
16GB	1 Hour 25 Min.	2 Hour 5 Min.	4 Hours 45 Min.
32GB	2 Hours 55 Min.	4 Hours 10 Min.	9 Hours 35 Min.
64GB	5 Hours 55 Min.	8 Hours 20 Min.	19 Hours 10 Min.

Recording Media:
SD Card x2 (Video, Still Images (JPEG), Custom Picture Data*, Clip Metadata, and menu settings); SD/SDHC/SDXC Supported; MMC Cards are not supported
*Custom Picture Data and settings are not compatible with data from others Canon models
File Format: AVCHD
File System: FAT 32
Maximum Clip Number: 999 (per media)

AUDIO
Recording Format: 24 Mbps Mode: Linear PCM; 2-Channel; 16-Bit; 48 kHz
All Other Modes: Dolby Digital AC3
Built-in Microphone: Stereo Microphone built in to Handle Unit
External Audio Inputs: 2 – XLR inputs (Auto and Manual level settings)
External microphone terminal: (3.5mm diameter)
Recording Chanel Selection: This is used to set the allocation of the audio channels:
CH1/CH2: The CH1 signals are allocated to the L output channel, and the CH2 signals are allocated to the R output channel.
CH1/CH1: The CH1 signals are allocated to the L output channel, and the CH1 signals are allocated to the R output channel.
CH2/CH2: The CH2 signals are allocated to the L output channel, and the CH2 signals are allocated to the R output channel.
ALL CH/ALL CH: Signals obtained by mixing the CH1 and CH2 signals are allocated to the L and R output channels.
XLR Mic Trimming: Available; -12 dB, -6 dB, 0 dB, +6 dB or +12 dB
Limiter: Available
Recording Level Adjustment Range: - Infinity to +18 dB, Automatic
Separate controls for internal and externally connected microphones.
Phantom Power: Available; +48V
Headphone Adjustment: 16 Settings; Volume is muted at lowest setting
Built-in Speaker: Yes; 16 level settings
1KHz Tone: Available; -12, -18, or -20 dB

FEATURES AND PERFORMANCE
Playback: Index Displays: Movie and Photo
HD Clip Playback: Normal, Forward Search (x5, x15, x60), Reverse Search (x5, x15, x60), Forward Frame Advance, Reverse Frame Advance, Record Review, Forward Skip, Reverse Skip
SD Clip Playback: Normal Playback
Playback Functions: Inter-media Copy (Single Clip, All Clips); Clip Delete (Single Clip, All Clips, Last Clip)
HD -> SD Conversion (SD Format: MPEG-2; 9 Mbps)
Still Image Playback: Index, Single Playback, Erasure, Protect
Slow and Fast Motion Recording: Not Available
Special Recording Functions: Relay Recording; Double-Slot Recording
Photo Recording Mode: Available; Images captured to SD Card; Images can be captured during Record, Pause and Playback modes.
Waveform Monitor: Available; 2 Modes (Standard and RGB Component)
Vectorscope: Not Available
Exposure / Focus Aids: Peaking (2 types), Zebra Pattern*, Magnify, Edge Monitor Focus Assist, Black and White Mode
Interval Record: Not Available
Frame Record: Not Available
Pre-Record: Yes, 3 seconds cache (Audio and Video)
Scan Reverse: Available (Horizontal, vertical, or both can be selected)
Time Code: Drop Frame (DF)* or Non-Drop Frame (NDF)
* NTSC-60i, PF30, and PF24 modes only
Time Code Modes: Regen, Record Run, Free Run
Peripheral Image Correction: Available
Auto White Balance (AWB): Available
White Balance Presets: AWB, Daylight (5,400K); Tungsten (3,200K); Set A; Set B
White balance shift is available within Presets (-9 to +9)
Custom White Balance: Available; 2,000K to 15,000K in 100K increments
Shockless White Balance: Available through Custom Functions
Black Balance Adjustment: Available
Custom Picture Settings: Available;
A total of nine 9 Customized Pictures are available in the camera and up to 20 can be saved to an SD card
Custom pictures can be adjusted using the following settings and saved for later recall:
Gamma, Black, Black Gamma, Low Key Saturation, Knee, Sharpness, Noise Reduction, Skin Detail, Selective Noise Reduction, Color Matrix, White Balance, Color Correction, Setup Level
Custom Pictures CP7, CP8 and CP9 ship with the following preset:
C7: EOS Standard – The image quality obtained when "Standard" is selected as the picture style on an EOS DSLR.
C8: Wide DR – The video setting applies a gamma setting (Wide DR Gamma) which can achieve a wide dynamic range while maintaining color values suitable for video without the need for post production processing.
C9: Cinema – Applies Canon Log Gamma and Color Matrix. This setting is ideal when post-production image processing is planned.
Custom Functions: Available, 9 total functions
Custom Display: Available; LCD panel and EVF information display can be customized
Total of 27 display and icons that can be turned on and off
Assign Buttons: 15; Can be assigned functions as desired
Color Bars: Available; Color bars compliant with SMPTE, EBU, or ARIB standards can be selected.
Marker Displays: Available (Horizontal Marker, Center Marker, Grid, Safety Zone, Aspect Ratio)
My Menu: Available
Key Lock: Available
HDMI REC Command: Available

SENSITIVITY
Minimum Subject Illumination: 59.94 Hz Mode: 0.3 Lux
(f/1.2 lens, 24 dB, 29.97p, 1/30s)
50.00 Hz Mode: 0.25 Lux
(f/1.2 lens, 24 dB, 25.00p, 1/25s)
Sensitivity: F9 (2000 lux, ISO 640/0 dB, 89.9% Reflection, in 1080/59.94i mode)
F10 (2000 lux, ISO 640/0 dB, 89.9% Reflection, in 1080/50i mode)
S/N Ratio: 59.94 Hz Mode: 54 dB (Typical)
(1920x1080/27.97P, Canon Log, ISO 850)
50.00 Hz Mode: 54dB (Typical)
(1920x1080/25.00p, Canon Log, ISO 850)
Dynamic Range: During Normal Shooting: 300%
*With Canon Log Gamma or Wide DR Gamma: 800%
*ISO 850 or above – gain 2.5 dB or above

EVF
Type: 0.24-inch Color (1,555,000 pixels – 960x540)
Aspect Ratio: 16:9
Viewing Angle Adjustment: Not Available
Diopter Adjustment Range: +2.0 to -5.5
Field of View Coverage: 100%
EVF Adjustments: Brightness, Contrast, Color, and Backlight
Special Features: Black and White Display, and setting for viewing concurrent images on display

LCD MONITOR
Type: Rotating 3.5 inch Wide Screen Color LCD Display (922,000 pixels – 640x480) on camera body
Aspect Ratio: 16:9
Viewing Angle Adjustment: Available
Field of View Coverage: 100%
Display Adjustments: Brightness, Contrast, Color, Sharpness, and Backlight (Normal or Bright)
Special Features: Black and White Display, and setting for viewing concurrent images on display

INPUT/OUTPUT
Time Code In/Out: Yes; through HDMI (Input and Output)
HDMI: Yes (Type A)
AV Out: Available
Audio Input Terminal: 2 – Balanced 3-pin XLR (Mic Level, Mic Level with phantom power and Line Level) on handle unit
3.5mm Microphone terminal on main body
Headphone Jack: Available; 3.5mm stereo mini-jack
Remote Terminal: Available (Fully LANC Compatible)
I/O Control: EXT and USB (Mini-B, High Speed) connectors; EXT is used to connect the camera to the handgrip
CCU: Not Available

POWER
Power Terminal: Battery Pack: 7.4V
DC in: 8.4V
Battery: BP-9 Series
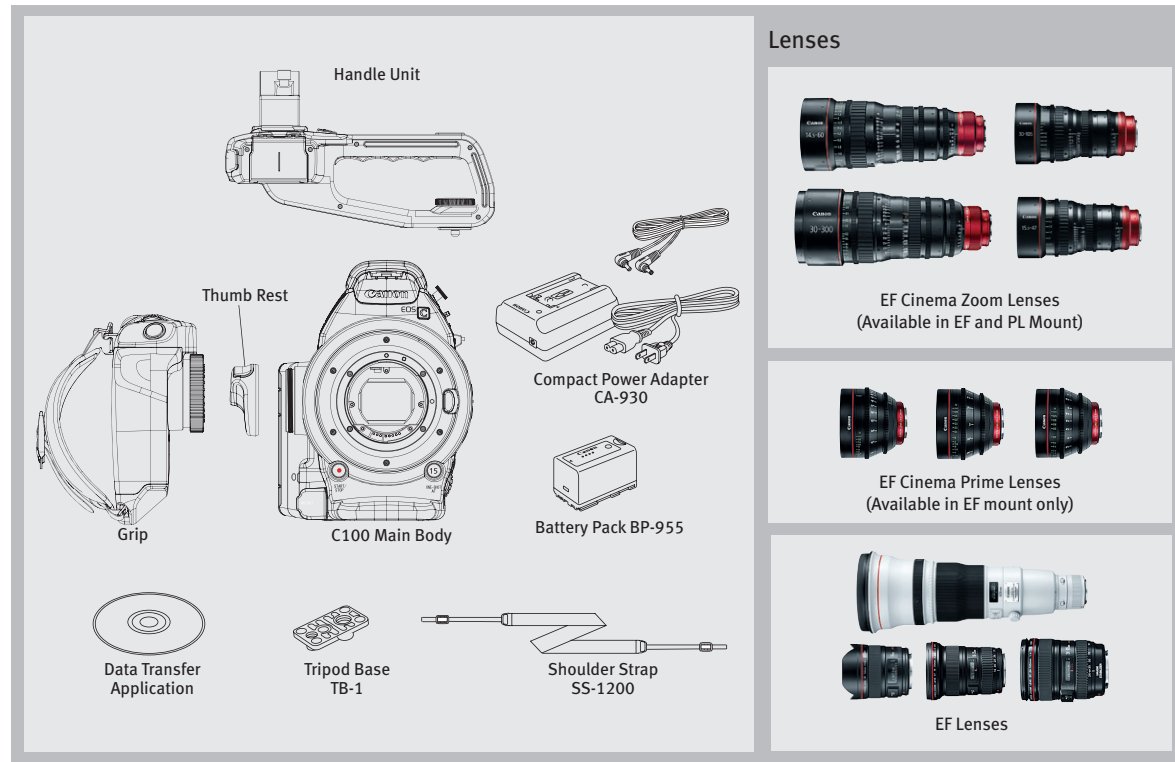**Compact Power Adapter:** CA-930 (Supplied)

ACCESSORIES
Tripod Adapter: Canon TA-100
Tripod Adapter Base: Canon TB-1
Zoom Remote Controller: Canon ZR2000
Car Battery Adapter: CB-920 (use old battery packs)
Wi-Fi® Adapter: Not Available

OTHER
Dimensions (W x H x D):
C100 (Body plus Thumb Rest): Approx. 5.3 x 6.7 x 5.1 in. (135 x 170 x 129mm)
C100 (Body plus Grip): Approx. 7.2 x 6.7 x 5.1 in. (182 x 170 x 129mm)
C100 (Body plus Thumb Rest and Handle Unit): Approx. 5.6 x 11.1 x 9.3 in. (142 x 281 x 236mm)
C100 (Body plus Grip and Handle Unit): Approx. 7.2 x 11.1 x 9.3 in. (182 x 281 x 236mm)
Main Unit Weight: C100 Body: Approx. 2.2 lb. (1020g)
Accessories Weight:
Grip: Approx. 8.1 oz. (230g)
Handle Unit: Approx. 12.7 oz. (360g)
Body Cap: Approx. 0.6 oz. (17g)
Thumbrest: Approx. 0.35 oz. (10g)
Total Equipped Weight:
Main Unit with Grip, Hook, Handle Unit, BP-955, 2x SD cards: Approx. 4.0 lb. (1835g)
Main Unit with Grip, Hook, BP-955, 2x SD cards : Approx. 3.3 lb. (1475g)
Temperature and Humidity:
Performance requirements: 0˚C to 40˚C, 85% (relative humidity)
Operating requirements: -5˚C to 45˚C, 60% (relative humidity)
Language Support: English, Japanese, Simplified Chinese, German, Spanish, French, Italian, Polish, Russian, Korean
Time and Date: Automatic Calendar range January 1st, 2010 through December 31, 2035 selectable in American, Japanese and European Date formats.
World Clock: World Clock support – UTC time setting: Setting range from +14:00 to - 12:00

EOS C100 SYSTEM

Handle Unit

Thumb Rest

Grip   **C100 Main Body**   **Battery Pack BP-955**

Compact Power Adapter CA-930

Data Transfer Application   **Tripod Base TB-1**   **Shoulder Strap SS-1200**

Lenses

EF Cinema Zoom Lenses (Available in EF and PL Mount)

EF Cinema Prime Lenses (Available in EF mount only)

EF Lenses

EOS C100 KIT CONTENTS

- EOS C100 Body (with Grip/Camera cover R-F-3)
- Handle Unit
- Battery Pack BP-955*
- Battery Charger CG-930
- Compact Power Adapter CA-930*
- Thumb Rest
- Tripod Base
- AC Cable x1
- DC Cable (for CA-930)
- Shoulder Strap SS-1200
- Data Import Utility Ver. 1.0

* Also available as optional accessory

Canon

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