

## PRESS INFORMATION

# Casio Releases EXILIM Digital Cameras that Automatically Detect Photo Subjects with New Intelligent AF

*Enhancing the Fun of Creating Composite Moving Images with Improved Dynamic Photo*

**Norderstedt, August 18, 2009** – Casio Europe GmbH and its parent company Casio Computer Co., Ltd., today announced the addition of two new models to the EXILIM digital camera line-up, the EXILIM Zoom EX-Z450 and EXILIM Zoom EX-Z90. Both are equipped with Intelligent AF, a new function that can detect even a non-human photographic subject, which means it automatically determines the focus and exposure area. The new models also come with a CD-ROM containing graphics that can be used with Dynamic Photo, a unique function for creating composite moving images. With the graphics and Dynamic Photo, users can easily create fun and dynamic images for animated electronic greeting cards and other purposes.

### Intelligent AF automatically detects the intended subject

In addition to usual face detection, just by pointing the camera at a desired shot, Intelligent AF automatically detects non-human photo subjects in the whole composition and determines the focus and exposure area. So when taking a picture of a pet or even scenery, Intelligent AF can help minimize the number of photos that have an out-of-focus subject, thanks to the high-speed image processing technology and image analysis technology of the EXILIM Engine 4.0.

### Dynamic Photo expands the possibilities for easy and fun image creation

Further advancements have been achieved for Dynamic Photo, which enables users to cut out images of a moving subject and combine them with a different still image. In the past, it was necessary to take photos twice<sup>\*1</sup> in order to cut out the moving subject, but now a moving subject can be cropped from a single shooting, as long as the background is flat and in one color. The new EXILIM models come with a CD-ROM containing a selection of more than 150 types<sup>\*2</sup> of graphics, including Animated Characters such as a cake or a firecracker. These can be added to still images, ideal for the creation of animated electronic greeting cards. The CD-ROM also contains the Dynamic Photo Manager software for PCs, which enables users to easily attach composite moving images to emails. Dynamic Photo offers endless possibilities for touching the hearts of family and friends.

\*1. Capturing separate photos with and without the subject, while keeping the camera in the same position.

\*2. Including still and moving graphics

### Two New Models

#### *EX-Z450*

This stylish model is a 12.1 effective megapixel digital camera boasting a wide-angle 28 mm 4X optical zoom lens (35 mm film camera equivalent). In addition to a CCD-shift image stabilization mechanism, the EX-Z450 features a Landscape Mode for taking more beautiful scenery shots, and a Makeup Mode that enhances the beauty of human faces.

#### *EX-Z90*

With an effective resolution of 12.1 megapixels and a 3X optical zoom lens, the EX-Z90 offers advanced base performance and a wide range of functions. Compact enough to fit into the palm of a hand, the EX-Z90 has been designed to feel like a fashion accessory.

EXILIM Zoom EX-Z450 and EXILIM Zoom EX-Z90  
*Digital Cameras that Automatically Detect Photo Subjects with Intelligent AF*

Both models have an effective resolution of 12.1 megapixels

*EX-Z450*

This stylish model features a large 3.0-inch LCD monitor with 230,400 dots of high resolution, as well as a lens ranging from 28-mm wide angle (35 mm film camera equivalent) all the way to 4X optical zoom. Its advanced base performance is supported by a CCD-shift image stabilization mechanism, and a longer battery life lasting about 550 shots on a single full charge.

*EX-Z90*

Compact enough to fit in the palm of a hand, the EX-Z90 comes in a range of colors that appeal to sophisticated women, and is designed to feel like a fashion accessory. In order to accent the camera's attractive color, the 3X optical zoom lens barrel is rendered in black.

Shooting functions made possible by high-speed image processing

*Intelligent AF*

When the camera is pointed at a desired shot, the Intelligent AF function automatically detects the photo subject even if it is not a human face, and determines the focus and exposure area accordingly.

*Landscape Mode*

This mode is for taking beautiful scenery shots. Users can choose between the Vivid Landscape option, which enhances only impressive colors or the Mist Removal option, which produces clearer pictures when the atmosphere is misty or hazy.

*Makeup Mode*

The camera helps create beautiful pictures of people's faces. This function ensures that faces are correctly focused and well exposed, adjusts the smoothness of skin, and softens facial shadows caused by sunlight.

*Handheld Night Scene function\* or Lighting function*

The camera can automatically detect difficult situations, such as night scenes where there would normally be camera shake, and backlit scenes where faces or backgrounds can be poorly exposed, and then make the most appropriate settings. All the user has to do is to press the shutter button to take great pictures.

\* EX-Z450 only

Dynamic Photo can create composite moving images ideal for animated electronic greeting cards

Without the need for a computer, Dynamic Photo enables users to cut out images of a moving subject that have been photographed, and combine them with a different still image that forms the background. The result is a unique still photo containing a moving subject. Dynamic Photo can be used to create highly original and creative electronic greeting cards. Thanks to improvements made to Dynamic Photo, fun composite moving images can now be created even more easily.

- A moving subject can be cropped from a single shooting, as long as the background is flat and in one color.
- It is now possible to expand or shrink the size of the cut-out subject to suit the still image that it will be combined with.
- A Dynamic Photo can be converted into a Motion JPEG movie file right on the camera.
- Using the included PC software, Photo Transport, still images can also be uploaded to the camera for use in composite moving image creation.
- Eight different Animated Characters (such as a heart or a dinosaur) are included in the camera so that users can have fun decorating their still images.
- Comes with a CD-ROM containing a selection of more than 150 types\* of graphics, including Animated Characters, for use in composite moving image creation.
- Using the included PC software, Dynamic Photo Manager, composite moving images can be easily attached to emails.

\* Including moving and still graphics

### High Resolution HD Movies

The camera also features an HD Movie function. Just press the dedicated Movie button to take beautiful movies at 1280x720 pixels.

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On the following pages you will get further information on the new EXILIM Zoom EX-Z280:

## More photo fun for the whole family: The new EXILIM Zoom EX-Z280 from CASIO

*The new digital camera offers comprehensive features for versatile use*

The new EXILIM Zoom EX-Z280 from CASIO is a delight with its captivating functions and is the ideal camera for the whole family. Whether a birthday party with friends, a joint weekend trip or portraits of relatives - the new EXILIM Zoom camera from CASIO transforms the happiest of moments into unforgettable memories. The EX-Z280 combines high performance and lots of fun in its slim and compact casing:

### A high-performance, stylish digital camera

The EXILIM Zoom EX-Z280 is a 12.1 effective megapixel digital camera boasting a wide-angle 26 mm 4X optical zoom lens (35 mm film camera equivalent) in a stylishly slim, compact body. Needless to say, it comes complete with Casio's usual high-performance features, such as a CCD-shift image stabilization mechanism and Face Detection function.

### EXILIM Engine 4.0 built-in

The EXILIM Engine 4.0 features a high-speed dedicated image processing CPU in addition to an ordinary CPU, allowing the camera to perform complex processing such as is required to allow users to combine images right on the camera. Casio developed the new engine to make possible beautiful, high-quality images, with outstanding color reproduction and a rich tonal range that guarantees superior visual expression, and noise reduction at high-sensitivity levels.

### Various new functions make the most of the new EXILIM Engine 4.0

#### *Dynamic Photo function*

This innovative function makes it possible to extract multiple motifs from one series of photos and turn them into an animated sequence. This can then be placed into another photo and now also be enlarged or minimised as well as optimally adjusted to the background within the newly created picture. The photographer can refine his photos even further simply by adding one of the already installed animations. The dynamic photo can subsequently be turned into a film file while still in the camera. This not only makes taking pictures fun, but also the creation of one's own photo and video compositions.

#### *Make-up function*

In addition to recognizing faces and adjusting focus and exposure accordingly, the camera can make adjustments to smooth skin in images and soften facial shadows caused by sunlight, creating beautiful photographs of people's faces. The photographer can choose from one of twelve levels of skin beauty using different strengths of image processing, and can shoot after viewing the results in the LCD monitor.

#### *Handheld Night Scene function and Lighting function*

The camera can automatically detect difficult situations, such as night scenes where there would normally be camera shake, and backlit scenes where faces or backgrounds can be poorly exposed, and then make the most appropriate settings. All the user has to do is to press the shutter button to take great pictures.

#### *Tracking AF*

The camera incorporates an autofocus function that automatically follows a moving subject. When a subject leaves the frame the camera makes a record of it, and when the same subject once again enters the frame it is recognized by the camera, and auto focusing is resumed.

### High Resolution HD Movies

The camera also features an HD Movie function. Just press the dedicated Movie button to take beautiful movies at 1280x720 pixels.

### YouTube™ Movie Mode

Movies can be recorded and saved using the ideal size and quality settings for the world's most popular video sharing site, YouTube™. Recorded movies can be easily uploaded to YouTube™ using the included computer software.

Easy Mode helps beginners by making camera settings easy to understand

Using Easy Mode, photo settings are restricted to just image size, flash on/off and self timer, and these are displayed on a simplified menu screen.

**If you have questions or require further information, please contact:**

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CASIO in general

CASIO is a leading international manufacturer of consumer electronics. In line with the principle of "creativity and contribution," the company has been dedicated to developing products that stand out for their cutting-edge technology and innovative design ever since it was founded, in 1957.

Today, the product palette of CASIO around the world includes watches, digital cameras, mobile phones (not in the EU), electronic dictionaries, calculators, musical instruments, projectors, cash register systems, handheld terminals, and electronic components such as LCDs (not in the EU). In total, CASIO Computer Co., Ltd. employs a staff of more than 12,300 people worldwide. The company ships more than 100 million products each year, and in the fiscal year from April 2008 to March 2009 alone, CASIO posted net sales revenue of 518 billion yen (about 3.8 billion Euros). You will find news and product information about Casio at [www.casio-europe.com](http://www.casio-europe.com).

## EX-Z450 / EX-Z90 Specifications

		EXILIM Zoom		
		EX-Z450	EX-Z90	
Number of Effective Pixels		12.10 million		
Image Sensor		1/2.3-inch square pixel CCD		
	Total Pixels	12.39 million	12.70 million	
File Format	Still Images	JPEG (Exif Version 2.2, DCF 1.0 standard, DPOF compliant)		
	Movies	AVI format, Motion JPEG, IMA-ADPCM (monaural)		
	Audio (Voice Recording)	WAV format (monaural)		
Built-in Flash Memory (Image Area)		35.7MB <sup>*1</sup>		
Recording Media		SDHC Memory Card, SD Memory Card <sup>*2</sup>		
Number of Recorded Pixels	Still Images	12M (4000 x 3000), 3:2 (4000 x 2656), 16:9 (4000 x 2240), 8M (3264 x 2448), 5M (2560 x 1920), 3M (2048 x 1536), VGA (640 x 480)		
	Movies	HD: 1280 x 720 (24 fps) / STD: 640 x 480 (30 fps) / LP: 320 x 240 (15 fps)		
Recording Capacity (Maximum Image Size Setting)	Still Images (JPEG)	SD Memory Card 1GB <sup>*3</sup> Approx. 122 shots (Fine) / 234 shots (Normal) / 350 shots (Economy)		
	Movies	Recording Time	Maximum Recording Time per File: 10 min.	
		SD Memory Card 1GB <sup>*3</sup>	Approx. 5 min. 27 seconds (HD)	
Continuous Shutter	High-speed Continuous Shutter	Approx. 10 frames per second at 1280 x 960 pixels (Up to 20 shots) Approx. 4 frames per second at 1600 x 1200 pixels (Up to 8 shots)	Approx. 4 frames per second at 1600 x 1200 pixels (Up to 8 shots)	
	Flash Continuous Shutter	Approx. 3 frames per second at 1600 x 1200 pixels (Up to 3 shots)		
Lens	Construction	7 lenses in 6 groups, including aspherical lens	6 lenses in 5 groups, including aspherical lens	
	F-number	F2.6 (W) to F5.8 (T)	F3.1 (W) to F5.9 (T)	
	Focal Length	f=4.9 to 19.6mm	f=6.3 to 18.9mm	
	35mm Film Equivalent	Approx. 28 to 112mm	Approx. 35 to 105mm	
Zoom	Optical Zoom	4X	3X	
	Digital Zoom	4X (16X in combination with optical zoom)	4X (12X in combination with optical zoom)	
	HD Zoom	25.0X (image size: 640 x 480 pixels)	18.7X (image size: 640 x 480 pixels)	
Focusing	Focus Type	Contrast Detection Auto Focus		
	Focus Modes	Auto Focus, Macro Mode, Pan Focus, Infinity Mode, Manual Focus		
	AF Area	Intelligent, Spot, Multi or Tracking		
	AF Assist Lamp	Yes	No	
Focus Range <sup>*4</sup> (From Lens Surface)	Auto Focus	Approx. 10cm to infinity (W)		
	Macro	Approx. 10cm to 50cm		
	Infinity Mode	Infinity (W)		
	Manual Focus	Approx. 10cm to infinity (W)		
Exposure	Exposure Metering	Multi-pattern, center weighted, spot by imaging element		
	Exposure Control	Program AE		
	Exposure Compensation	-2EV to +2EV (in 1/3EV steps)		
Shutter Type	CCD electronic shutter, mechanical shutter			
	Shutter Speed <sup>*5</sup>	Auto	1/2 to 1/1000 second	1/2 to 1/2000 second
		Night Scene	4 to 1/1000 second	4 to 1/2000 second
Aperture <sup>*4</sup>	F2.6 (W) to F7.0 (W) <sup>*6</sup>		F3.1 (W) to F5.6 (W)	
White Balance		Auto WB, Daylight, Overcast, Shade, Day White FL, Daylight FL, Tungsten, Manual WB		
Sensitivity (SOS/REI) <sup>*7</sup>	Still Images	Auto, ISO64, ISO100, ISO200, ISO400, ISO800, ISO1600, ISO3200	Auto, ISO64, ISO100, ISO200, ISO400, ISO800, ISO1600	
	Movies	Auto		



		EXILIM Zoom		
		EX-Z450	EX-Z90	
Other Recording Functions	Image Stabilization Mechanism	CCD-shift image stabilization	No	
	Make-up Mode	Yes (12-level steps)		
	Landscape Mode	Yes (Vivid Landscape: 2-level steps / Mist Removal: 2-level steps)		
	Handheld Night Scene	Yes	No	
	Lighting Function	Yes		
	BEST SHOT		Yes: 39 scenes	Yes: 32 scenes
		Dynamic Photo	Yes	
		Multi-motion Image <sup>*5</sup>	Yes	
		YouTube™ Capture Mode	Yes	
		AUTO BEST SHOT	Yes	
		Voice Recording	Yes	
	Face Detection	Yes		
	Auto Shutter	Yes		
Self-timer	10 seconds, 2 seconds, Triple Self-timer			
Built-in Flash	Flash Modes	Auto, Flash Off, Flash On, Soft Flash, Red Eye Reduction		
	Flash Range <sup>*4</sup>	Approx. 0.1 to 4.5m (W), approx. 0.5 to 2.0m (T)	Approx. 0.1 to 3.7m (W), approx. 0.6 to 1.4m (T)	
Monitor Screen		3.0-inch TFT color LCD (Super Clear LCD), 230,400 dots (960 x 240)	2.7-inch TFT color LCD, 230,160 dots (959 x 240)	
Timekeeping Functions	Date and Time	Recorded with image data		
	On-image Time Stamp Function	Yes		
	Auto Calendar	To 2049		
	World Time	162 cities in 32 time zones, city name, date, time, summer time		
Input/Output Terminals		USB/AV port		
	USB	Hi-Speed USB		
Microphone	Monaural			
Speaker	Monaural			
Power Requirements		Rechargeable lithium ion battery (NP-40) x 1	Rechargeable lithium ion battery (NP-60) x 1	
Battery Life	Number of Shots <sup>*9</sup> (CIPA Standards)	Approx. 550 still images	Approx. 230 still images	
	Continuous Playback (Still Images)	Approx. 9 hr.	Approx. 5 hr.	
	Continuous Recording (Voice Recording)	Approx. 13 hr.	Approx. 5 hr.	
Dimensions (Excluding Projections)		96.9 (W) x 57.6 (H) x 21.4 (D)mm	89.7 (W) x 51.7 (H) x 19.4 (D)mm	
		Thinnest part: 19.5mm	Thinnest part: 17.8mm	
Weight (Excluding Battery and Accessories)		Approx. 130g	Approx. 102g	
Bundled Accessories	Rechargeable lithium ion battery, lithium ion battery charger, AC power cord, USB cable, AV cable, strap, CD-ROM			

\*1. Built-in memory capacity after formatting. \*2. Compatible with Eye-Fi Card, an SD memory card-type wireless LAN. \*3. When using Panasonic Pro High Speed 1GB SD Memory Card. \*4. Range is affected by optical zoom. \*5. May differ according to camera settings. \*6. F7.0 is the aperture when an ND filter is being used. \*7. SOS: Standard Output Sensitivity. REI: Recommended Exposure Index. \*8. Image size 2048 x 1536 pixels. \*9. Auto Mode, standard brightness monitor setting.

## EX-Z280 Specifications

		EXILIM Zoom EX-Z280	
Number of Effective Pixels		12.1 million	
Image Sensor		1/2.3-inch square pixel CGD	
	Total Pixels	12.39 million	
File Format	Still Images	JPEG (Exif Version 2.2, DCF 1.0 standard, DPOF compliant)	
	Movies	AVI format, Motion JPEG, IMA-ADPCM (monaural)	
	Audio (Voice Recording)	WAV format (monaural)	
Internal Memory		35.7 MB	
Recording Media		SDHC Memory Card, SD Memory Card	
Number of Recorded Pixels	Still Images	4.000 x 3.000 (12 MP), 4.000 x 2.656 (3:2), 4.000 x 2.240 (16:9), 3.264 x 2.448 (8 MP), 2.560 x 1.920 (5 MP), 2.048 x 1.536 (3 MP), 640 x 480 (VGA)	
	STD / LP Movies	640 x 480 (30 fps) / 320 x 240 (15 fps)	
	HD Movies	1280 x 720 (24 fps)	
Recording Capacity ( Max. Resolution)	Still Images	Built-in Memory	Approx. 4 shots (Fine) / ca. 8 shots (Normal) / ca. 13 shots (Economy)
		SD Memory Card 1GB <sup>1</sup>	Approx. 122 shots (Fine) / Approx. 234 shots (Normal) / Approx. 350 shots (Economy)
	Movies	Recording Time	Max. recording time per file: 10 min.
		Built-in Memory	Approx. 11 second (HD)
	SD Memory Card 1GB <sup>1</sup>	Approx. 5 Min. 27 second (HD)	
Operating Speed	Start-up Time <sup>2,3</sup>		Approx. 2.0 second
	Shutter Release Time Lag <sup>2,3</sup>		Approx. 0.008 second
	Playback Speed		Approx. 0.1 second / image
	Shooting Interval <sup>3,4</sup>		Approx. 3.5 second
	Normal Continuous Shooting Speed <sup>4</sup>		Approx. 3.4 second
	Highspeed Continuous Shooting Speed <sup>5</sup>		Max. 4 images / second
	Flash Continuous Shooting Speed <sup>5</sup>		Max. 3 images / second
Lens / Focal Length	Construction		7 lenses in 6 groups, including aspherical lens
	F-number		F2.6 (W) to F5.9 (T)
	Focal Length	35mm Film equivalent	f= 4,65 to 18,6 mm Approx. 26 to 104mm
Zoom Ratio	Optical Zoom		4X
	Digital Zoom		4X (16X in combination with optical zoom)
	HD Zoom		Max. 25X @VGA
Focusing	Focus Type		Contrast Detection Auto Focus
	Focus Modes		Auto Focus, Macro Mode, Pan Focus, Infinity Mode, Manual Focus
	AF Area		Spot, Free or Tracking
	AF Assist Lamp		No
Focus Range <sup>6</sup> (From Lens Surface))	Auto Focus		Approx. 15cm to Infinity (W)
	Macro		Approx. 5cm to 50cm (W) (First step from widest setting)
	Infinity Mode		Infinity (W)
	Manual Focus		Approx.. 15cm to Infinity (W)
Exposure	Exposure Metering		Multi-pattern, center weighted, spot by imaging element
	Exposure Control		Program AE
	Exposure Compensation		-2EV to +2EV (in 1/3EV steps)
		CCD electronic shutter, mechanical shutter	
Shutter Type	Shutter Speed <sup>7</sup>	Auto	1/2 to 1/2000 Sek.
		Night Scene (BEST SHOT)	4 to 1/2000 Sek.

		EXILIM Zoom EX-Z280	
Aperture*8		F2.6 (W) to F7.8 (W)*9, auto	
White Balance (WB)		Auto WB, Daylight, Overcast, Shade, Day White FL, Daylight FL, Tungsten, Manual WB	
Sensitivity (SOS/REI)*10	Still Images	Auto, ISO64, ISO100, ISO200, ISO400, ISO800, ISO1600, ISO3200	
	Movies	Auto	
Other Recording Functions	Image Stabilization Mechanism	CCD-shift image stabilization	
	Make-up Shot	Yes	
	Lighting	Yes	
	Handheld Night Scene	Yes	
	BEST SHOT	Yes: 39 scenes	
		Dynamic Photo	Yes
		Multi-motion Image*11	Yes
		Pre Record Movie	Yes
		YouTube™ Capture Mode	Yes
		AUTO BEST SHOT	Yes
		Voice Recording	Yes
	Face Detection	Yes	
Auto Shutter	Yes		
Easy Mode	Yes		
Self-timer	10 seconds, 2 seconds, Triple Self-timer		
Built-in Flash	Flash Mode	Auto, Flash off, Flash on, Soft Flash, Red Eye reduction	
	Flash Range*6	Normal: Approx. 0.15 – 4.2 m (W), Approx. 0.6 – 1.9 m (T)	
	Flash Continuous Shooting*6	Approx. 0.6 – 1.6 m (W), Approx. 0.6 – 0.7 m (T)	
	Flash Charge Time	Approx. 6 seconds	
Monitor Screen	2.7-inch wide TFT color LCD, 114,960 dots (479 x 240)		
Timekeeping Functions	Date and Time	Recorded with image data	
	On-image Time Stamp Function	Yes	
	Auto Calendar	To 2049	
	World Time	162 cities in 32 time zones, city name, date, time, summer time	
Input/Output Terminals	USB/AV port (PAL/NTSC)		
	USB	USB, Hi-Speed USB compatible	
Microphone	Monaural		
Speaker	Monaural		
Power Requirements	Rechargeable lithium ion battery (NP-80) x 1		
Battery Life	Number of Shots (CIPA)*12	Approx. 250 shots	
	Continuous Playback (Still Images)*13	Approx. 7 hrs. 30 min.	
	Continuous Movie Recording Time*14	Approx. 2 hrs.	
	Continuous Voice Recording Time*15	Approx. 6 hrs. 20 min.	
Dimensions (Excluding Projections)	98.2 (W) x 54.9 (H) x 20.1 (D)mm		
	Thinnest part: 19.6mm		
Weight (Excluding Battery and Accessories)	Approx. 112g		
Bundled Accessories	Rechargeable lithium ion battery (NP-80), lithium ion battery charger, AC power cord, USB cable, AV cable, strap, basic reference, CD-ROM		

\*1. When using Panasonic (Matsushita) Pro High Speed 1GB SD Memory Card \*2. When using built-in memory. \*3. With built-in flash off. \*4. When set at maximum image size and normal image quality. \*5. Image is fixed at 1600x1200 pixels and normal image quality. \*6. Range is affected by optical zoom. \*7. Shutter speed range may be different depending on the BEST SHOT scene. \*8. Using optical zoom causes the aperture to change. \*9. F7.8 is the aperture when an ND filter is being used. \*10. SOS: Standard Output Sensitivity. REI: Recommended Exposure Index. \*11 Image size 2048 x 1536 pixels. \*12. Auto Mode, standard brightness monitor setting. \*13. Continuous playback conditions: Temperature: 23°C (73°F), scroll one image about every 10 seconds \*14. Continuous movie recording without zoom \*15. Voice recording times are based on continuous recording.

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**Specs are subject to change w/o notice**