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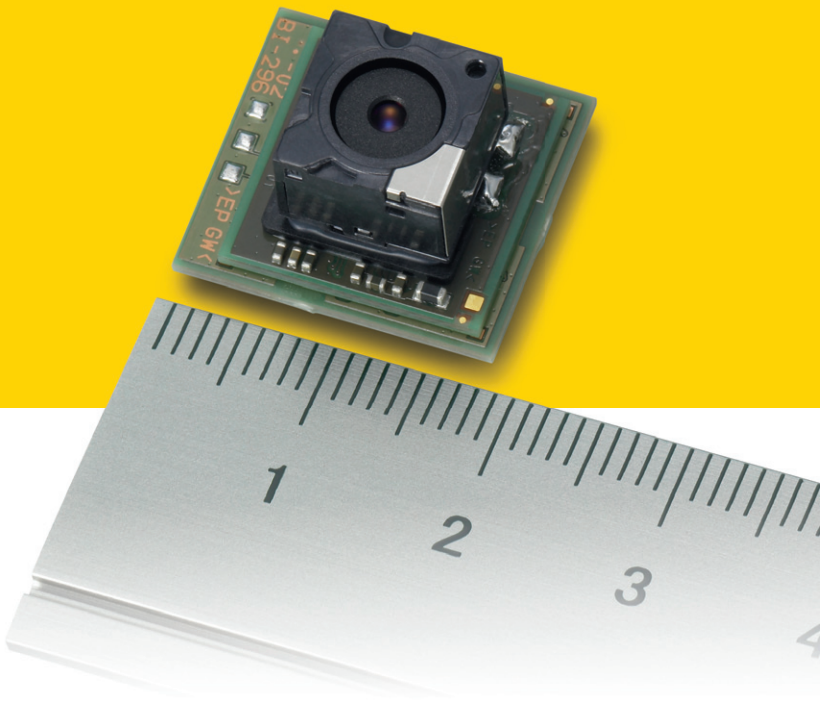
FCB-MA130

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.

Exmor



Features

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

Colour Block Camera

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.

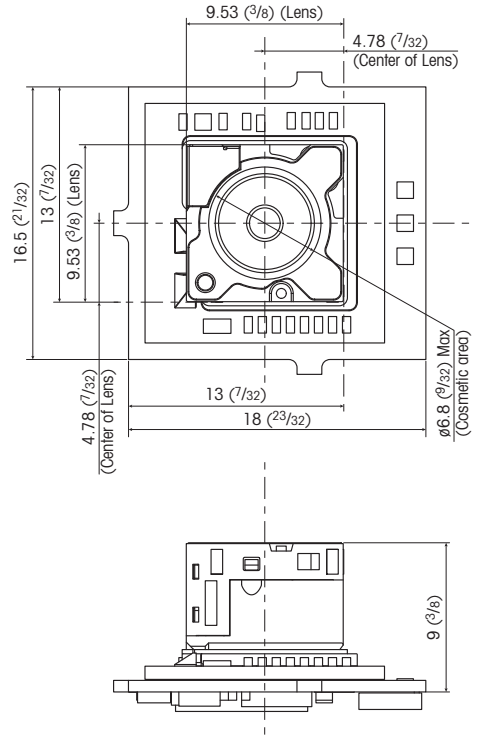
Outstanding compactness coupled with high-quality images – with these capabilities, Sony anticipates this remarkable camera is set to open up brand new industrial applications.

FCB-MA130 Specifications

		FCB-MA130
Camera	Image Sensor	1/2.45-type Exmor CMOS
	Movie Image	1920 x 1080 (FHD), 1600 x 1200 (UXGA), 1280 x 960 (SXGA), 1280 x 720 (HD), 1024 x 768 (XGA), 800 x 480 (WVGA), 640 x 480 (VGA); 30fps/25fps*
	Still Image	4192 x 3104, 4128 x 3096 (13M), 3264 x 2448 (8M), 2592 x 1944 (5M), 1920 x 1080 (FHD), 1280 x 960 (SXGA), 1280 x 720 (HD), 640 x 480 (VGA)
	Gain	Auto
	Shutter Speed	1/25 to 1/5000 s, 24 Step
	Sync System	Internal
	Exposure Control	Auto, Hold, Manual, Shutter priority, Gain priority
	Backlight Correction	Yes
	White Balance	Auto, Hold, ATW, Fixed (Light Bulb, Neutral Color Fluorescent Light, Clear Sky, Cloudy Sky, Daylight Color Fluorescent Light, Light Bulb Color Fluorescent Light)
	Lens	F2.8
	Digital Zoom	16x
	Focusing System	One-push AF
	Horizontal Viewing Angle (1080p Mode)	Movie Mode: 53°, Still Image Mode: 58°
	Horizontal Viewing Angle (720p Mode)	Movie Mode: 53°, Still Image Mode: 58°
	Minimum Object Distance	100 mm
Camera Features	Auto ICR	No
	Adaptive Tone Reproduction (ATR)	Yes
	Noise Reduction	Yes
	Image Stabilization for still image	Yes
	Image Stabilization for movie	Yes
	Face Detection	Yes
	Picture Effects	Flip horizontal, Flip vertical
Interface	Video Output	CMOS Clock 81MHz, Parallel 16bit (YCbCr422 / SAV, EAV selectable) / Sync Signal (HD, VD) MIPI D-PHY Clock 324MHz, Data 2lane CSI-2 (YCbCr422)
	Camera Control Interface	I2C
General	Power Requirements	3.3±0.1, 1.8±0.1, 1.2-0.05/+0.1 V DC
	Power Consumption	700 mW (@ FHD movie)
	Operating Temperature	-5°C to +50°C 23°F to 122°F
	Storage Temperature	-20°C to +60°C -4°F to +140°F
	Dimensions (W x H x D)	16.5 x 10.3 x 18.0 mm 21/32 x 13/32 x 23/32 inches
	Mass	2.2 g / 0.078 oz

* Non-standard video format

Dimensions



Unit: mm (inches)

Pin assignment

Pin No.	Symbol	Description
1	GND	Ground
2	GND	Ground
3	VDD_33 (AF)	Power Supply (3.3 V)*1
4	VDD_33 (AF)	Power Supply (3.3 V)*1
5	VDD_33	Power Supply (3.3 V)
6	VDD_12	Power Supply (1.2 V)
7	VDD_12	Power Supply (1.2 V)
8	VDD_12	Power Supply (1.2 V)
9	VDD_18	Power Supply (1.8 V)
10	GND	Ground
11	GND	Ground
12	STRB	Camera Strobe Output Signal
13	TRIG	Mode Transition Output Signal
14	C7	Digital Video Data (Chroma Parallel Data 7)
15	C6	Digital Video Data (Chroma Parallel Data 6)

Pin No.	Symbol	Description
16	C5	Digital Video Data (Chroma Parallel Data 5)
17	C4	Digital Video Data (Chroma Parallel Data 4)
18	C3	Digital Video Data (Chroma Parallel Data 3)
19	C2	Digital Video Data (Chroma Parallel Data 2)
20	C1	Digital Video Data (Chroma Parallel Data 1)
21	C0	Digital Video Data (Chroma Parallel Data 0)
22	DCLK	Digital Video Clock
23	Y7	Digital Video Data (Luminance Parallel Data7)
24	Y6	Digital Video Data (Luminance Parallel Data6)
25	Y5	Digital Video Data (Luminance Parallel Data5)
26	Y4	Digital Video Data (Luminance Parallel Data4)
27	Y3	Digital Video Data (Luminance Parallel Data3)
28	Y2	Digital Video Data (Luminance Parallel Data2)
29	Y1	Digital Video Data (Luminance Parallel Data1)
30	Y0	Digital Video Data (Luminance Parallel Data0)

Pin No.	Symbol	Description
31	HD	Digital Video H-Active Signal
32	VD	Digital Video V-Active Signal
33	GND	Ground
34	MIPI_D0-	MIPI Output Data Lane0(-)
35	MIPI_D0+	MIPI Output Data Lane0(+)
36	MIPI_CK-	MIPI Output Clock(-)
37	MIPI_CK+	MIPI Output Clock(+)
38	MIPI_D1-	MIPI Output Data Lane1(-)
39	MIPI_D1+	MIPI Output Data Lane1(+)
40	GND	Ground
41	XRST	System Reset, or not connected
42	SDA	I2C Serial Bus Data I/O*2
43	SCL	I2C Serial Bus Clock*2
44	GND	Ground
45	GND	Ground

*1 Pin No.3-4 is recommended for AF driver power. *2 An external pull-up resistor is recommended.

Distributed by

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