

SONY

Image Sensing Solutions

Line up 2014



Sony have designed, developed and manufactured a range of imaging products that you can depend upon, even in the most demanding applications. From factory automation, microscopy and inspection to security and process control.

IMAGE SENSING SOLUTIONS

Colour Camera Block

Intelligent Cameras

Digital Interface IEEE 1394B

Digital Interface Camera Link

Digital Interface GigE Vision

Non TV Format

TV Format

3CCD Colour Video Cameras

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Colour Camera Block

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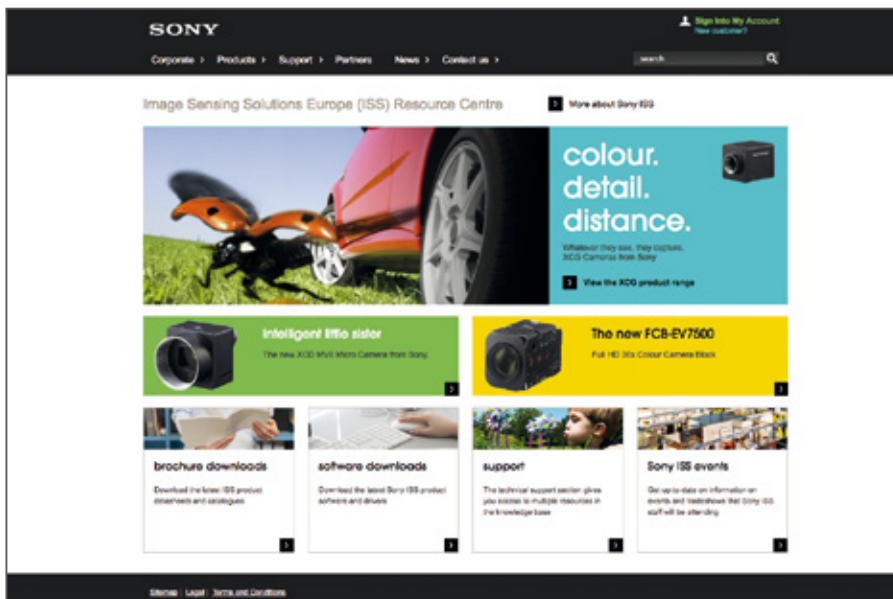
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SONY

Day or night;
see everything.

IMAGE
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XCG Series

See the detail
and contrast
with the
XCG-H280E
Camera from
Sony.

The XCG series from Sony utilises GigE Vision Technology to perfectly fit the needs of demanding applications, such as factory automation, high-end security and intelligent traffic systems. They offer a flexible range of resolutions from VGA to 5Mp via full HD and combine cutting edge sensor technology with a smart, robust design. If speed is of the essence, and small object detection is of paramount importance, choose XCG cameras from Sony and see the bigger picture.

GEN*i*CAM **GIG**[™]
VISION

XCG series B/W Models

DIGITAL INTERFACE GIGE VISION

2/3-type EXView HAD CCD II™ sensor
XCG-H280E



Resolution	Frame rate *1	
	2ch*2 (default)	4 ch *2
1,920 (H) x 1,080 (V) (16 :9, default)	32 fps	64 fps *3
1,920 (H) x 1,440 (V) (4 :3)	26 fps	52 fps *3

*1 Approx. value in free run mode
 *2 Readout mode of image sensor
 *3 Frame rate of image sensor. Some image data may not be transferred when the frame rate exceeds transmission capacity.

The XCG-H280E incorporates the GigE Vision interface standard, based on Gigabit Ethernet technology. In response to the growing demand for large-scale systems, this interface enables the camera to transfer a large amount of data over long distances. The use of an Ethernet cable and availability of a wide variety of peripheral devices contribute to significant cost cutting benefits when designing a complete vision system. By utilizing the features and benefits of the GigE Vision, the XCG-H280E is ideally suited to the demanding requirements of ITS (Intelligent Transportation System) and machine-vision applications.

- Gigabit Ethernet (1000BASE T)
- GigE Vision® Ver. 1.2
- GenIcam™ Ver. 1.0
- Bulk Trigger Mode

- Sequential trigger Mode
 - Readout mode: Normal/Partial scan/Binning
 - High Frame Rate Image Transfer
 - High Sensitivity: 400 lx F8 (0 dB)
 - Auto-exposure
 - Chunk data
 - Image Buffer
 - Strobe Delay
 - Auto Gain Control
 - C mount
 - Minimum illumination: 0.5 lx
 - Compact Design :
 Dimensions (W×H×D): 50× 50× 57.5 mm
 - Mass: 200 g
 - Low Power consumption: 5.3 W
- “GigE Vision” is a registered trademark of AIA (Automated Imaging Association)
 “GenIcam” is trademark of EMVA (European Machine Vision Association)

2/3-type PS CCD
 (5 megapixel 15 fps)
XCG-5005E

1/1.8-type PS CCD (UXGA 15 fps)
XCG-U100E

2/3-type PS CCD (SXGA 27 fps)
XCG-SX99E

1/3-type PS CCD (VGA 90 fps)
XCG-V60E



- Gigabit Ethernet (1000BASE-T)
- GigE Vision® Ver. 1.0
- GenIcam™ Ver. 1.0
- Special trigger mode (Bulk trigger / Sequential trigger / Trigger delay)
- Readout mode: Normal/Partial scan (V/H)
- Binning
- Frame Rate Control
- Strobe Delay
- Auto Gain Control
- C mount
- Sensitivity:
 XCG-5005E, XCG-U100E, XCG-V60E: 400 lx F5.6 (0 dB)
 XCG-SX99E : 400 lx F8 (0 dB)

- Minimum illumination (Gain +18 dB, F1.4)
 XCG-5005E, XCG-U100E, XCG-V60E: 1 lx,
 XCG-SX99E: 0.4 lx
 - Dimensions (W×H×D): 44 × 33 × 67.5 mm
 - Mass: 145 g
 - Power consumption (Max.)
 XCG-U100E, XCG-V60E: 3.1W
 XCG-SX99E : 3.6 W
 XCG-5005E: 4.3 W
- “GigE Vision” is a registered trademark of AIA (Automated Imaging Association) “GenIcam” is trademark of EMVA (European Machine Vision Association)

SONY

Colour.
Detail.
Distance.

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XCG Colour Series

Whatever
they see,
they capture.
XCG Cameras
from Sony.

The XCG series from Sony utilises GigE Vision Technology to perfectly fit the needs of demanding applications, such as factory automation, high-end security and intelligent traffic systems. They offer a flexible range of resolutions from VGA to 5Mp via full HD and combine cutting edge sensor technology with a smart, robust design. If speed is of the essence, and small object detection is of paramount importance, choose XCG cameras from Sony and see the bigger picture.

GEN*i*CAM **GIGÉ**
VISION

XCG series Colour Models

DIGITAL INTERFACE GIGE VISION

2/3-type EXView HAD CCD II™ sensor
XCG-H280CR



Resolution	Frame rate *1	
	2ch*2 (default)	4ch*2
1,920 (H) x 1,080 (V) (16:9, default)	32 fps	64 fps *3
1,920 (H) x 1,440 (V) (4:3)	26 fps	52 fps *3

*1 Approx. value in free run mode
 *2 Readout mode of image sensor
 *3 Frame rate of image sensor. Some image data may not be transferred when the frame rate exceeds transmission capacity.

The new XCG-H280CR incorporates a 2/3-type EXview HAD CCD II™ colour sensor which provides great sensitivity with a full-HD high frame rate image transfer capability with 8-, 10-, or 12-bit video data output.

In addition to inheriting some of the unique features of Sony's XCD Series, such as Bulk Trigger and Sequential Trigger modes, the XCG-H280CR supports useful features for ITS (Intelligent Transportation System) applications such as Chunk Data and Auto Exposure.

- Gigabit Ethernet (1000BASE T)
- GigE Vision® Ver.1.2
- GenIcam™ Ver.1.0
- Bulk Trigger Mode

- Sequential trigger Mode
- Readout mode: Normal/Partial scan
- High Frame Rate Image Transfer
- High Sensitivity: F8 (2000lx, Gain:0 dB)
- Auto-exposure
- Chunk data
- Image Buffer
- C mount
- Minimum illumination (50%): 6 lx (Iris:F1.4, Gain:+18dB, Tentative)
- Compact Design: Dimensions (WxHxD): 50x 50x 57.5 mm
- Mass: 200 g
- Low Power consumption: 5.8 W (max.)

"GigE Vision" is a registered trademark of AIA (Automated Imaging Association)
 "GenIcam" is trademark of EMVA (European Machine Vision Association)

2/3-type PS CCD
 (5 megapixel 15 fps)
XCG-5005CR

1/1.8-type PS CCD (UXGA 27 fps)
XCG-U100CR



Sony proudly introduces two new raw colour GigE cameras to its popular XCG Series: the high-quality, high-performance **XCG-5005CR** and **XCG-U100CR**.

These cameras incorporate the GigE Vision® interface, which is specifically standardized for machine-vision applications based on Gigabit Ethernet technology.

	XCG-5005CR	XCG-U100CR
Progressive Scan IT CCD	2/3-type	1/1.8-type
Cell size (H) x (V)	3.45 µm x 3.45 µm	4.4 µm x 4.4 µm
Standard picture size (H) x (V) and High Frame Rate Image Transfer	2,448 x 2,048 at 15 fps	1,600 x 1,200 (UXGA) at 27 fps

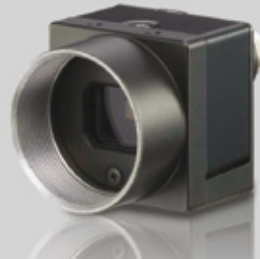
- Gigabit Ethernet (1000BASE-T)
- GigE Vision® Ver.1.2
- GenIcam™
- Special trigger mode (Bulk trigger / Sequential trigger / Trigger delay)
- Readout mode: Normal/Partial scan
- Frame Rate Control
- Strobe Delay
- Auto Gain Control
- C mount
- Sensitivity:
 XCG-5005CR: 2000 lx at F8 (0 dB)
 XCG-U100CR: 2000 lx at F5.6 (0 dB)

- Minimum illumination
 XCG-5005CR, XCG-U100CR: 6lx (F1.4, +18dB, Shutter: off, 50% video level)
 - Dimensions (WxHxD): 44 x 33 x 67.5 mm
 - Mass: 145 g
 - Power consumption (Max.):
 XCG-U100CR: 3.5W
 XCG-5005CR: 4.3 W
- "GigE Vision" is a registered trademark of AIA(Automated Imaging Association)
 "GenIcam" is trademark of EMVA (European Machine Vision Association)

SONY

Introducing our intelligent little sister.

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XCD MV6

The new
Micro Camera
from Sony.

Trust Sony to create the world's smallest C-Mount digital machine vision camera. We're the company that launched the first industrial camera in the 1980's and the first ever triggered camera in the early 1990's. We also pioneered 1394 cameras with the ground-breaking CCM-DS250 and invented the cubic XC-HR50, a small and light machine vision camera weighing just 50 grams.

Now we've redefined the standard once again with the revolutionary new XCD-MV6 Micro Camera. This marvel of miniaturisation is less than two-thirds the size of the cubic XC-HR50, designed for easy installation and machine downsizing. A high speed camera that perfectly captures the spirit of innovation that has distinguished Sony for decades.



XCD series

DIGITAL INTERFACE IEEE 1394b-2002

1/1.8-type PS CCD
(UXGA size 15 fps)

XCD-U100(B/W)

XCD-U100CR(RAW Colour)

1/3-type PS CCD (SXGA size 15 fps)

XCD-SX90(B/W)

XCD-SX90CR(RAW Colour)

1/3-type PS CCD (VGA size 90 fps)

XCD-V60(B/W)

XCD-V60CR(RAW Colour)



	XCD-U100 XCD-U100CR	XCD-SX90 XCD-SX90CR	XCD-V60 XCD-60CR
Standard image size (H x V)	1,600 x 1,200 (UXGA)	1,280 x 960 (SXGA)	640 x 480 (VGA)
Bit length	Mono 8/Row8	8 frames	13 frames
	Mono 16/Row16	4 frames	6 frames
		27 frames	

- High image quality, high-speed image output
- Daisy chain connection
- Hardware preprocessing
The camera is equipped with hardware LUT (Lookup Table).
- 3 x 3 Image Filter (B/W model only)
- Bus synchronization
- Broadcast delivery of commands
- Memory channel
- Bulk trigger mode
- Memory shot
- Partial scan
- Binning
- 9-pin connector with fixing screws
- Low power consumption, vibration-resistant structure, and compact size
- IIDC Ver. 1.31 protocol compliant

XCL-C series

DIGITAL INTERFACE CAMERA LINK

New Release

In response to customer demand, Sony is proud to introduce a broad selection of new XCL CameraLink Series cameras, ranging from VGA to 5M in monochrome and color versions. With their compact size and variety of resolution options, these new cameras make it easy and affordable for customers to migrate from analog to digital. The new XCL-C280 (monochrome) and XCL-C280C (color) cameras incorporate a 1/1.8-type EXview HAD CCD II™ sensor which provides high sensitivity with a 2.8M resolution. These new advanced features and benefits make XCL-C Series cameras ideal for various applications such as ITS (Intelligent Transportation Systems) and sports shooting, as well as traditional machine-vision applications.

	XCL-C500	XCL-C500C	XCL-C280	XCL-C280C	XCL-C130	XCL-C130C	XCL-C32	XCL-C32C	XCL-C30	XCL-C30C
Imager sensor	2/3-type CCD		1/1.8-type CCD		1/3-type CCD		1/2-type CCD		1/3-type CCD	
Monochrome / Color	Mono-chrome	Color	Mono-chrome	Color	Mono-chrome	Color	Mono-chrome	Color	Mono-chrome	Color
Effective pixels (H x V)	2,456 x 2,048		1,940 x 1,460		1,296 x 966		659 x 494		659 x 494	
Cell size (µm)	3.45 x 3.45		3.69 x 3.69		3.75 x 3.75		9.9 x 9.9		7.4 x 7.4	
Output pixels (H x V, Full resolution)	2,456 x 2,058		1,940 x 1,460		1,296 x 966		658 x 494			
Frame rate	15 fps		26 fps		31 fps		104 fps		130 fps	

DIGITAL INTERFACE CAMERA LINK

New Release

XCL-C500
XCL-C500C
XCL-C280
XCL-C280C
XCL-C130
XCL-C130C

XCL-C32
XCL-C32C
XCL-C30
XCL-C30C



■ Shading Correction

With embedded shading correction, XCL-C Series cameras minimize the uneven image intensity often caused by lighting and/or the lens.

■ Near-infrared Sensitivity

Utilizing Sony's EXview HAD CCD II technology enables the XCL-C280 to capture clear images in NIR (near-infrared) wavelengths

■ Defect Correction

XCL-C Series cameras can automatically minimize defective pixels (e.g., white and black dots) within the entire imaging area directly inside the camera.

■ Memory Channel

In addition to factory default settings, up to 16 camera parameters – including brightness, gamma, shutter, gain, and trigger mode – can be preset to suit each particular scene.

■ Temperature Readout

Each camera comes with an internal temperature sensor.

■ Pulse Train Generator

XCL-C Series cameras are capable of outputting any rectangular wave from one of the general-purpose outputs.

■ Sensitivity Control

The XCL-C Series*1 is equipped with a saturation signal control function to allow the amount of saturation signal charge on the CCD to be increased or decreased via software commands.

*1 Excludes XCL-C130 and XCL-C130C

■ Look-up Table (LUT)

Each XCL-C Series camera supports a look-up table which transforms the input luminance signal into the required digital output.

■ Trigger Noise Filtering

With a trigger line filter, these cameras can specify a valid pulse width for the trigger.

■ Bulk Trigger Mode & Sequential Trigger Mode

These new XCL-C Series cameras feature advanced Bulk Trigger and Sequential Trigger modes in addition to a conventional trigger mode.

XCL series

DIGITAL INTERFACE CAMERA LINK

2/3-type 5 megapixel PS CCD
CameraLink: PoCL/non-PoCL
XCL-5005(B/W)
XCL-5005CR(Colour)



XCL-5005 series

- 2/3-type 5 megapixel PS CCD
- Effective picture elements: 2,456 (H) × 2,058 (V)
- Frame rate: 15 fps
- Partial scan function (Vertical random read scan)
- Normal/External trigger shutter
- C mount
- High Shock and Vibration Resistance
- RS-232C Control
- CameraLink: Standard (non-PoCL) /PoCL*
- Switching an Output tap (1TAP/2TAP)
- Various mode setting
 - Shutter speed
 - Gamma
 - Partial scan

*PoCL (Power over Camera Link)

XCL-5005

- Read out mode: Normal/Binning
- Outline detection, Outline Emphasis
- Binarization
- 3 × 3 Image Filter
- Flip-Flop

XCL-5005CR

- One-push white balance function
- Switching colour output (RAW colour or RGB)
- Colour Bar Chart

Digital output CameraLink Base Configuration

	1 tap	2 tap
XCL-5005	8/10/12 bit 80 MHz	8/10/12 bit 40 MHz
XCL-5005 CR	8/10/12 bit 80 MHz 24 bit RGB 80 MHz	8/10/12 bit 40 MHz

1/1.8-type 2 megapixel PS CCD
CameraLink: non-PoCL
XCL-U1000(B/W)
XCL-U1000C(Colour)



- 1/1.8-type 2 megapixel PS CCD
- UXGA image (1,600 × 1,200 pixels)
- Frame rate: 15 fps
- High sensitivity
 - XCL-U1000 : 400 lx at F5.6
 - XCL-U1000C : 2,000 lx at F8
- Camera Link (non-PoCL)
 - XCL-U1000 : 10 bit
 - XCL-U1000C : R/G/B 24 bit
- Monitor output

- External trigger shutter : 1/15 sec to 1/10,000 sec
- C-mount lens
- Partial scanning
- Binning function (XCL-U1000)
- White balance (XCL-U1000C)
- Auto/Manual/Preset selectable
- Matrix function for accurate colour reproduction (XCL-U1000C)
- High shock and Vibration Resistance

1/1.8-type 2 megapixel PS CCD
CameraLink: PoCL/non-PoCL
XCL-U100(B/W)



- 1/1.8-type 2 megapixel PS CCD
- UXGA image (1,600 × 1,200 pixels)
- Frame rate: 15 fps
- C mount
- High shock and Vibration Resistance
- Various mode settings
- Gain
- Read mode: Normal/Binning

- Partial scan
- Shutter: Normal/Trigger shutter
- Shutter speed
- Gamma
- Switching an output bit length
- 3 × 3 Image Filter
- Binarization

SONY

clarity in vision



The new XCL-S Series from Sony.

With their superb resolution and high frame rates, the new XCL-S Series camera range from Sony delivers a level of exceptional picture quality that analogue cameras simply cannot achieve. 1/1-type EXview HAD CCD II™ sensor provides extremely high sensitivity in addition to a variety of unique features including shading correction, defect correction and temperature readout. When used with an infrared strobe, each camera produces outstanding picture quality especially in low light and NIR inspection applications making the XCL-S Series cameras ideal when the highest quality is demanded for sports, intelligent traffic systems, pharmaceutical, industrial applications and many others...

See more about the full range available at Image-sensing-solutions.eu



IMAGE SENSING SOLUTIONS

Digital Interface Camera Link

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XCL-S series

DIGITAL INTERFACE CAMERA LINK

New Release

In response to customer demand, Sony is proud to introduce a new top-of-the-line XCL CameraLink Camera Series in monochrome and colour.

With their superb resolution and high frame rates, these new cameras deliver a level of exceptional picture quality that analog cameras cannot achieve. The new XCL-S Series cameras incorporate a 1/1-type EXview HAD CCD II™ sensor which provides extremely high sensitivity. In addition to inheriting many convenient functions from Sony's XCL Series, such as Bulk Trigger and Sequential Trigger modes, these new cameras also incorporate some unique features including Shading Correction, Defect Correction, and Temperature Readout.

These new advanced features and benefits make XCL-S Series cameras ideal when the highest inspection quality is demanded for display panels, semiconductors, solar panels, PCBs (Printed Circuit Boards), and pharmaceutical applications.

	XCL-S900	XCL-S900C	XCL-S600	XCL-S600C
Imager sensor	1/1-type CCD			
Monochrome / Colour	Monochrome	Colour	Monochrome	Colour
Effective pixels (H x V)	3,388 x 2,712		2,758 x 2,208	
Cell size (µm)	3.69 x 3.69		4.54 x 4.54	
Output pixels (H x V, Full resolution)	3,388 x 2,712		2,758 x 2,208	
Frame rate	18 fps		27 fps	

DIGITAL INTERFACE CAMERA LINK

XCL-S900
XCL-S900C
XCL-S600
XCL-S600C



■ Near-infrared Sensitivity

Utilizing Sony's EXview HAD CCD II technology enables XCL-S Series cameras to capture clear images in NIR (near-infrared) wavelengths. When used with an infrared strobe, each camera produces outstanding picture quality especially in low light and NIR inspection applications.

■ High Frame Rate Image Transfer

XCL-S Series cameras feature a high readout rate of uncompressed images for smooth and clear results. The XCL-S600 and XCL-S600C achieve 27 frames per second (fps), and the XCL-S900 and XCL-S900C achieve 18 fps when fourchannel output is selected. This enables these cameras to capture fast-moving objects without sacrificing image quality.

■ Shading Correction

With embedded shading correction, XCL-S Series cameras minimize the uneven image intensity often caused by lighting and/or the lens. Their internal hardware processing reduces the need for external image correction that is normally performed via a frame grabber board and PC.

This handy function reduces the processing load of the PC, and simplifies the processing task. In addition, these cameras are equipped with rich optional lighting settings to capture clear images in varying lighting conditions. *XCL-S600 and XCL-S600C: 10 settings; XCL-S900 and XCL-S900C: 6 settings.

■ Defect Correction

XCL-S Series cameras can automatically minimize defective pixels (e.g., white and black dots) within the entire imaging area directly inside the camera. This feature helps simplify image processing.

Temperature Readout

Each camera comes with an internal temperature sensor. The host device can receive temperature information by issuing a command. This eliminates the need for a separate sensor, and simplifies system configuration.

■ Sensitivity Control

The XCL-S Series is equipped with a saturation signal control function to allow the amount of saturation signal charge on the CCD to be increased or decreased via software commands.

■ Bulk Trigger Mode & Sequential Trigger Mode

These new XCL-S Series cameras feature advanced Bulk Trigger and Sequential Trigger modes in addition to a conventional trigger mode. Each camera can store up to 16 different camera setups (e.g., exposure, and gain).

■ User Set

In addition to factory default settings, up to 16 camera parameters – including brightness, gamma, shutter, gain, and trigger mode – can be preset to suit each particular scene.

■ Look-up Table (LUT)

■ Trigger Noise Filtering

■ Pulse Train Generator

SONY

clarity in vision



The new XCL-S Series from Sony.

With their superb resolution and high frame rates, the new XCL-S Series camera range from Sony delivers a level of exceptional picture quality that analogue cameras simply cannot achieve. 1/1-type EXview HAD CCD II™ sensor provides extremely high sensitivity in addition to a variety of unique features including shading correction, defect correction and temperature readout. Designed to enable the capture of fast-moving objects without sacrificing image quality, these new advanced features make the XCL-S Series range ideal for use when the highest inspection quality is demanded. They are the perfect choice for use in the production control of display panels, semiconductors, solar panels, printed circuit boards and pharmaceuticals.

See more about the full range available at Image-sensing-solutions.eu

IMAGE SENSING SOLUTIONS

Digital Interface Camera Link

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XC series

NON-TV FORMAT

XC-HR90



- 1/3-type PS CCD
- Full pixel read-out, SXGA size
(Effective lines: 1,280 (H) × 960 (V))
- Image output: (selectable) 30 fps, 15 fps
- Vertical frequency
 - 49.302 MHz (30 fps)
 - 24.651 MHz (15 fps)
- Analog output
- Partial scan function
- Binning function
- External control possible (RS-232C)
- C mount system
- High shock and Vibration Resistance

XC-HR70



- 1/3-type PS CCD
- Full pixel read-out, XGA size
(Effective lines: 1,024 (H) × 768 (V))
- Image output: 30 fps
Effective picture element: XGA size
1,034 (H) × 779 (V)
- Partial scanning
(at restart/reset ON, Binning OFF)
Up to 120 fps (Effective line: 152 lines)
- External trigger shutter
1/4 sec to 1/100,000 sec
- Electronic Shutter
1/100 sec to 1/20,000 sec
- Synchronization Internal/External (HD/VD)
- C mount system
- High shock and Vibration Resistance

XC-HR50



- 1/3-type PS CCD
 - Double Scan CCD
 - The CCD has square pixels eliminating the need for aspect ratio conversion.
 - VGA resolution (648 × 494 pixels) image capturing at a speed of 60 fps.
- Partial scanning
(at restart/reset ON, Binning OFF)
Up to 240 fps. (Effective line: 102 lines)
- Compact and lightweight
29 (W) × 29 (H) × 30 (D) mm, 50 g
- External trigger shutter
1/4 sec to 1/100,000 sec
- Electronic Shutter
1/100 sec to 1/20,000 sec
- Synchronization Internal/External (HD/VD)
- C mount system
- High shock and Vibration Resistance

XC-HR57



- 1/2-type PS CCD
 - Double Scan CCD
 - The CCD has square pixels eliminating the need for aspect ratio conversion.
 - VGA resolution (648 × 494 pixels) image capturing at a speed of 60 fps.
- Partial scanning
(at restart/reset ON, Binning OFF)
Up to 240 fps. (Effective line: 102 lines)
- Compact and lightweight
29 (W) × 29 (H) × 30 (D) mm, 50 g
- External trigger shutter
1/4 sec to 1/100,000 sec
- Electronic Shutter
1/100 sec to 1/20,000 sec
- Synchronization Internal/External (HD/VD)
- C mount system
- High shock and Vibration Resistance

XC-HR58



- 1/2-type PS CCD
 - Double Scan CCD
 - The CCD has square pixels eliminating the need for aspect ratio conversion.
 - SVGA class resolution (767 × 580 pixels) image capturing at a speed of 50 fps.
- Partial scanning
(at restart/reset ON, Binning OFF)
Up to 200 fps. (Effective line: 90 lines)
- Compact and lightweight
29 (W) × 29 (H) × 30 (D) mm, 50 g
- External trigger shutter
1/4 sec to 1/100,000 sec
- Electronic Shutter
1/100 sec to 1/20,000 sec
- Synchronization Internal/External (HD/VD)
- C-mount system
- High shock and Vibration Resistance

XC-56



- 1/3-type PS CCD
- Non-TV format
- Square pixel/Full pixel read-out
- VGA-class resolution
- Image output: 30 fps
- Partial scanning function
- External trigger shutter
 - Restart/Reset
 - Mode 1 (Non-reset mode)
 - Mode 2 (Reset mode)
- Various settings are available on the rear panel
- C mount system
- High shock and Vibration Resistance

XC-56BB



- 1/3-type PS CCD
- Non-TV format
- Square pixel/Full pixel read-out
- VGA-class resolution
- Image output: 30 fps
- Partial scanning function
- External trigger shutter
 - Restart/Reset
 - Mode 1 (Non-reset mode)
 - Mode 2 (Reset mode)

- Various settings are available on the rear panel
- Cable Length: 2 m
- C mount system
- High shock and Vibration Resistance

XC series

TV FORMAT B/W series

XC-ES50
XC-ES51
XC-ES30



- XC-ES50/ES50CE: 1/2-type IT CCD
- XC-ES51/ES51CE: 1/2-type IT CCD High sensitivity
- XC-ES30/ES30CE: 1/3-type IT CCD
- External trigger shutter function
- Electronic shutter function
- 2:1 Interlaced/non-interlaced
- Frame/Field accumulation
- Restart/Reset function
- Sync system: Internal/external (HD/VD)
- C mount system
- High shock and Vibration Resistance

XC-EI50
XC-EI30



- XC-EI50/EI50CE: 1/2-type IT CCD
- XC-EI30/EI30CE: 1/3-type IT CCD
- Near-IR sensitivity
- High sensitivity: F1.4
XC-EI50/EI50CE: 0.1 lx
XC-EI30/EI30CE: 0.2 lx
- Electronic shutter function
- External trigger shutter function
- 2:1 Interlaced/non-interlaced
- Frame/Field accumulation
- Restart/Reset function
- Sync system: Internal/external (HD/VD)
- C mount system
- High shock and Vibration Resistance

XC-EU50



- 1/2-type IT CCD
- Near-UV sensitivity
- High S/N ratio: 60 dB
- Electronic shutter function
- External trigger shutter function
- 2:1 Interlaced/non-interlaced
- Sync system: Internal/external (HD/VD)
- Frame/Field accumulation
- Restart/reset function
- C mount system
- High shock and Vibration Resistance

XC-ES50L



- 1/2-type IT CCD
- Electronic shutter function
- External trigger shutter function
- 2:1 Interlaced/non-interlaced
- Frame/Field accumulation
- Restart/Reset function
- IR cut filter
- Sync system: Internal/external (HD/VD)
- C mount system
- High shock and Vibration Resistance

XC-ST70
XC-ST51
XC-ST50
XC-ST30



- XC-ST70/ST70CE: 1/3-type IT CCD
- XC-ST51/ST51CE/ST50/ST50CE: 1/2-type IT CCD
- XC-ST30/ST30CE: 1/3-type IT CCD
- Dimensions (WxHxD): 44 x 29 x 57.5 mm
- Mass: 110 g
- Flexible trigger shutter functions
- High sensitivity
XC-ST51/ST51CE: 0.2 lx (F1.4)
XC-ST70/ST70CE/ST50/ST50CE/ST30/ST30CE: 0.3 lx (F1.4)
- 2:1 interlaced/non-interlaced (during external sync input)

- High S/N ratio : 60 dB (XC-ST70/ST50/ST51); 58 dB (XC-ST30)
- Electronic shutter function (1/100 to 1/10,000 s)
- Synchronization: internal/external (HD/VD, VS)
- Frame/Field exposure
- Restart/Reset function
- C mount system
- High shock and Vibration Resistance

TV FORMAT Colour

XC-505



- 1/3-type IT CCD
- Dimensions (WxHxD): 22 x 22 x 64 mm
- Mass: 51 g
- External synchronization
HD/VD, VS, VBS
- VBS and Y/C outputs
- CCD IRIS function
- NR function
- Built-in Test Pattern
- Compact NF lens and lens mount
- RS-232C interface to control camera

XC series - Accessories

NF-Mount Lens

VCL-03S12XM



Focal length	3.5 mm
Aperture (F-number)	F1.8 to F16
Minimum object distance (MOD)	300 mm
Mass	40 g

VCL-06S12XM



Focal length	6 mm
Aperture (F-number)	F1.4 to F16
Minimum object distance (MOD)	298 mm
Mass	25 g

VCL-12S12XM



Focal length	12 mm
Aperture (F-number)	F1.4 to F16
Minimum object distance (MOD)	298 mm
Mass	25 g

Adaptor

DC-700



- Compact, lightweight
- External sync input/output
- Trigger input/WEN output
- Built-in high-performance switching power supply

Cable

CCXC-12P02N CCXC-12P10N CCXC-12P05N CCXC-12P25N



- Camera cable (for XC series)
This 12-pin camera cable is used for connecting an XC camera to a DC-700/700CE camera adaptor or JB-77 junction box.
- Shielded

Junction Box

JB-77



- This junction box enables simple conversion from 12-pin camera cable to BNC. Also, 12V DC can be supplied from general purpose power supply to the junction box's power terminal.

C-Mount Adaptor

LO-999CMT



Mass	12 g
------	------

- When a C-mount type lens is attached, a C-mount adaptor (LO-999CMT) is required.

Connector

PC-XC12



- 12-pin/female

Tripod Adaptor

VCT-333I



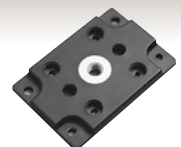
- Material: ABS resin
- Insulated type

VCT-55I



- Material: ABS resin
- Insulated type

VCT-ST70I



- Material: ABS resin
- Insulated type

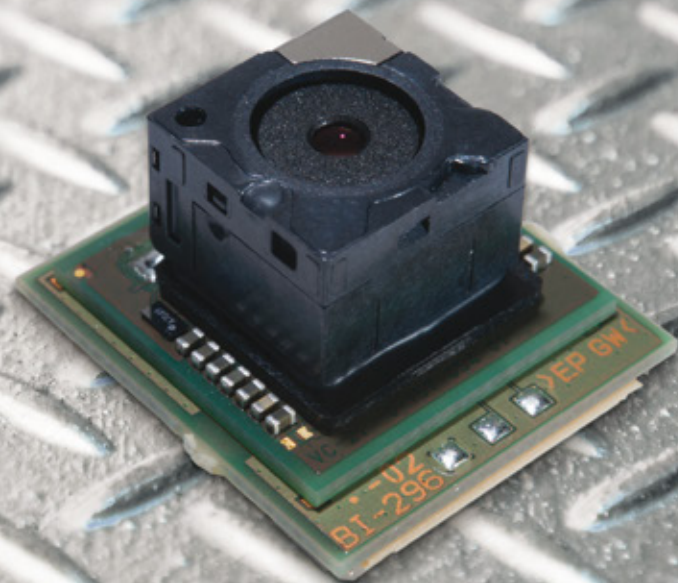
Sony FCB-MA130

Industrial strength technology

Introducing the tiniest, toughest example of Sony's block camera technology. At 18 x 10.3 x 16.5mm, the FCB-MA130 fits into the smallest industrial, professional, security product or even sporting application where size matters. Then it gets to work, endlessly and reliably capturing brilliant HD movies and still images up to 13 megapixel.

Thanks to Sony's renowned CMOS sensor and ISP technology, the FCB-MA130 also offers outstanding features as standard, including autofocus, auto exposure, image stabilisation, face detection and even wide dynamic range. Small size but no compromise. True industrial strength technology from Sony.

See the strengths of the micro FCB-MA130 at: image-sensing-solutions.eu/micro



FCB Micro series

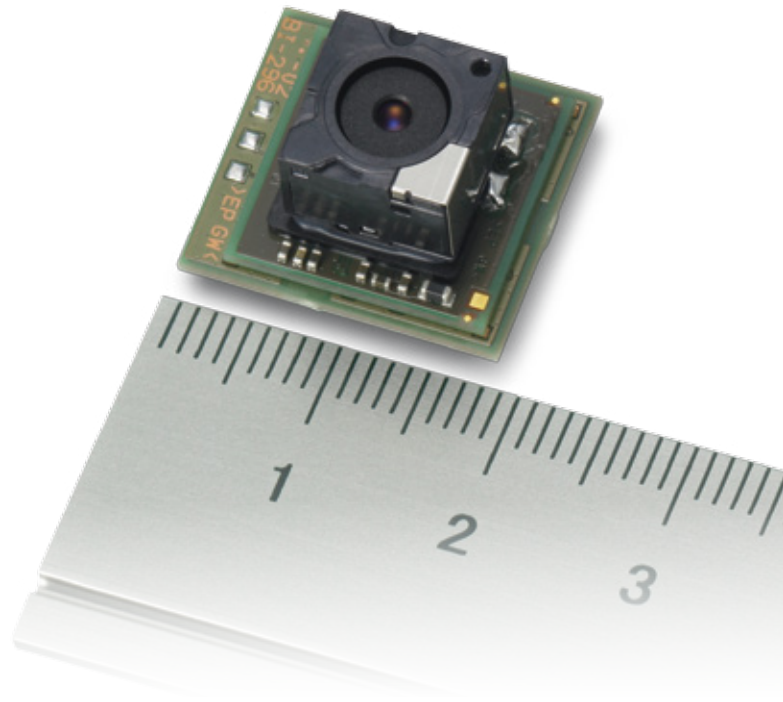
COLOUR CAMERA BLOCK

Sony is expanding its popular FCB Block Camera Series with the introduction of an ultra-compact, all-in-one color camera – the FCB-MA130 – which supports both moving pictures and still images.

With its modest dimensions, the FCB-MA130 contributes to reducing the size of finished products, and this can be useful in wide range of applications.

Incorporating a 1/2.45-type Exmor™ CMOS sensor and Sony's original image signal processor, this new camera enables users to capture Full HD resolution (1080p/30) movies and 13-megapixel still images.

The FCB-MA130 features several other useful functions, including embedded Image Stabilizer and Face Detection, thanks to Sony's original image signal processor. Outstanding compactness coupled with high-quality images – with these capabilities, Sony anticipates this remarkable camera is set to open up brand new industrial applications.



COLOUR CAMERA BLOCK

New Release

FCB-MA130

Exmor

■ Compact Size

The FCB-MA130 is extremely compact, measuring just 16.5 x 10.3 x 18.0 mm (21/32 x 13/32 x 23/32 inches), and can be easily integrated into space-restricted products.

■ Supports Still Images and Video

The FCB-MA130 supports high-quality images. It achieves Full HD (1080p/30) quality moving pictures and 13-megapixel still images in a single unit.

■ Superb Picture Quality

Thanks to Sony's renowned high-quality Exmor image sensor and Sony's original image signal processor, the FCB-MA130 delivers superb picture quality in both still images and moving pictures. In addition to these technologies, picture quality is optimized by precise adjustment previously developed by Sony during production of mobile phone camera modules.

■ Auto Focus

This camera offers a one-push auto focus (AF) function for ease of use.

■ Sony's Original Image Processor

Many useful features are achieved thanks to Sony's original image processor:

- Image Stabilizer
- Face Detection
- Wide Dynamic Range (ATR)
- Noise Reduction (3DNR)
- 16x Digital Zoom

See things other HD cameras can't



The High Definition FCB-EV Series

Achieve new heights of image definition in all lighting conditions with the Sony FCB-EV series. The advanced Exmor CMOS sensor and new Visibility Enhancer capture every detail of light and shade in full HD quality. No movement or vibration blur either, thanks to the built-in image stabiliser. Just sharp, unmistakable results for all your security and monitoring applications, enhanced further by Sony's 30x optical zoom and exceptional wide dynamic range for high contrast environments. It's easy to see why the FCB-EV series leaves its competitors in the shadows.

See more of the HD image quality of Sony's FCB-EV series by visiting: image-sensing-solutions.eu

Exmor™

FCB-HD Advanced Series

COLOUR CAMERA BLOCK

New Release

FCB-EV7500
 FCB-EV7300
 FCB-EV7310
 FCB-EV7100
 FCB-EV5500
 FCB-EV5300



Exmor

In response to growing demand for high-quality, high-resolution images, Sony is adding six new colour models to our camera block line-up.

The FCB-EV7500 employs a 1/2.8-type Exmor™ CMOS image sensor with Full HD (1080/60p) performance, and achieves excellent zooming performance with a 30x optical zoom lens. The FCB-EV7100 also delivers Full HD (1080/60p) performance with a 10x optical zoom lens with very light compact design. The FCB-EV5500 is a model with HD (720/60p) performance with 30x optical zoom lens.

All of these cameras inherit a multitude of features from Sony's world-renowned FCB Series including Wide-D*, Auto ICR, Spherical Privacy Zone Masking and NEW Visibility Enhancer. These useful features are suitable for a variety of demanding applications.

In addition to the FCB-EV7500, FCB-EV7100 and FCB-EV5500 Sony is expanding the EV series further by adding a 20x optical zoom option. The FCB-EV7300 delivers Full HD 1080/60p performance, and includes all the high quality features as the 30x and 10x Full HD camera blocks. Further additions include FCB-EV5300, which delivers 720/60p performance, and also FCB-EV7310, which delivers 1080/60p performance with added benefits of improved low light sensitivity. These new models will be available from August 2014.

*1 Wide dynamic range.

	FCB-EV7500	FCB-EV7300	FCB-EV7310	FCB-EV7100	FCB-EV5500	FCB-EV5300
Imager sensor	1/2.8-type CMOS	1/2.8-type CMOS	1/2.8-type CMOS	1/2.8-type CMOS	1/3-type CMOS	1/3-type CMOS
Lens	30x	20x	20x	10x	30x	20x
Picture quality	Full HD 1080/60p (1920 x 1080)	Full HD 1080/60p (1920 x 1080)	Full HD 1080/60p (1920 x 1080)	Full HD 1080/60p (1920 x 1080)	HD 720/60p (1280 x 720)	HD 720/60p (1280 x 720)
Minimum illumination*	1.4 lx (F1.6, 50%)	TBD	TBD	1.4 lx (F1.8, 50%)	1.0 lx (F1.6, 50%)	TBD
Digital zoom	12x (360x with optical zoom)	12x (240x with optical zoom)	12x (240x with optical zoom)	12x (120x with optical zoom)	12x (360x with optical zoom)	12x (240x with optical zoom)
Mass	260 g (9.2 oz)	TBD	TBD	210 g (7.4 oz)	260 g (9.2 oz)	TBD
Dimensions	50 x 60 x 89.7 mm (2 x 2 3/8 x 3 5/8 inches)	50 x 60 x 89.7 mm (2 x 2 3/8 x 3 5/8 inches)	50 x 60 x 89.7 mm (2 x 2 3/8 x 3 5/8 inches)	45.6 x 48.8 x 78 mm (1 13/16 x 1 15/16 x 3 1/8 inches)	50 x 60 x 89.7 mm (2 x 2 3/8 x 3 5/8 inches)	50 x 60 x 89.7 mm (2 x 2 3/8 x 3 5/8 inches)
Defog	●	●	●	●	●	●
Wide-D (Wide dynamic range)	●	130dB	VE only	●	●	130dB
Image stabilizer	●	●	●	●	●	●
StableZoom	●	●	●	●	●	●
Auto ICR (Auto IR-cut Filter Removal)	●	●	●	●	●	●
Spherical privacy zone masking	●	●	●	●	●	●
Noise reduction	●	●	●	●	●	●
Slow AE response	●	●	●	●	●	●
Video output HD	• Analog: Component (Y/Pb/Pr) • Digital: Y/Cb/Cr 4:2:2 via LVDS (Signal format conforms to SMPTE 274/SMPTE 296.)	• Analog: Component (Y/Pb/Pr) • Digital: Y/Cb/Cr 4:2:2 via LVDS (Signal format conforms to SMPTE 274/SMPTE 296.)	• Digital: Y/Cb/Cr 4:2:2 via LVDS (Signal format conforms to SMPTE 274/SMPTE 296.)	• Analog: Component (Y/Pb/Pr) • Digital: Y/Cb/Cr 4:2:2 via LVDS (Signal format conforms to SMPTE 274/SMPTE 296.)	• Analog: Component (Y/Pb/Pr) • Digital: Y/Cb/Cr 4:2:2 via LVDS (Signal format conforms to SMPTE 296.)	• Digital: Y/Cb/Cr 4:2:2 via LVDS (Signal format conforms to SMPTE 274/SMPTE 296.)
Video output SD	VBS	VBS	VBS	VBS	VBS	VBS
Signal system	1080p/59.94, 1080p/50, 1080p/29.97, 1080p/25, 1080i/59.94, 1080i/50, 720p/59.94, 720p/50, 720p/29.97, 720p/25, NTSC*1, PAL*1	1080p/60, 1080p/30, 1080p/59.94, 1080p/50, 1080p/29.97, 1080p/25, 1080i/60, 1080i/59.94, 1080i/50, 720p/60, 720p/30, 720p/59.94, 720p/50, 720p/29.97, 720p/25		1080p/59.94, 1080p/50, 1080p/29.97, 1080p/25, 1080i/59.94, 1080i/50, 720p/59.94, 720p/50, 720p/29.97, 720p/25, NTSC*1, PAL*1	720p/59.94, 720p/50, 720p/29.97, 720p/25, NTSC*1, PAL*1	720p/60, 720p/30, 720p/59.94, 720p/50, 720p/29.97, 720p/25

* High sensitivity mode, ICR off. *1 Non-standard video format

It's not only what you see it's how you see it



The High Definition FCB-EV Series

With full HD picture quality and Sony's wide dynamic range light sensitivity, you see exactly what you need to in every detail with a Sony FCB-EV camera. The unique CMOS image sensor technology, optimal zoom performance and image stabilisation for minimal blur and vibration, ensures you get the added sharpness and clarity you need even in the most contrasting light conditions.

Sony cameras are already bringing added detail to security and monitoring environments throughout the world. Why not see what they can do for you?

See more of the HD image quality of Sony's FCB-EV series by visiting:
image-sensing-solutions.eu

Exmor[™]



FCB-HD series

COLOUR CAMERA BLOCK

Camera	FCB-EH6500	FCB-EH6300	FCB-EH3410	FCB-EH3310	FCB-EH3150	FCB-SE600	FCB-H11	
Format (HD)	1080p/30, 1080p/29.97, 1080p/25, 1080i/60 (30PsF), 1080i/59.94 (29.97PsF), 1080i/50 (25 PsF), 720p/60, 720p/59.94, 720p/50, 720p/30, 720p/29.97, 720p/25	1080p/29.97, 1080p/25, 1080i/59.94 (29.97PsF), 1080i/50 (25PsF), 720p/59.94, 720p/50, 720p/29.97, 720p/25	720p/59.94, 720p/50, 720p/29.97, 720p/25	720p/59.94, 720p/50, 720p/29.97, 720p/25	720p/59.94, 720p/50, 720p/29.97, 720p/25	720p/59.94, 720p/50, 720p/29.97, 720p/25	1080p/30, 1080p/25, 1080i/60 (30PsF), 1080i/50 (25PsF), 720p/60, 720p/50, 720p/30, 720p/25	1080i/59.94, 1080i/50, 720p/59.94, 720p/50
Lens (Optical Zoom Lens) (wide) mm - (tele) mm	30x f=4.6 to 138.0 F1.6 to F4.7	20x f=4.7 to 94.0 F1.6 to F3.5	28x f=3.5 to 98.0 F1.35 to F3.7	20x f=3.5 to 70.0 F1.35 to F3.4	12x f=3.7 to 44.4, F1.6 to F2.5	3x *Motorized Vari-focal Lens f=3.0 to 9.0, F1.2 to F2.1	10x f=5.1 to 51.0, F1.8 to F2.1	
Digital zoom (with optical zoom)	12x (360x)	12x (240x)	12x (336x)	12x (240x)	12x (144x)	12x (36x)	12x (120x)	
Minimum illumination High sensitivity mode	0.5lx (F1.6, 50%)	0.5 lx (F1.6, 50%)	0.25 lx (F1.35, 50%)	0.25 lx (F1.35, 50%)	0.3 lx (F1.6, 50%)	0.25 lx (F1.2, 50%)	12 lx (F1.8, 50%)	

COLOUR CAMERA BLOCK

FCB-EH6500
FCB-EH6300
FCB-EH3410
FCB-EH3310
FCB-EH3150



Exmor

The FCB-EH Series includes a variety of zoom ratios options, including the FCB-EH6500 which incorporates a 1/2.8-type Exmor™ CMOS image sensor with Full HD (1920 x 1080) resolution, and achieves excellent zooming performance with a 30x optical zoom lens. All of these cameras inherit a multitude of features from Sony's world-renowned FCB Series such as Wide-D*, Auto ICR, and Spherical Privacy Zone Masking. With this breadth of choice, it has never been easier to select the right camera from Sony for your specific imaging applications.

*Wide dynamic range

- Excellent high-definition (HD) picture quality
- The "Exmor" CMOS sensor realizes high image quality and high sensitivity
- Powerful zoom capability
- Bright, fast and robust 30x zoom lens
The FCB-EH6500 incorporates a new 30x bright zoom lens with F1.6. This lens has a fast-zooming capability (approx 3.2 seconds from tele end to wide end) and high durability.
- FCB-EH3410 : Bright fast and robust 28x zoom Lens (f=1.35)
- Various output modes
- Simple connection - one cable, one connector
- StableZoom™
- Image Stabilization (FCB-EH6500 + FCB-EH3410)
- Security-oriented functions (Wide-D technology, Day/Night function, Digital noise reduction, Spherical privacy zone masking, Motion detection alarm)
- Various modes for White Balance (Auto, AT W, Indoor, Outdoor, Outdoor Auto, Sodium Vapor Lamp (Fix/Auto), One push, Manual)
- Picture effects (E-Flip, Nega Art, Black & White, Mirror Image, Colour Enhancement)
- Picture freeze
- Temperature readout
- Slow AE response (Approx 5 min.)
- Title display (20 characters per line, max. 11 lines)
- Camera mode display (English)
- Electronic shutter/slow shutter
- Spot AE
- High Resolution Mode
- IR Focus Correction Function
- 4 Presets for Gamma Control
- 4 Levels of Chrominance Suppression
- Slow shutter

FCB-H11

The FCB-H11 incorporates a 1/3-type HD CMOS image sensor boasting approximately two million effective pixels. This camera also features multi-format video outputs, satisfying user needs for high-definition (HD) and standard-definition (SD) applications. When extremely clear, super picture quality HD images are required, the FCB-H11 camera offers 1080i and 720p signals.

This versatile and flexible camera can also be used with an SD system to allow easy migration from SD to HD when you are ready.

The camera employs a 10x optical zoom lens.

Auto Focus 10x Zoom Lens
f= 5.1 mm (wide) to 51.0 mm (tele), F1.8 to F2.1



- 1/3-type HD CMOS
- The camera is compatible with 8 formats, including the Full HD (1080i high definition)
 - **HD:**
 - 1080i/59.94, 1080i/50
 - 720p/59.94, 720p/50
 - **PAL / NTSC:**
 - 525i/59.94 (Crop), 625i/50 (Crop)
 - 525i/59.94 (Squeeze), 625i/50 (Squeeze)
 - **Video Output**
 - HD: Analog Component
 - SD: VBS, Y/C
- Auto ICR Function
- Minimum illumination (Typical F1.8, 50 IRE)
 - ICR off mode : 12 lx
 - ICR on mode : 1.0 lx
- Digital zoom 12x (120x with optical zoom)
- Sync System Internal
- VISCA protocol (TTL signal level)
- Position preset function
- Custom preset function

FCB-SE600

The FCB-SE600 is cleverly designed with a 3x vari-focal lens, Exmor™ sensor, and image processor and interface (I/F) board, all combined in an ultra-compact body. Its petite design goes a long way to reducing the size of finished OEM products.

Ideally suited to surveillance applications, the FCB-SE600 incorporates a 1/2.8-type Exmor CMOS sensor that achieves Full HD resolution (1080p/30) and superb sensitivity in low light environments.

In addition, the FCB-SE600 features a 3x vari-focal lens with motorized zoom capability and One push AF (auto focus) function.

The FCB-SE600 also inherits some of the unique features of Sony's popular FCB Series cameras.

These outstanding features and benefits, coupled with its smart size, make the FCB-SE600 ideal for demanding applications such as video surveillance, public transportation, sports, video conferencing, and more.



- Compact Size
 - Dimensions : 50.0 x 47.6 x 53.4mm
- Motorized Zoom and One push AF
- Full HD Superb Picture Quality
- Power consumption : less than 1.2W (zoom/focus inactive)
- Mass : Approx. 83g
- High Sensitivity
- Rich Security Features
 - Auto Exposure
 - Auto ICR
 - Auto Wide-Dynamic
 - Privacy Zone Masking
 - Motion detection
 - Temperature readout
 - Noise reduction

Resolution not revolution



The FCB-EX F Series

The innovative FCB-EX F series has evolved standard definition to new heights. The world class HAD CCD II sensor, with 960H technology and new image processor ensures immaculate 670 horizontal line SD image quality.

Up to 480x zoom ratio captures every detail from distance. Wide Dynamic Range and Visibility Enhancer ensure consistent clarity in extreme or contrasting light conditions. Just choose the features to fit your applications from our wide range and fit it seamlessly into your system. Not revolutionary maybe but a clear change for the better.

See more of the standard setting FCB-EX F range at image-sensing-solutions.eu

FCB-EX F series

COLOUR CAMERA BLOCK

- FCB-EX2700 (NTSC)
- FCB-EX2700P (PAL)
- FCB-EX2400 (NTSC)
- FCB-EX2400P (PAL)
- FCB-EX2200 (NTSC)
- FCB-EX2200P (PAL)



Super HAD CCD II

Sony is proudly introducing a new family of standard definition (SD) camera blocks to the FCB camera line-up.

Cameras in the new FCB-EX F Series offer excellent picture quality with a horizontal resolution of 670 TV lines, thanks to the use of Super HAD CCD II™ image sensors and a newly developed image processor. These cameras also incorporate high-performance optical zoom lenses (including high-resolution 40x, and bright 28x and 18x lenses), allowing you to select the right camera according to your varying needs.

All of these cameras inherit a multitude of features from Sony's world-renowned FCB Series such as Wide-D*, Auto ICR, and Spherical Privacy Zone Masking, and they are specifically designed to be integrated into security domes/cameras. These features and breadth of choice enable you to pick the right camera every time.

* Wide dynamic range

	FCB-EX2700	FCB-EX2700P	FCB-EX2400	FCB-EX2400P	FCB-EX2200	FCB-EX2200P
Signal systems	NTSC	PAL	NTSC	PAL	NTSC	PAL
Imager sensor	1/4-type Super HAD CCD II					
Lens	40x		28x		18x	
Minimum illumination*	0.6 lx (F1.6, 50%)		0.4 lx (F1.35, 50%)		0.4 lx (F1.4, 50%)	
Digital zoom	12x (480x with optical zoom)		12x (336x with optical zoom)		12x (216x with optical zoom)	
Mass	265 g (9.3 oz)		245 g (8.6 oz)		225 g (7.9 oz)	
Dimensions	50.0 x 60.0 x 90.9 mm (2 x 2 3/8 x 3 5/8 inches)		50.0 x 57.5 x 89.8 mm (2 x 2 3/8 x 3 5/8 inches)		52.7 x 57.5 x 88.5 mm (2 1/8 x 2 3/8 x 3 1/2 inches)	
De-fog	●		●		●	
Wide-D (Wide dynamic range)	●		●		●	
Image stabilizer	●		●		●	
StableZoom	●		●		●	
Auto ICR (Auto IR-cut Filter Removal)	●		●		●	
Spherical privacy zone masking	●		●		●	
Noise reduction	●		●		●	
Slow AE response	●		●		●	

* IRE 50%, AGC ON.

- Super HAD CCD II Image Sensor**
 The FCB-EX2400, FCB-EX2400P, FCB-EX2200, and FCB-EX2200P achieve excellent sensitivity at as low as 0.4 lx* minimum illumination, and the FCB-EX2700 and FCB-EX2700P at 0.6 lx.* This sensor delivers an excellent horizontal resolution of 670 TV lines, enabling detail to be captured in scenes.
 * IRE 50%, AGC ON.
- Progressive Scan Broadens Capabilities**
 The original picture quality can be maintained without requiring conversion from interlace scan to progressive scan.
- Powerful 40x Optical Zoom Lens**
 FCB-EX2700 and FCB-EX2700P cameras are equipped with a high-resolution 40x optical zoom lens. Together with digital zoom, these cameras achieve a 480x zoom ratio, allowing high-quality picture capture over long distances.
- Visibility Enhancer (VE)**
 The powerful Visibility Enhancer corrects tone curve dynamically and adaptively on a pixel-by-pixel basis while continuously enabling greater visibility in contrasting environments.
- De-fog**
 This feature enhances and optimizes contrast in this type of situation.
- High-quality Digital Output**
 The camera is equipped with a digital interface (Y/Cb/Cr 4:2:2) which is comparable to ITU-R BT656. Using this digital interface, the quality of the camera's video signal does not deteriorate. In addition, there is no need for an external analog/digital converter between the camera and any other equipment.
- Various Operation Modes**
 - Slow AE Response**
 These cameras allow the user to set the auto response speed (up to two minutes) to enable the cameras to adapt to changes in lighting conditions.
 - StableZoom™**
 - Advanced White Balance**
 For the White Balance function, there are two different modes: Outdoor Auto mode and Sodium Vapor Lamp mode. These modes are designed to adapt to changing natural light outdoors and to changing sodium vapor lamp lighting, respectively.
- Extended Operating Temperature**
 These cameras can operate in a range of temperature from -5°C to 60°C.
- Temperature Readout via VISCA.**
- Wide Dynamic Range with New Technology (Wide-D)**
 - Auto Mode**
 When shooting in high- or low-contrast lighting situations, the camera monitors the luminance differences within an image and automatically switches the Wide-D feature on and off, depending on the visibility of the subjects and background.
 - Interlace Wide-D and Progressive Wide-D Modes**
 There are two modes to choose from.
 - Interlace Wide-D mode is ideally suited to high-contrast lighting environments.
 - Progressive Wide-D mode is suited to low-contrast environments.
- Enhanced Noise Reduction**
 By combining 2D and 3D noise reduction, the camera offers a wide selection of noise-reduction settings, from Level 1 to Level 5.
- Image Stabilization.**

Standard can still set new standards



The FCB-EX F Series

Being standard definition doesn't stop the new Sony FCB-EX F series from being exceptional. Our latest HAD CCD II sensor, with 960H technology and new image processor ensures immaculate 670 horizontal line, SD image quality. Up to 480x zoom ratio captures every detail from distance.

Wide Dynamic Range and Visibility Enhancer ensure consistent clarity in extreme or contrasting light conditions. Choose the exact block camera performance to fit your applications and existing infrastructure from our wide and versatile range. The FCB-EX F series, as you'd expect from Sony, anything but standard.

See more of the standard setting FCB-EX F range at image-sensing-solutions.eu

FCB-EX E series

FEATURES

NTSC	FCB-EX1020	FCB-EX995E	FCB-EX985E	FCB-EX490E	FCB-EX48E	FCB-EX15E
PAL	FCB-EX1020P	FCB-EX995EP	FCB-EX985EP	FCB-EX490EP	FCB-EX48EP	FCB-EX15EP
Lens (Optical Zoom Lens)	36x	28x	28x	18x	18x	12x
(wide) mm to (tele) mm	f=3.4 to 122.4, F1.6 to F4.5	f=3.5 to 98.0 F1.35 to F3.7	f=3.5 to 98.0 F1.35 to F3.7	f=4.1 to 73.8, F1.4 to F3.0	f=4.1 to 73.8, F1.4 to F3.0	f=3.7 to 44.4, F1.6 to F2.8
Digital out	●	●	●	●	●	●
PS mode	●	●	●	●	●	●
Wide-D	●	●	●	●	●	●
Image Stabilizer	●	●	●	●	●	●
Auto-ICR	●	●	●	●	●	●

COLOUR CAMERA BLOCK

FCB-EX1020 (NTSC) FCB-EX1020P (PAL)



- 1/4-type EXview HAD CCD
- Auto Focus 36x Zoom Lens
- Excellent AF performance
- 12x digital zoom function
- Higher resolution : 550 TV lines
- Progressive Scan
- Analog & Digital Output (Comparable to ITU-R BT656)
- Image Stabilizer : "Stable Zoom"
- WDR with Automatic On/Off switching
- Noise Reduction (2D+3D)
- Auto ICR function (Focus compensation in Auto ICR mode)
- Spherical Privacy Zone Masking with Mosaic Effect
- Electronic-Flip (E-Flip)
- Multi-Line On-Screen Display
- Video Motion Detection
- VISCA protocol (TTL signal level)
- Position preset function
- Slow AE response up to 10 min. (Max.)
- Various AWB modes
 - Outdoor Auto mode
 - Sodium Vapor Lamp mode
- Operation temperature: -5°C to +60°C
- Temperature readout

FCB-EX995E (NTSC) FCB-EX985E (NTSC) FCB-EX995EP (PAL) FCB-EX985EP (PAL)



- 1/4-type EXview HAD CCD (FCB-EX995E/EX995EP)
- 1/4-type Super HAD CCD II (FCB-EX985E/EX985EP)
- Auto Focus 28x Zoom Lens
- Excellent AF performance
- 12x digital zoom function
- Higher resolution : 550 TV lines
- Analog & Digital Output (Comparable to ITU-R BT656)
- Image Stabilizer : "Stable Zoom"
- Noise Reduction (2D+3D)
- Auto ICR function (Focus compensation in Auto ICR mode)
- High sensitivity: 0.25 lx (**only for FCB-EX985E/P**)
- Spherical Privacy Zone Masking with Mosaic Effect
- Electronic-Flip (E-Flip)
- Multi-Line On-Screen Display
- Video Motion Detection
- VISCA protocol (TTL signal level)
- Position preset function
- Slow AE response up to 10 min. (Max.)
- Various AWB modes
 - Outdoor Auto mode
 - Sodium Vapor Lamp mode
- Operation temperature: -5°C to +60°C
- Temperature readout

FCB- EX995E/EX995EP only

- Progressive Scan
- WDR with Automatic On/Off switching

FCB-EX490E (NTSC) FCB-EX48E (NTSC) FCB-EX490EP (PAL) FCB-EX48EP (PAL)



- 1/4-type EXview HAD CCD (FCB-EX490E/EX490EP)
- 1/4-type CCD (FCB-EX48E/EX48EP)
- Auto Focus 18x Zoom Lens
- Excellent AF performance
- 12x digital zoom function
- Higher resolution : 550 TV lines
- Analog & Digital Output (Comparable to ITU-R BT656)
- Image Stabilizer : "Stable Zoom"
- Noise Reduction (2D+3D)
- Spherical Privacy Zone Masking with Mosaic Effect
- Electronic-Flip (E-Flip)
- Multi-Line On-Screen Display
- Video Motion Detection
- VISCA protocol (TTL signal level)
- Position preset function
- Slow AE response up to 10 min. (Max.)
- Various AWB modes
 - Outdoor Auto mode
 - Sodium Vapor Lamp mode
- Operation temperature: -5°C to +60°C
- Temperature readout

FCB-EX490E/EX490EP only

- Progressive Scan
- WDR with Automatic On/Off switching
- Auto ICR function (Focus compensation in Auto ICR mode)

FCB-EX E series

COLOUR CAMERA BLOCK

FCB-EX15E (NTSC)
FCB-EX15EP (PAL)



- 1/4-type EXview HAD CCD (FCB-EX15E/EX15EP) – Progressive Scan
 - Auto Focus 12x Zoom Lens
 - Small size
 - Excellent AF performance
 - 12x digital zoom function
 - Higher resolution : 550 TV lines
 - Auto ICR mechanism for Day & Night function
 - Noise Reduction (2D+3D)
 - Analog & Digital Output via LVDS
 - Image Stabilizer : "Stable Zoom"
 - Spherical Privacy Zone Masking with Mosaic Effect
 - Electronic-Flip (E-Flip)
 - Multi-Line On-Screen Display
 - Video Motion Detection
 - VISCA protocol (TTL signal level)
 - Position preset function
 - Slow AE response up to 10 min. (Max.)
 - Various AWB modes
 - Outdoor Auto mode
 - Sodium Vapor Lamp mode
 - Operation temperature: -5°C to +60°C
 - Temperature readout
- FCB-EX15E/EP only**
- Progressive Scan
 - WDR with Automatic On/Off switching

FCB-EX D series

COLOUR CAMERA BLOCK

FCB-EX1010/P



FCB-EX1010(NTSC)/EX1010P(PAL)

Auto Focus 36x Zoom Lens
f= 3.4 mm (wide) to 122.4 mm (tele),
F1.6 to F4.5
Minimum Illumination : 1/60 s mode: 1.4 lx,
1/4 s mode: 0.1 lx

- Wide Dynamic Range
- High resolution: 530 TV lines
- Auto IR-Cut Filter Removal (ICR)
- Slow AE Response Function
- Spherical Privacy Zone Masking with Mosaic Effect
- Electronic-Flip (E-Flip)
- Multi-Line On-Screen Display
- Video Motion Detection
- 12x digital Zoom function
- Sync system: Internal/External (V-Lock)
- VISCA protocol (TTL signal level)
- Position preset function

FCB-EX20D (NTSC)
FCB-EX20DP (PAL)



Auto Focus 10x Zoom Lens
f= 5.1 mm (wide) to 51.0 mm (tele),
F1.8 to F2.1

- 1/3-type Super HAD CCD II
- Minimum illumination of 0.25 lx (Typical, F1.8, 50 IRE)
- Auto ICR (IR Cut-filter Removal) function
- High resolution: 530 TV lines
- Internal/External Sync
- Electronic-Flip (E-Flip)
- Spherical Privacy Zone Masking with Mosaic Effect
- Slow AE Response Function
- Picture Freeze
- Video Motion Detection
- Multi-line On-screen Display
- VISCA protocol (TTL signal level)
- Compact and Lightweight Design

FCB-EX11D (NTSC)
FCB-EX11DP (PAL)



Auto Focus 10x Zoom Lens
f= 4.2 mm (wide) to 42.0 mm (tele),
F1.8 to F2.9

- 1/4-type EXview HAD CCD
- High resolution: 530 TV lines
- Slow AE Response Function
- Spherical Privacy Zone Masking with Mosaic Effect
- Electronic-Flip (E-Flip)
- Multi-Line On-Screen Display
- Video Motion Detection
- 12x digital Zoom function
- Sync system: Internal/External (V-Lock)
- VISCA protocol (TTL signal level)
- Position preset function
- Custom preset function
- Compact and Lightweight Design

FCB-EX C series

COLOUR CAMERA BLOCK

FCB-EX980S/P



FCB-EX980S(NTSC)/EX980SP(PAL)

Auto Focus 26x Zoom Lens
f= 3.5 mm (wide) to 91.0 mm (tele),
F1.6 to F3.8

- Auto ICR (IR Cut-filter Removal) function*
- * (Except EX48C/P)
- Slow AE Response Function
- Spherical Privacy Zone Masking
- Electronic-Flip (E-Flip)
- Title Display (One Line)
- Image stabilizer function
- *FCB-EX980S/EX980SP only
- Alarm function
- 12x digital zoom function
- Sync system: Internal/External
- VISCA protocol (TTL signal level)
- Position preset function
- Custom preset function

FCB-IX series

COLOUR CAMERA BLOCK

FCB-IX11A/P FCB-IX47C/P



FCB-IX11A



FCB-IX47C

FCB-IX11A(NTSC)/IX11AP(PAL)

Auto Focus 10x Zoom Lens
f= 4.2 mm (wide) to 42.0 mm (tele),
F1.8 to F2.9

FCB-IX47C(NTSC)/IX47CP(PAL)

Auto Focus 18x Zoom Lens
f= 4.1 mm (wide) to 73.8 mm (tele),
F1.4 to F3.0

FCB-IX11A/IX11AP

- 1/4-type EXview HAD CCD
- Minimum illumination: 1.5 lx (at normal shutter speed, 50 IRE)
- Compact size
- Digital zoom function (4x)

FCB-IX47C/IX47CP

- 1/4-type Super HAD CCD
- Minimum illumination: 1.0 lx (at normal shutter speed, 50 IRE)
- Digital zoom function (4x)
- New privacy zone masking (PZM) function

- Electronic-Flip (E-Flip)
- Alarm function
- Slow AE Response function

All models

- Auto slow shutter
- Picture Freeze, Mirror Image, and neg. art
- Preset status backup function
- Key SW control
- VISCA protocol (RS-232C/TTL signal level)
- On-screen date/time and title display
- Initial mode settings can be changed

I love my EX



The FCB-EX F Series

Happy to remain with SD monitoring and surveillance but want more from it? The new Sony FCB-EX F series upgrades high resolution to something you'll be even happier with. The HAD CCD II sensor, with 960H technology and new image processor ensures immaculate 670 horizontal line SD image quality. Up to 480x zoom ratio captures every detail from distance. Wide Dynamic Range and Visibility Enhancer ensure consistent clarity in extreme or contrasting light conditions.

Just choose the features compatible with your applications from our wide range, without having to split from your current infrastructure. The new FCB-EX F series. We think you're going to love it.

See more of the standard setting FCB-EX F range at image-sensing-solutions.eu



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PHC_17/05/2014

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