SONY
make.believe

Image Sensing Solutions

Line up 2011

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, we thoroughly understand your requirements and the specialised environments in which our products need to operate.

IMAGE SENSING SOLUTIONS

- Colour Pan / Tilt / Zoom
- 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

XCG series

DIGITAL INTERFACE GIGE VISION

New Release

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

Sony is expanding its popular XCG GigE camera series with the introduction of a new high-quality, high-sensitivity monochrome camera.
The new XCG-H280E incorporates a 2/3-type EXview HAD CCD II™ sensor which provides greater sensitivity in the visible and near-infrared wavelengths than previous models.
In addition to inheriting some of the unique features of Sony's XCD Series such as Bulk Trigger and Sequential Trigger modes, the XCG-H280E features a full-HD high frame rate image-transfer capability with 8, 10, or 12-bit video data output.

- 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)
- 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)

DIGITAL INTERFACE GIGE VISION

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

2/3-type PS CCD (SXGA 16 fps)
XCG-SX97E

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-SX97E : 400 lx F11 (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-SX97E: 0.2 lx, XCG-SX99E: 0.4 lx
- Dimensions (W×H×D): 44 × 33 × 67.5 mm
- Mass: 145 g
- Power consumption (Max.)
  XCG-U100E, XCG-SX97E, XCG-V60E: 3.1W
  XCG-SX99E : 3.6 W
  XCG-5005E: 4.3 W

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XCG series Colour Models

DIGITAL INTERFACE GIGE VISION

New Release

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.

- 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 (W×H×D): 44 × 33 × 67.5 mm
- Mass: 145 g
- Power consumption (Max.):
  XCG-U100CR: 3.5W
  XCG-5005CR: 4.3 W

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"GenIcam"is trademark of EMVA (European Machine Vision Association)

XCI series

INTELLIGENT CAMERAS

1/3-type PS CCD
XCI-SX100(B/W)
XCI-SX100C(Colour)
XCI-V100(B/W)
XCI-V100C(Colour)

- All-in-one Body and High shock and vibration resistance
- High performance sensor and processor
  - CCD sensor capable of high speed image capturing
  - x86-compatible CPU (1 GHz) and 512 MB DDR2 SDRAM
  - FPGA customizable for hardware image processing
  - Microsoft Windows® XP Embeded Support
    Camera driver for Microsoft Windows® XP Embedded is equipped CompactFlash and OS are optional.

* Windows is a trademark of Microsoft Corporation in USA and other countries.

- Security Specifications
  - CS mount lens support (C mount lens attached when shipped)
  - Auto Iris control, convenient for a wide range of security application
  - Dual Read out by Wide-D Technology
  - AWB
  - AGC
- Colour Model Equipped with a Colour Separation
  Technology that Enables High-definition Image Reproduction
- Binning function (for monochrome model only)
- Partial Scan function
- Various Interfaces
  - Easy and direct monitor output (D-sub 15-pin)
  - High-speed network connectivity, up to 1000Base-T
  - USB 2.0 interface
- Power Requirements Adjustable for Environment (+12 V and +24 V)

XCD series

DIGITAL INTERFACE IEEE IEEE 1394-2002

New Release

1/3-type global shutter CMOS sensor
XCD-MV6

Sony continues to expand its popular XCD IEEE1394b camera series with the latest introduction of its ultra-compact and lightweight, monochrome XCD-MV6. This new progressive scan camera incorporates a 1/3-type wide VGA global shutter CMOS sensor and is one of the smallest IEEE1394b cameras available on the market.
The XCD-MV6 measures just 19 mm in depth and weighs only 37 grams. Combining high-quality images with a miniaturized body, the XCD-MV6 is ideally suited for space-restricted machine vision and robotic applications.

- Ultra-compact body measuring (W x H x D) :29 × 29 × 19 mm
- IEEE1394b S1600 Complian-High data transfer rate (up to 1600 Mbps)
- IIDC Ver. 1.32 Compliant
- Broadcast delivery function - Enables the sending of commands (e.g. software trigger and adjusting camera settings) when used in a multiple camera system.
- Various image correction capability
  - Defect pixel correction
  - Fix pattern noise correction
  - Shading correction
    Up to ±25% luminance difference can be corrected by Shading correction function.
- Partial scan functions
- Temporal image storage functions allows for later transmission (Max. 100 frames)
- High shock and vibration resistance

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)

- High image quality, high-speed image output
- Daisy chain connection

- Hardware preprocessing
  The camera is equipped with hardware LUT (Lookup Table).
- 3 × 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 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 x 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 x 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

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 (W×H×D): 44 × 29 × 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 (W×H×D): 22 × 22 × 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

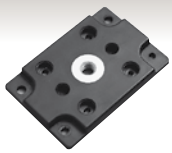
VCT-333I

- Material: ABS resin
- Insulated type

VCT-55I

- Material: ABS resin
- Insulated type

VCT-ST70I



- Material: ABS resin
- Insulated type

FCB-HD series

COLOUR CAMERA BLOCK

FCB-EH6300
FCB-EH3400
FCB-EH3300

New Release

Sony, a leader in high-definition (HD) technology, is expanding its FCB Block Camera Series with the addition of three new HD resolution cameras.
In response to the growing demand for high-quality and high-resolution images offers a range of 20x to 28x optical zoom lens options with outstanding features for surveillance, intelligent traffic, unmanned vehicles, photo booths, police vehicles, low vision and videoconferencing applications.
The flagship FCB-EH6300 camera incorporates a 1/2.8-type Exmor™ CMOS image sensor with 1080p resolution. The FCB-EH3400 and FCB-EH3300 cameras incorporate a 1/4-type Exmor CMOS image sensor with 720p resolution. All three cameras inherit a multitude of features from Sony's world-renowned FCB Series such as Wide-D, Auto ICR and Spherical Privacy Zone Masking.

- Excellent high-definition (HD) picture quality
- The "Exmor" CMOS sensor realizes high image quality and high sensitivity
- Powerful zoom capability
- Bright fast and robust 28x zoom Lens (FCB-EH3400 f=1.35)
- Various output modes
- Simple connection - one cable, one connector
- StableZoom™
- Image Stabilization (FCB-EH3400)
- 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

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 an 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-EX E version

COLOUR CAMERA BLOCK

New Release

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
- Enhanced Noise Reduction
- 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"
- Enhanced Noise Reduction
- 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"
- Enhanced Noise Reduction
- 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)

Release Schedule - 2011 Spring Season

FCB-EX12E (NTSC)
FCB-EX15E (NTSC)
FCB-EX12EP (PAL)
FCB-EX15EP (PAL)

- 1/4-type EXview HAD CCD (FCB-EX15E/EX15EP) – Progressive Scan
- 1/4-type CCD (FCB-EX12E/EX12EP) – Interlace 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
- Enhanced Noise Reduction
- 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-EX D version

COLOUR CAMERA BLOCK

FCB-EX1010/P
FCB-EX490D/P
FCB-EX990D/P

FCB-EX1010/EX1010P

FCB-EX990D/EX990DP

FCB-EX490D/EX490DP

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
FCB-EX990D(NTSC)/EX990DP(PAL)
Auto Focus 26x Zoom Lens
f= 3.5 mm (wide) to 91.0 mm (tele),
F1.6 to F3.8
Minimum Illumination : 1/60 s mode: 1.0 lx,
1/4 s mode: 0.09 lx
FCB-EX490D(NTSC)/EX490DP(PAL)
Auto Focus 18x Zoom Lens
f= 4.1 mm (wide) to 73.8 mm (tele),
F1.4 to F3.0
Minimum Illumination : 1/60 s mode: 0.7 lx,
1/4 s mode: 0.07 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 (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 (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 version

COLOUR CAMERA BLOCK

FCB-EX1000/P
FCB-EX480C/P
FCB-EX980S/P
FCB-EX48C/P
FCB-EX980/P

FCB-EX1000/EX1000P

FCB-EX980S/EX980SP
FCB-EX980/EX980P

FCB-EX480C/EX480CP

FCB-EX48C/EX48CP

FCB-EX1000(NTSC)/EX1000P(PAL)
Auto Focus 36x Zoom Lens
f= 3.4 mm (wide) to 122.4 mm (tele),
F1.6 to F4.5
FCB-EX980S(NTSC)/EX980SP(PAL)
FCB-EX980(NTSC)/EX980P(PAL)
Auto Focus 26x Zoom Lens
f= 3.5 mm (wide) to 91.0 mm (tele),
F1.6 to F3.8
FCB-EX480C(NTSC)/EX480CP(PAL)
FCB-EX48C(NTSC)/EX48CP(PAL)
Auto Focus 18x Zoom Lens
f= 4.1 mm (wide) to 73.8 mm (tele),
F1.4 to F3.0

- Auto ICR (IR Cut-filter Removal) function*
  * FCB-EX980S/EX980SP,FCB-EX980/EX980P, FCB-EX480C/EX480CP only
- 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-IXC47C(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

FCB-PV series

COLOUR CAMERA BLOCK

FCB-PV10
FCB-PV480

FCB-PV10

FCB-PV480

FCB-PV10
Auto Focus 10x Zoom Lens
f= 4.2 mm (wide) to 42.0 mm (tele),
F1.8 to F2.9
FCB-PV480
Auto Focus 18x Zoom Lens
f= 4.1 mm (wide) to 73.8 mm (tele),
F1.4 to F3.0

- 1/4-type Progressive Scan CCD
- Excellent colour reproduction and eliminate the need for pixel size conversion
- Digital Interface with Selectable Modes
  16-bit Progressive output
  8-bit Progressive output
  8-bit Interlace output
- VGA output (640 (H) × 480 (V))
- Frame rate: 29.97 fps/25 fps (switchable)

- Auto ICR (IR Cut-filter Removal) FCB-PV480 only
- Spherical Privacy Zone Masking with Mosaic Effect
- Electronic-Flip (E-Flip)
- On-screen Display : Title
- Alarm function
- Sync system: Internal
- VISCA protocol (TTL signal level)
- Position preset function
- Custom preset function

New EVI series

COLOUR VIDEO CAMERAS

New Release

SD Models (EVI-D80 & EVI-D90)
HD Models (EVI-H100S & EVI-H100V)

From standard definition to high definition, Sony's new EVI PTZ cameras are ideal for videoconferencing, houses of worship, corporate training, and distance learning.

Product Line-up

SD models	Black (NTSC)	Black (PAL)	White (NTSC)	White (PAL)
Optical Zoom 18x	EVI-D80N	EVI-D80P	EVI-D80N/W	EVI-D80P/W
Optical Zoom 28x	EVI-D90N	EVI-D90P	EVI-D90N/W	EVI-D90P/W

HD models	Black	White
HD-SDI Interface	EVI-H100S	EVI-H100S/W
DVI Interface	EVI-H100V	EVI-H100V/W

EVI-HD series

COLOUR VIDEO CAMERAS

EVI-H100S

Exmor

- Full HD 1080p/30
- 20x optical zoom lens
- HD-SDI interface
- 1/2.8-type Exmor™ CMOS sensor
- Both standard mounting and ceiling mounting with E-flip function
- Smart and stylish design with either a black or white body

EVI-H100V

Exmor

- Full HD 1080p/30
- 20x optical zoom lens
- DVI interface
- 1/2.8-type Exmor™ CMOS sensor
- Both standard mounting and ceiling mounting with E-flip function
- Smart and stylish design with either a black or white body

EVI-SD series

COLOUR VIDEO CAMERAS

EVI-D80N/W
EVI-D80P/W

- 18x optical zoom lens
- 1/4-type CCD sensor
- Both standard mounting and ceiling mounting with E-flip function
- Smart and stylish design with either a black or white body

EVI-D90N/W
EVI-D90P/W

EXview HAD CCD

- 28x optical zoom lens
- Wide-D technology
- 1/4-type EXview HAD CCD sensor
- Both standard mounting and ceiling mounting with E-flip function
- Smart and stylish design with either a black or white body

EVI-HD series

COLOUR PAN / TILT / ZOOM

EVI-HD7V
EVI-HD3V

The EVI-HD7V achieves digital image acquisition of up to 1080p/60 for exceptional picture quality. The EVI-HD3V provides superb image quality of up to 720p/60 at an affordable price. Both cameras are equipped with a DVI-I interface, enabling easy connection to a PC monitor.

EVI-HD1

The EVI-HD1 is a High-Definition (HD) colour camera equipped with a 2-megapixel CMOS.
The camera supports 14 formats, including 1080i full high-definition video, and it allows for high-quality image transfer via the digital interface (HD-SDI).
The pan/tilt mechanism uses an extremely quick and quiet direct drive motor.

Features

■ Flexibility and Choice of Video Outputs From SD to Full HD

EVI-HD Series provides multiple formats for natural and smooth video images.

	EVI-HD7V	EVI-HD3V	EVI-HD1
1080p/59.94 1080p/50	✔		
1080i/59.94 1080i/50	✔		✔
1080p/29.97 1080p/25	✔		✔
720p/59.94 720p/50	✔	✔	✔
720p/29.97 720p/25	✔	✔	✔
640 x 480p/59.94	✔ (LB)	✔ (LB)	
SD			✔ (LB,CR,SQ)

LB: Letter box CR: Crop SQ: Squeeze

■ High-quality Image Transmission

The EVI-HD7V and EVI-HD3V are both equipped with a DVI-I interface that is designed to maximize high video quality of digital displays. This digital interface is capable of displaying both digital and analog signals (output is selectable from Y/Pb/Pr and RGB). The EVI-HD1 features an HD-SDI interface, enabling long-distance transmission of HD images without degrading the picture quality.

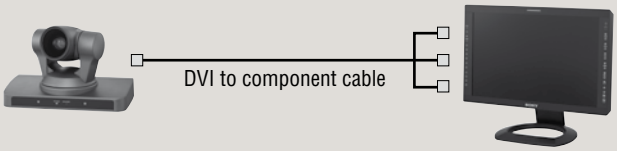
Video Interface

Camera		EVI-HD7V/HD3V	EVI-HD1
Digital output	IF	DVI-I (Digital)	HD-SDI
	Colour coding	RGB or Y/Pb/Pr *1	Y/Cb/Cr
Analog output	IF	DVI-I (Analog)	Component (D-sub 15-pin)
	Colour coding	RGB or Y/Pb/Pr *1	Y/Pb/Pr
	Tri-level Sync on video signal	On or Off *2	Always on
	Sync signal	HD and VD	HD and VD, or HD and Tri-level Sync *1

*1: Can be set by OSD or VISCA *2: Selected by DIP SW

Connection of EVI-HD7V/HD3V to HD Monitor

By selecting Y/Pb/Pr in colour coding of EVI-HD7V/HD3V, analog component signals can be output to an HD monitor.



■ Wide-range, Quiet, and Quick Pan/Tilt Movement

All models in the EVI-HD Series utilize a direct drive motor mechanism for achieving high-speed, quiet, and smooth P/T/Z operations to capture images. These cameras cover a wide shooting range, ideal for capturing extensive areas where face-to-face discussions are critical. The face-to-face experience is enhanced by the unique quiet operation of the direct drive pan/tilt mechanism.

- Pan angle: -100 degrees to +100 degrees (max pan speed: 300 degrees/s)
- Tilt angle: -25 degrees to +25 degrees (max tilt speed: 125 degrees/s)

■ 10x Optical (40x with Digital Zoom)

All models in the EVI-HD Series are equipped with a 10x optical zoom lens. They have 40x zoom ratio with 4x digital zoom lens. This fast and stable auto-focus lens can clearly capture small and intricately featured objects.

■ Other Features

- RS-232C Remote Control (VISCA™ Protocol)
  The EVI-HD Series enables camera settings and P/T/Z control functions to be performed remotely at any location and at high communication speeds via the RS-232C interface.
- Six Position Presets
  All models in the EVI HD Series can store up to a maximum of six preset settings for P/T/Z, focus position, exposure mode, and white balance mode.
- Customizable Settings via On-screen Menu using IR Remote Commander® Unit
  Users are able to adjust various camera settings using IR Remote Commander unit. The easy-to-use supplied IR Remote Commander unit is useful for full operation of the EVI-HD Series from various locations within a room.

EVI-SD series

COLOUR PAN / TILT / ZOOM

EVI-D70 (NTSC BLACK)
EVI-D70/W (NTSC WHITE)
EVI-D70P (PAL BLACK)
EVI-D70PW (PAL WHITE)

- Auto Focus 18x Zoom Lens
  - f= 4.1 mm (wide) to 73.8 mm (tele)
  - F1.4 to F3.0
- Wide pan/tilt angle
  - Horizontal: –170 degrees to +170 degrees (Maximum speed: 100 degrees/s)
  - Vertical: –30 degrees to +90 degrees (Maximum speed: 90 degrees/s)
- Minimum illumination: 1.0 lx (at normal shutter speed, 50 IRE)
- Auto ICR function
  - The IR (infrared) cut filter can be mechanically removed and automatically selected, allowing you to capture an optimum image when shooting bright or dark subjects.
- Vertical flip function
  - Both ceiling mounting and standard mounting possible
  - Ceiling mounting brackets included
- Black models (EVI-D70, D70P) and white models (EVI-D70/W, D70P/W) available
- Alarm function
- In addition to external control via the VISCA protocol's RS-232C interface, long-distance control is also possible from the RS-422 interface with support for commands via VISCA protocol (38,400 bps/9,600 bps).
- EVI-D30/D31 emulation mode
- 6 position presets

EVI-D100 (NTSC)
EVI-D100P (PAL)

- Quick, quiet pan/tilt mechanism made possible with direct drive motor
  - Horizontal: –100 degrees to +100 degrees (Maximum speed: 300 degrees/s)
  - Horizontal: –25 degrees to +25 degrees (Maximum speed: 125 degrees/s)
- Wide angle, Auto Focus 10x Zoom Lens
  - Horizontal field angle: 65 degrees (wide end)
  - f= 3.1 mm (wide) to 31.0 mm (tele)
  - F1.8 to F2.9
- Compact size: Dimensions (WxHxD): 113 × 120 × 132 mm (Maximum dimensions (not including protruding parts))
- External control via VISCA protocol RS-232C interface
- EVI-D30/D31 emulation mode
- 6 position presets

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