

# FCB-EV Series

Color Block Cameras

**SONY**  
make.believe



FCB-EV750



FCB-EV550



FCB-EV710

**Exmor**

## Introduction

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

The FCB-EV7500 employs 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\*<sup>1</sup>, Auto ICR, and Spherical Privacy Zone Masking. These useful features are suitable for a variety of applications to satisfy your needs.

\*1 Wide dynamic range.

	FCB-EV7500	FCB-EV7100	FCB-EV5500
Imager sensor	1/2.8-type CMOS	1/2.8-type CMOS	1/3-type CMOS
Lens	30x	10x	30x
Picture quality	Full HD 1080/60p (1920 x 1080)	Full HD 1080/60p (1920 x 1080)	HD 720/60p (1280 x 720)
Minimum illumination*	1.4 lx (F1.6, 50%)	1.4 lx (F1.8, 50%)	1.0 lx (F1.6, 50%)
Digital zoom	12x (360x with optical zoom)	12x (120x with optical zoom)	12x (360x with optical zoom)
Mass	260 g (9.2 oz)	210 g (7.4 oz)	260 g (9.2 oz)
Dimensions	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)
Defog	●	●	●
Wide-D (Wide dynamic range)	●	●	●
Image stabilizer	●		●
StableZoom	●	●	●
Auto ICR (Auto IR-cut Filter Removal)	●	●	●
Spherical privacy zone masking	●	●	●
Noise reduction	●	●	●
Slow AE response	●	●	●

\* High sensitivity mode, ICR off.

## Key Features

### ■ Capture crisp, clear Full HD (1080/60p) images\*<sup>2</sup>

The high-performance 1/2.8-type Exmor™ CMOS image sensor achieves superb Full HD (1920 x 1080) picture quality, even in low-light environments. Progressive scanning assures smoother pictures with reduced blur – ideal for capturing the detail in moving images.

\*<sup>2</sup> The FCB-EV5500 achieves crisp HD 720 picture quality.

### ■ Fast, bright lens with rapid 30x optical zoom\*<sup>3</sup>

The high quality lens offers a bright F1.6 maximum aperture and 30x optical zoom range. Fast zoom operation (from wide end to tele) is ideal for smooth, rapid transitions from wide area coverage to detailed close-ups in security and surveillance applications.

\*<sup>3</sup> The FCB-EV7100 is equipped with a bright F1.8 maximum aperture and 10x optical zoom.

### ■ Get a steadier picture with image stabilizer\*<sup>4</sup>

The camera's built-in image stabilizer function counters the effects of blurred, shaky images caused by low-frequency vibration. It's useful for outdoor surveillance and traffic monitoring applications where the camera may be subject to wind or mechanical vibration such as on a bridge or mounting pole.

\*<sup>4</sup> Except FCB-EV7100.

### ■ StableZoom™

Image stabilizer and optical/digital zoom are combined to enhance picture quality while maintaining the original horizontal angle of view, ensuring no compromise in image size and reduced blurring.

### ■ 2D/3D Noise Reduction

Advanced noise reduction technology filters noise from the image for clearer results, especially in low light conditions. Noise reduction can be selected from five levels to suit a wide range of operating environments.

### ■ See more clearly with Visibility Enhancer and De-fog

Picture quality is enhanced dynamically and adaptively on a pixel-by-pixel basis while continuously adapting to the scene within the given dynamic range. There's also a de-fog feature that allows clearer viewing in foggy or misty scenes.

### ■ Wide dynamic range

Wide-D image processing technology gives the ability to see clear detailed images in high-contrast or backlit environments. For the FCB-EV5500, enhanced processing now supports an exceptionally wide 120dB dynamic range method (HD 720 resolution) for even greater clarity.

### ■ Clear vision round the clock with Day/Night

Benefit from optimized picture quality in changing light conditions – a frequent challenge in round-the-clock security operations. In high sensitivity mode the camera can operate effectively in lighting levels as low as 0.35 lx (ICR on).\*<sup>5</sup>

\*<sup>5</sup> The FCB-EV5500 achieves 0.25lx.

■ **Auto ICR (Auto IR-cut Filter Removal)**

In low light conditions the camera automatically switches from day to night mode, removing the IR-cut filter to boost sensitivity for clear pictures in near-darkness.

■ **Spherical privacy zone masking**

Areas of view can be selectively masked for privacy. Masked areas are automatically interlocked with the camera's pan/tilt/zoom movements.

■ **Choice of HD and SD output modes**

Video signal outputs are available in a range of HD (digital and analog) and SD formats, reducing integration cost and complexity by avoiding the need for additional analog/digital converters. Video output modes can be changed 'on the fly' during normal operation, without a hardware reboot of the camera.

■ **One-cable connection for simpler integration**

A single cable carries HD video signals plus VISCA communication and power supply. Integration flexibility is further supported by both 30-pin micro coaxial (digital output) and 24-pin FFC (analog output) interfaces.

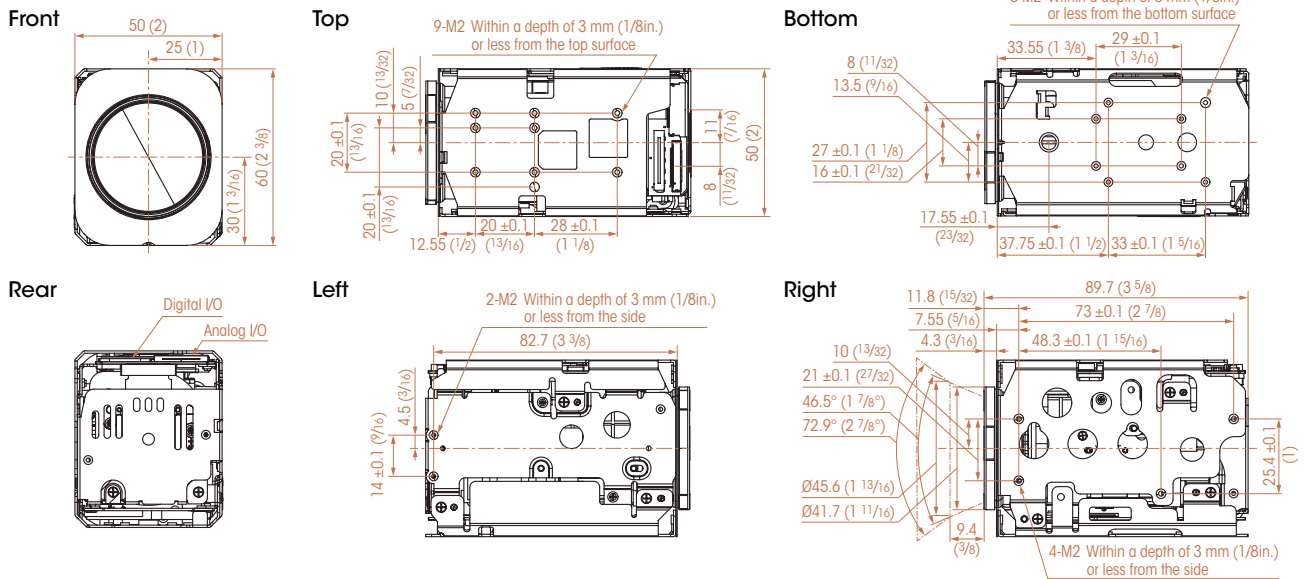
■ **Wide range of features for versatile operation**

Versatile operation is ensured by a wide range of functions and adjustments, including: White Balance modes; Picture effects (E-Flip, Nega Art, Black & White, Mirror Image, Color Enhancement); Motion Detection/Alarm; Picture freeze; Temperature readout; Slow AE response; Electronic shutter/slow shutter; Title display/Camera mode display (English).

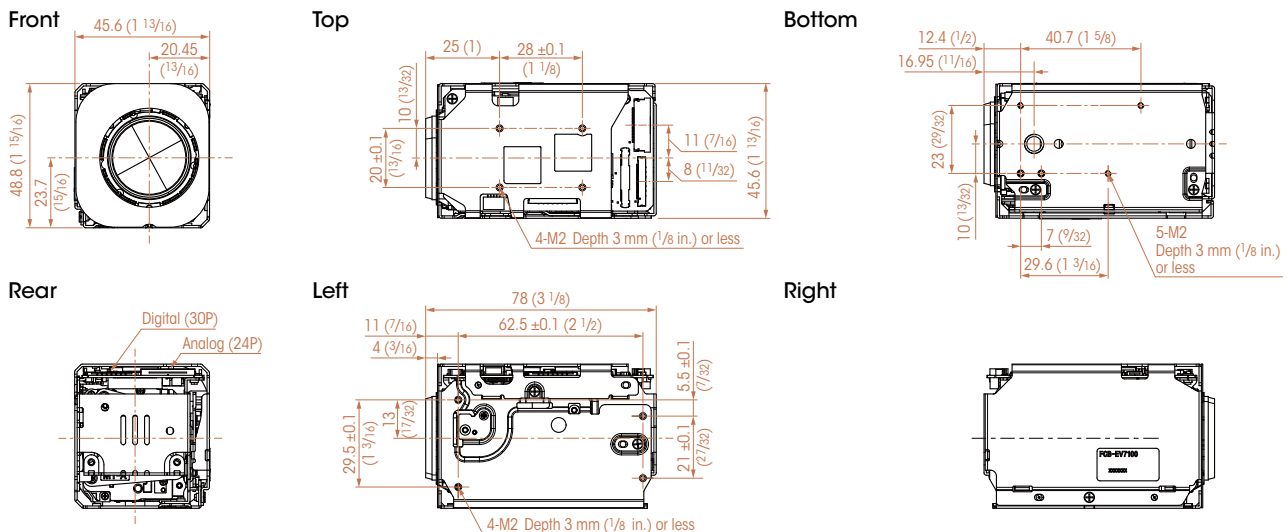
**Dimensions**

Unit: mm (inches)

**FCB-EV7500 / FCB-EV5500**



**FCB-EV7100**



# SPECIFICATIONS

	FCB-EV7500	FCB-EV7100	FCB-EV5500
Image sensor	1/2.8-type Exmor CMOS		
Image sensor (Number of effective pixels)	Approx. 2.38 Megapixels		Approx. 1.37 Megapixels
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 <sup>*1</sup> , PAL <sup>*1</sup>		720p/59.94, 720p/50, 720p/29.97, 720p/25, NTSC <sup>*1</sup> , PAL <sup>*1</sup>
Minimum illumination (50%)	High sensitivity mode	Color: 0.35 lx (F1.6, AGC on, 1/30 s)	
	Normal mode	Color: 1.4 lx (F1.6, AGC on, 1/30 s)	Color: 1.4 lx (F1.8, AGC on, 1/30 s)
Recommended illumination	100 lx to 100,000 lx		
S/N ratio	More than 50 dB		
Gain	Auto/Manual (0 step to 28 step, +2 step/total 15 steps) Max. Gain Limit (6 step to 28step, +2 step/total 12 steps)		
Shutter speed	1/1 s to 1/10,000 s, 22 steps		
Sync system	Internal		
Exposure control	Auto, Manual, Priority mode (shutter priority & iris priority), Bright, EV compensation, Slow AE		
Backlight compensation	Yes		
Aperture control	16 steps		
White balance	Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium Vapor Lamp (Fix/Auto/Outdoor Auto), One-push, Manual		
Lens	30x optical zoom	10x optical zoom	30x optical zoom
	f=4.3 mm (wide) to 129.0 mm (tele) F1.6 to F4.7	f=3.8 mm (wide) to 38 mm (tele) F1.8 to F3.4	f=4.3 mm (wide) to 129.0 mm (tele) F1.6 to F4.7
Digital zoom	12x (360x with optical zoom)		12x (360x with optical zoom)
Focusing system	Auto (Sensitivity: normal, low), One-push AF, Manual, Interval AF, Zoom Trigger AF, Focus compensation in ICR on		
Horizontal viewing angle	63.7° (wide end) to 2.3° (tele end)	67.0° (wide end) to 7.6° (tele end)	57.8° (wide end) to 2.1° (tele end)
Minimum object distance	10 mm (wide end) to 1200 mm (tele end) (Default: 300 mm)	10 mm (wide end) to 800 mm (tele end) (Default: 320 mm)	10 mm (wide end) to 1200 mm (tele end) (Default: 300 mm)
Auto ICR	Yes		
Wide-D <sup>*2</sup>	Yes		
Visibility enhancer	Yes		
Noise reduction	Yes (6 steps)		
Progressive scan mode	Yes		
Image stabilizer	Yes	No	Yes
StableZoom	Yes		
Digital output	Yes		
Spherical privacy zone masking	Yes		
Motion detection	Yes		
Alarm	No		
Slow AE response	Yes		
Picture effects	E-Flip, Nega Art, Black & White, Mirror image, Color enhancement		
Picture freeze	Yes		
Slow shutter	Yes		
Temperature readout	Yes		
Title display	20 characters/line, max. 11 lines		
Camera mode display	Yes		
Key switch control	No		
Camera operation switch	No		
Video output	HD	Analog: Component (Y/Ps/Ps) Digital: Y/Cb/Cr 4:2:2 via LVDS (Signal format conforms to SMPTE 274/SMPTE 296.)	
	SD	VBS	
Camera control interface	VISCA (CMOS 5V level) Baud rate: 9.6 Kbps, 19.2 Kbps, 38.4 Kbps, 115.2 Kbps, Stop bit: 1 bit		
Power requirements	6.0 V to 12.0 V DC	6.0 V to 12.0 V DC	6.0 V to 12.0 V DC
Power consumption	2.9 W (zoom/focus inactive)	3.4 W (zoom/focus inactive)	2.6 W (zoom/focus inactive)
	3.7 W (zoom/focus active)	3.7 W (zoom/focus active)	3.5 W (zoom/focus active)
Operating temperature	-5°C to +60°C (23°F to 140°F)		
Storage temperature	-20°C to +60°C (-4°F to 140°F)		
Operating humidity	20% to 80%		
Storage humidity	20% to 95%		
Dimensions (W x H x D)	50.0 x 60.0 x 89.7 mm (2 x 2 3/8 x 3 5/8 inches)	45.6 mm x 48.8 mm x 78.0 mm (1 13/16 x 1 15/16 x 3 1/8 inches)	50.0 x 60.0 x 89.7 mm (2 x 2 3/8 x 3 5/8 inches)
	Mass		260 g (9.2 oz)
	260 g (9.2 oz)	210 g (7.4 oz)	260 g (9.2 oz)

\*1 Non-standard video format. \*2 Wide dynamic range.

# PIN ASSIGNMENTS

## CN401

Pin No.	Name	Level
1	TXOUT3+	
2	TXOUT3-	
3	TXCLKOUT+	
4	TXCLKOUT-	
5	TXOUT2+	
6	TXOUT2-	
7	TXOUT1+	
8	TXOUT1-	
9	TXOUT0+	
10	TXOUT0-	
11	GND	
12	TxD	CMOS 5 V (Low: Max. 0.1 V, High: Min. 4.4 V)
13	RxD	CMOS 5 V (Low: Max. 1.0 V, High: Min. 2.3 V)
14	DC IN	6 to 12 V DC
15	DC IN	6 to 12 V DC
16	DC IN	6 to 12 V DC
17	DC IN	6 to 12 V DC
18	DC IN	6 to 12 V DC
19	GND	
20	GND	
21	TXOUT7+	Single out mode: open
22	TXOUT7-	Single out mode: open
23	TXOUT6+	Single out mode: open
24	TXOUT6-	Single out mode: open
25	NC	
26	RESET	Reset: Low (GND) Normal: Open (1.8 V)
27	TXOUT5+	Single out mode: open
28	TXOUT5-	Single out mode: open
29	TXOUT4+	Single out mode: open
30	TXOUT4-	Single out mode: open

Connector: USL00-30L-C (KEL Co.)

## CN501

Pin No.	Name	Level
1	GND	
2	TxD	CMOS 5 V (Low: Max. 0.1 V, High: Min. 4.4 V)
3	RxD	CMOS 5 V (Low: Max. 1.0 V, High: Min. 2.3 V)
4	RESET	Reset: Low (GND) Normal: Open (1.8 V)
5	GND	
6	NC	
7	GND	
8	NC	
9	GND	
10	VBS-OUT	
11	GND	
12	Y-OUT	HD Analog Component
13	GND	
14	Pb-OUT	HD Analog Component
15	GND	
16	Pr-OUT	HD Analog Component
17	GND	
18	DC IN	6 to 12 V DC
19	DC IN	6 to 12 V DC
20	DC IN	6 to 12 V DC
21	DC IN	6 to 12 V DC
22	GND	
23	DC IN	6 to 12 V DC
24	GND	

Connector: 046240024006800+ (Kyocera-elco)

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