SONY

CCD Colour Digital Camera Module
DFW-SX910
DFW-X710

Sony's new DFW-SX910 and DFW-X710 cameras are the latest additions to its range of IEEE 1394 colour cameras. Incorporating an IEEE 1394 digital interface, these advanced cameras produce uncompressed, high resolution, digital colour images. Both cameras employ a new, next generation progressive scan CCD with square pixels as well as a primary filter for superb colour reproduction and excellent sensitivity.

The DFW-SX910 is equipped with a 1/2 type 1,450,000-pixel CCD and offers SXGA resolution images, at 7.5 fps while the DFW-X710 is equipped with a 1/3 type 800,000-pixel CCD that offers XGA at 15 fps. Both models incorporate a variety of convenient features such as partial scan (16 x 16 zones), selectable output modes (image size/frame rate) and an external trigger function with an exposure range from 1/100,000 to 17.5 seconds, allowing for the clear capture of fast moving objects or still images in low light environments. In addition, their compact and lightweight design make them easy to install and ideal for a variety of industrial applications such as machine vision, semiconductor inspection, image processing, printing inspection, and factory automation, plus medical applications such as microscopy. What's more, the automatic white balance feature allows for professional operation even in changing light conditions.

Combining high resolution, compact design and a wide range of feature-rich functions, the DFW-SX910 and the DFW-X710 cameras are the right choice for quality-critical imaging applications.

Features

- High resolution with progressive scan square-pixel CCD
  - DFW-SX910: SXGA, 1/2 type IT CCD, 1,280 (H) x 960 (V)
  - DFW-X710: XGA, 1/3 type IT CCD, 1,024 (H) x 768 (V)
- IIDC 1394-based Digital Camera Specification Version 1.30 compliant (400 Mbps)
- Selectable frame rate
  - DFW-SX910: 7.5/3.75/1.875 fps
  - DFW-X710 15/7.5/3.75/1.875 fps
- Built-in frame memory for storage of images
  - XGA (YUV 4:2:2) 10 images
  - SXGA (YUV 4:2:2) 6 images
- External trigger input and exposure output functions (4-pin)
- Fast hardware or software asynchronous trigger
- Trigger at full frame rate
- Colour (YUV 4:2:2 or YUV 4:1:1) scale (Mono8) output
- Partial scan (16 x 16 selectable zones)
- Synchronisation of exposure start of multiple cameras on the same 1394 bus
- Auto/Manual gain: Manual gain 0 to +18 dB
- C mount
- Lead-free solder mounting board

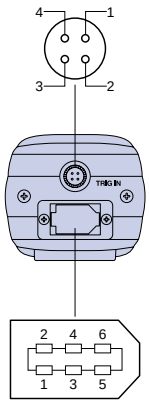
DFW-SX910 / DFW-X710

SPECIFICATIONS	DFW-SX910	DFW-X710
Image device	1/2 type progressive scan IT CCD	1/3 type progressive scan IT CCD
Effective picture elements	1,392 (H) x 1,040 (V); 1,450,000 pixels	1,034 (H) x 779 (V); 800,000 pixels
Output image size	SXGA: 1,280 x 960	XGA: 1,024 x 768
Cell size	4.65 x 4.65 µm	
Lens mount	C mount	
Minimum illumination	20 lx (F1.4, +18 dB gain)	
Digital interface	IEEE 1394-1995	
Transfer rate	400/200 Mbps	
Frame rate	7.5/3.75/1.875 fps	15/7.5/3.75/1.875 fps
Gain control	Auto/Manual (0 to +18 dB, 0.0354 dB steps)	
White Balance	Auto/ATW/Manual/Preset	
Shutter speed	Approx. 1/100,000 to 17.5 s	
External trigger shutter	Trigger start (mode0), trigger start and exposure duration (mode1)	
Partial scan	256 zones (16 x 16)	
Power requirements	DC 8 to 30 V (from IEEE 1394 camera cable)	
Power consumption	4 W	
Dimensions (W x H x D)	55 x 50 x 110 mm (2 1/4 x 2 x 4 3/8 inches)	
Mass	250 g (9 oz)	
Operating temperature	-5 to +45 °C (23 to 113 °F)	
Storage temperature	-20 to +60 °C (-4 to +140 °F)	
Operating humidity	20 to 80 % (non condensing)	
Storage humidity	20 to 95 % (non condensing)	
Regulations	UL60950 listed, FCC Class B Digital Device, IC Class B, CE (EN61326), AS4251.1 + AS4252.2	
Supplied accessories	Lens mount cap (1), Cable (1), External trigger connector (male) (1), Operating instructions (1)	
Optional accessory	50 mm macro lens	

PIN Assignment

4-pin: Trigger-in and Exposure-out

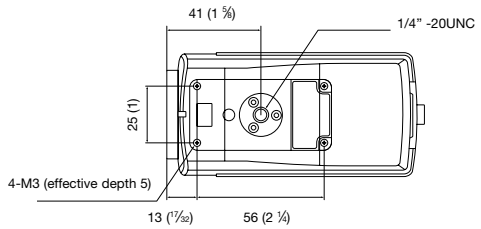
Pin number	Signal
1	Exposure out
2	GND
3	Trigger in
4	NC

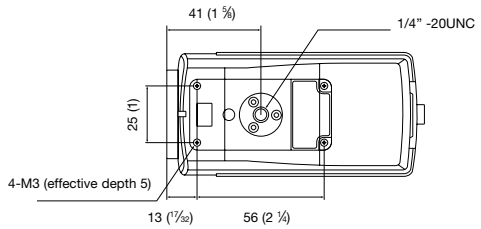


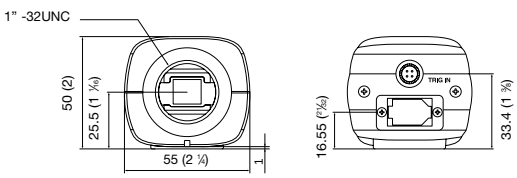
6-pin: IEEE 1394-1995 CN

Pin number	Signal
1	Power
2	Power (GND)
3	TPB-
4	TPB+
5	TPA-
6	TPA+

Dimensions Unit: mm (inches)







Sony Contacts

ISS for Central Zone	+49 221 537 3668
(Austria, Eastern Europe, Germany, Netherlands, German-speaking Switzerland)	
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CA DFW-SX910/DFW-X710/GB- / /2004