

Think GAIA
For Life and the Earth

SANYO

Digital Movie Camera

VPC-CA65 Series

Waterproof!

Xacti CA65
DIGITAL MOVIE CAMERA

Compact, waterproof body extends the fun of shooting to new settings.



Waterproof to 1.5 meters, so you can film underwater!

A waterproof design (JIS Level 8, equivalent to IPX8) lets you enjoy shooting your family and friends at the beach, by the pool, or on ski slopes without worrying about submerging the camera or getting it wet from rain or snow. You'll have even more fun recording action that would be impossible to capture with other cameras.



[BM-H] mode, F5.7, 1/36 sec.

- Note:*
- Do not immerse in water at a depth greater than 1.5 m (4.92 ft.).
 - Do not immerse in water for longer than 60 minutes.
 - After 60 minutes of use in water, allow to dry for at least 10 minutes.
 - Do not immerse in water that is warmer than 40° C (104° F).
 - Do not open and close the battery/card compartment cover with wet hands.

What is "JIS IPX8" (formerly "JIS protection grade 8")?

- "JIS IPX8" specifies that a device is protected against the effects of continuous immersion in water.

Compact, lightweight active design for one-handed picture-taking

Weighing in at just 70.4 x 111.4 x 40.5 mm (W x H x D) in size and 217 g in weight (body only), the CA65 can be easily carried anywhere and pictures can be taken on a whim anytime. This portable digital movie camera is designed to go with you everywhere all the time. It is styled to a casual form with an active flare and is well balanced to enable picture-taking with one hand. The vertical body lets users retain a natural posture in recording without stressing the wrist or shaking.

Super macro shooting as close as 1 cm

The CA65 incorporates a Super Macro mode that enables users to get within 1 cm of subjects when the lens is set to the wide-angle end. Magnificent close-ups can be taken to capture tiny objects in sharp detail.



[BM-H] mode, F5.1, 1/535 sec. (Super Macro)



**It's waterproof! What proof?
Take great movies underwater.**



High video clip, audio, and still image quality because it's digital.

MPEG-4 AVC/H.264 compression for sharper quality and longer recording times

The CA65 adopts the MPEG-4 AVC/H.264 (Advanced Video Coding) format for high-compression recording. The resulting files are small in size, making them easier to handle and giving the user the ability to record more minutes of high-quality video*. Compared to DVD (MPEG-2), files are about half the size yet picture quality is the same or better. Users can have fun viewing sharp, high-quality video on big-screen TVs, too. Also, the CA65 is SDHC-compatible, which means that you can record movies for up to 5 hours 13 minutes* on a 4GB SDHC memory card.

* In TV-HQ mode.

High performance 6.37M CCD

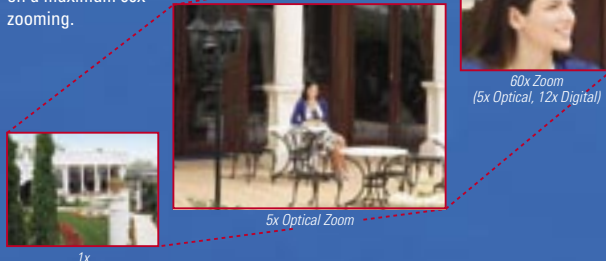
The CA65 combines an exceptionally expressive 6.37 megapixel primary-color CCD with an image processing LSI to reduce dark noise and render skin tones more beautifully. You'll love this camera's vibrant, high-resolution photographs whether they're output as large or small prints.



[6M-H] mode, F4.7, 1/247 sec.

5x optical zoom lens nimbly gets you closer to your subject

The CA65 incorporates a high performance 5x optical zoom lens with a maximum aperture of F3.5, allowing distant subjects and people to be captured in beautiful quality. Coupled with the camera's 12x digital zoom, users can capitalize on a maximum 60x zooming.



Easy-to-view large 2.5-inch TFT LCD monitor

A large 2.5-inch TFT LCD monitor is built into the CA65's compact body. The large screen makes it easier to see and confirm images before and after taking the picture. The monitor itself can rotate approximately 285°, so it can be positioned at the user's preferred shooting posture whether at a high/low angle and even turned to see oneself.



Digital audio recording for high-quality stereo sound

The CA65 features a built-in microphone and records audio using AAC-LC (MPEG-4 Audio), a file format that delivers higher compression and smaller files than MP3. Two-channel 16-bit recording at a sampling rate of 48 kHz yields high-quality audio, while a noise reduction feature reduces undesirable wind noise.

Capture still and video images simultaneously

While recording video clip footage, still pictures can be taken by simply pressing the shutter button. The CA65 can simultaneously record VGA-size (640 x 480) video clips and 6M stills. While recording video clips, memories of a special moment can be preserved forever without missing that golden opportunity to capture it as a still picture image.

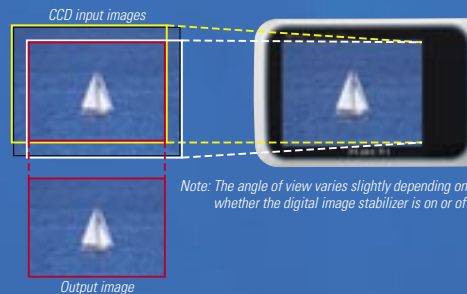


Note: Capturing photographs in Still mode may cause video recording to pause.

The angle of view may change when filming video clips while using the digital image stabilizer.

Featuring a digital image stabilizer function

A proprietary Sanyo algorithm delivers optimal image stabilization for focal distances ranging from wide angle to telephoto. The camera is capable of accurately differentiating between camera shake and intentional camera work such as panning and tilting, a difficult task that the CA65 performs exceptionally well to provide image stabilization with a natural photographic feel.



Note: The angle of view varies slightly depending on whether the digital image stabilizer is on or off.

Real-time interpolation for conversion to 10M recording

An original algorithm utilizing a pixel interpolation filter converts images collected by the 6M into a recording equivalent of 10M (3680 x 2760). Prints as large as A3 can be made, or specific parts of the image can be enlarged for detailed printing.

On-camera functionality keeps image playback and editing easy and convenient.

It's easy to find specific images with the 9-Image Display Function. The Slideshow feature lets you play back a continuous series of images, while Art mode spices up image playback for extra fun. You can also cut footage preceding or following a desired location and splice movies together at the camera. The ability to easily delete unwanted footage makes filming a breeze and helps you use valuable SD memory card capacity as efficiently as possible.



Pasting



Cutting

Functionally loaded to make picture-taking fun and worthwhile

Scene Selected Shot

By simply selecting a photo mode, beautiful fun pictures can be taken according to set photographic parameters.



Sports Mode

The high-speed shutter captures fast-moving subjects.



Portrait Mode

The subject stands out against a deemphasized background to enhance the portrait atmosphere.



Landscape Mode

The entire image is brought into sharp focus.



Night Portrait Mode

Subjects come out clear against a nighttime backdrop.



Lamp Mode

Pictures taken under minimal lighting such as lamps come out beautifully.



Snow & Beach Mode

Beautiful pictures can be taken in the snow and on the beach without white-outs.

Fireworks Mode

Fireworks are captured in all their vivid brightness.

*Note (1): The images above are authentic images shot using the CA65 itself.
Note (2): The modes listed above can also be used while shooting video clips.*

Manual mode for true photography

Focusing on 16 levels and exposure correction of ± 1.8 EV in 0.3 EV steps. Users can freely adjust picture quality (sharpness and saturation) to suit the scene.

Red-eye correction



The CA65's red-eye correction feature lets you easily correct red-eye caused by the flash, restoring the natural color of your subject's eyes.

Note: The corrective effect may differ depending on the subject and shooting conditions.

A new world opened up by digital technology

Xacti is the best tool for Web communications

Small file sizes make the CA65 ideal for sending videos and photographs by email, showing off clips on your website or blog, and distributing your creations on video sharing sites or podcasts. For not only still images but also video, the CA65 will turn you into a more active and accustomed user of the Internet via SNS, blogs, video-sharing sites and more.



Great fun printing the picture you take

PictBridge support for printing without a PC

By simply connecting the CA65 via the included USB cable to a printer that supports PictBridge, selected snapshots can be printed out directly from a printer without requiring a PC. Pictures are selected from the camera's LCD monitor and a print menu is also displayed, so operation is easy.

Sharp prints that bring out the performance of a digital camera

When using a printer that supports Exif Print, camera settings used at the time the picture was taken and stored in the image file can be printed along with the image. In output to a printer that supports PRINT Image Matching III, users can reflect the composition of the image captured via the camera's own color and brightness in the print.



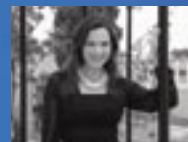
Filter Functions

Snapshots are more fun to take when using one of the filter modes.



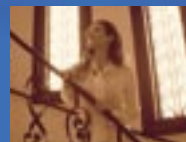
Cosmetic Mode

Skin comes out beautifully in close-ups of people.



Monochrome Mode

Pictures have the atmosphere of a black-and-white photo.



Sepia Mode

A nostalgic look is achieved using sepia toning.

*Note (1): The images above are authentic images shot using the CA65 itself.
Note (2): The modes listed above can also be used while shooting video clips.*

ISO1600 stills

High quality 6M pictures can be taken at ISO1600. Even with shots that easily blur such as indoor or nighttime pictures, and scenes where you do not want to use a flash, colors and expressions come out more natural looking.



[BM-H] mode, F3.9, 1/14 sec.

High sensitivity in movie recording with an approx. 2 lux minimum subject illumination

Advanced 9-pixel mixing technology enables bright and noise-free movies even in under-lit scenes, for example at dusk. In the Lamp mode, users get a minimum subject illumination of approx. 2 lux, sufficient enough sensitivity to enable recording by candlelight.

USB storage support and easy-to-use PC movie editing kit included

Adobe Premier Elements 3.0

Lets you edit and create original DVDs.

Adobe Photoshop Album SE

Simple management and viewing of photographs.

Xacti Screen Capture 1.1

Connect the CA65 and PC with supplied USB cable, the displayed image on the PC is captured into the camera.

QuickTime 7.1 + iTunes 7.1



Other Features

- Thin, Compact Lithium-Ion Battery Gives 80 Minutes of Sequential Video Clip Recording
- Talking Navigation Guide
- Zoom-and-Crop Recording (Max. 58x Zoom in [10M] Mode)
- Voice Recorder Function
- Multi-Language (German, English, Spanish, French, Italian, Dutch, Russian, Japanese, Korean, Traditional or Simplified Chinese, Portuguese, Turkish)
- Equipped with "3M mode" enabling pictures to be taken in portrait style without manually rotating the camera to its side
- Utilizing the 16 : 9 widescreen (4.4 M: 2816 x 1584 pixel) photo setting, user can enjoy their high quality photos on their high-definition TV in full screen mode.
- Smooth playback on TV with 60 frames per second.

Specifications

Effective pixel count	Approx. 6.0 megapixels
CCD	1/2.5 inch, approx. 6.37 megapixels (Total)
Recording media	SD Memory Card, SDHC Memory Card (Up to 8 GB ¹⁾), Built-in memory (Approx. 18 MB)
Recording file format	Still: JPEG (DCF ² , DPOF ³ , Exif Ver. 2.2 ⁴ standard) Video Clip: MPEG-4 AVC/H.264 (ISO standard); Audio: 48 kHz, 16 bit, 2 ch, AAC-compression (stereo)
Resolution (pixel)	Still
	Video clip
Lens	[10M]: 3680 x 2760; [6M-H]: 2816 x 2112 (Low-compression); [6M-S]: 2816 x 2112 (Standard-compression); [16:9]: 2816 x 1584; [3M]: 1536 x 2048 (Vertical); [2M]: 1600 x 1200; [0.3M]: 640 x 480 f = 6.3 - 31.7 mm (Equivalent to 38 - 190 mm on a 35 mm camera); Optical 5.0x zoom lens; F: 3.5 (Wide) - 4.7 (Tele); AF: 9 groups, 12 lenses, built-in ND filter
Photo range	Standard: 10 cm (Wide)/80 cm (Tele) to infinity; Super Macro: 1 cm - 80 cm (Wide)
Shutter speed	Still: 1/2 - 1/2000 sec. (Flash: 1/30 - 1/2000 sec.; Lamp mode: Max. 4 sec.) Video Clip: 1/30 - 1/10000 sec.
Digital zoom	Shooting: Max. approx. 12x; Playback: Max. approx. 58x ([10M] mode); varies with resolution)
Focus	Auto (Still: 9-point AF/Spot AF; Video Clip: Continuous area AF)
Scene select	Auto/Sports/Portrait/Landscape/Night Portrait/Snow & Beach/Fireworks/Lamp ⁵
Filter function	Standard/Cosmetic/Monochrome/Sepia
Photometry	Multi/Center-weighted/Spot
Minimum illumination for movie	7 lux (Auto, 1/30 sec.), 2 lux (Lamp mode, 1/15 sec.)
Sensitivity	Still: Auto (ISO 50 - 400), Manual (ISO 50/100/200/400/800/1600)
Exposure collection	±1.8 EV (In 0.3 EV steps)
Self timer	2 sec./10 sec.
White balance	Auto: Full auto TTL; Manual: Sunny/Cloudy/Fluorescent/Incandescent/Sampling
Flash	Auto/Forced/Off (With slow synchro in Night Portrait mode)
Flash range	GN=3 (10 cm - 1.7 m [Wide], 80 cm - 1.3 m [Tele])
Audio	Microphone: Built-in stereo; Speaker: Built-in monaural (L/R mixed output)
Monitor	2.5 inch low-temperature polysilicon TFT color LCD (Low-reflection), Approx. 150,000 pixels (Approx. 100% coverage, 7-level brightness)
Interface	AV output (Video clip: Composite Video, NTSC/PAL; Audio: Stereo) USB 2.0 High Speed
Power source	Lithium-ion battery (DB-L20/720 mAh, included), Battery Charger (VAR-L20NI, included)
Approx. battery life⁶	Still: CIPA ⁷ standard, 160 stills; Video clip recording: 80 min./ Continuous playback: 190 min. ⁸
Dimensions	70.4 (W) x 111.4 (H) x 40.5 (D) mm (Maximum dimensions excluding protrusions); 192 cc
Weight	Approx. 217 g (Body only) or approx. 236 g (Including battery and SD Memory Card)
Operating environment	Temperature: 0°C - 40°C (32°F - 104°F); Humidity: 30% - 90% (Non-condensing)

Product appearance and specifications are subject to change without notice.

All company and/or product names are trademarks and/or registered trademarks of their respective manufacturer. SANYO makes no warranties or representations of any kind with respect to these products.

*1: As of June, 2007. Maximum file size per clip is 4GB.

*2: DCF (Design rule for Camera File system) is a standard designed by the Japan Engineering Information Technology Association (JEITA) primarily to facilitate the use of image files from digital still cameras with related devices.

*3: DPOF (Digital Print Order Format) is a format for recording on storage media information specifying frames and numbers of copies for printing of images taken by digital cameras.

*4: Exif Ver. 2.2 is an industry standard established for file formatting of images from digital cameras.

*5: For still images, only available in [0.3M] mode.

*6: Results may vary according to operating conditions.

*7: CIPA (Camera & Image Products Association) standard.

*8: Continuous playback in Slideshow mode.

Photo Capacities and Recording Times

SD Memory Card	Video Recording Time (Total Time)				
	TV-SHQ	TV-HQ	Web-SHQ	Web-HQ	Sound only
4GB	2 hr. 45 min.	5 hr. 13 min.	10 hr. 35 min.	15 hr. 18 min.	64 hr. 53 min.
2GB	1 hr. 22 min.	2 hr. 36 min.	5 hr. 17 min.	7 hr. 39 min.	32 hr. 25 min.
1GB	41 min. 18 sec.	1 hr. 18 min.	2 hr. 38 min.	3 hr. 49 min.	16 hr. 11 min.

SD Memory Card	Still Image Capacity						
	10M	6M-H	6M-S	16:9	3M-Portrait	2M	0.3M
4GB	1,190	1,340	2,030	2,690	3,760	5,900	31,000
2GB	596	674	1,010	1,340	1,870	2,950	15,500
1GB	297	338	507	673	953	1,510	7,740

*Available video clip recording time is shown when a re-formatted card is inserted.

*The actual frame rates for this model are 29.97 fps at 30 fps and 14.995 fps at 15 fps.

*Photo capacities and recording times are approximations only and may vary according to the type and manufacturer of the memory card, the subject, and shooting conditions.

*Maximum sequential recording times are 5 hr. 30 min. for Web-SHQ, 7 hr. for Web-HQ, and 12 hr. for sound.

*Continuous movie recording times per clip may vary depending on the resolution used and the subject as well as the type, capacity, and features of the memory card.

Important! Concerning your camera's waterproof design

Although this camera is waterproof as defined by the JIS Protection Grade 8 standards, warranty coverage does not include any malfunctions or problems caused by failure to heed the following precautions:

- The waterproof properties of the camera apply to fresh water and saltwater only; they do not apply to cleaning substances, chemicals or water from spas, etc. In case of a splash, immediately wipe off any moisture.
- Do not immerse in water at a depth greater than 1.5 m (4.92 ft)
- Do not subject the camera to high-pressure water.
- Do not immerse in water for longer than 60 minutes. After 60 minutes of use in water, allow to dry for at least 10 minutes.
- Do not immerse in water that is warmer than 40°C (104°F)
- Do not open and close the battery/card compartment cover with wet hands.
- Do not leave the camera unwashed after it has been immersed in salt water or if salt water is adhering to it.
- After the camera has been used in water, use fresh water to wash it.
- After washing the camera, take care to completely drain it, and use a dry cloth to wipe off any drops of water adhering to it.
- Waterproof seals are used in this camera. It is recommended that the waterproof seals be replaced every year with new ones.

Accessories

- DVD-ROM (Xacti Software DVD 1.0)
- USB Cable
- AV Cable
- Battery Charger
- Li-ion Battery Pack
- Soft Case
- Hand Strap

Options



Li-ion Battery
DB-L20:
3.7 V, 720 mAh



Battery Charger
VAR-L20:
4.2 V, 100 - 240 V



Floating Strap
VCP-S01F

Further details regarding this product can be accessed at <http://www.sanyo-dsc.com/english/>

Caution: Please consult the instruction manual to ensure safe and proper operation of the product.

Distributed by

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