



• **DXC-C33/P**

• **3CCD COLOUR REMOTE HEAD VIDEO CAMERA**

Ideal for use in space-limited locations, the DXC-C33/P incorporates one of the smallest and lightest camera head units featuring a 1/3 type 3CCD.

In spite of its compact and lightweight camera head unit, this model inherits the superb picture quality of the DXC Series. Its horizontal resolution is 850 TV lines and the minimum illumination is 2000 lux at F8. Various features such as DynaLatitude™ and Partial Enhance functions are also included.

First for the DXC Series and also first for 3CCD small head cameras, the DXC-C33/P is equipped with a DV output terminal. Thanks to the DV output terminal, video signals can be recorded to i.LINK™ interface-equipped VTRs with no quality deterioration.

With excellent features and approval for medical applications, the DXC-C33/P is the right choice for medical fields and for other demanding applications such as research, broadcast, and industrial fields.

Features

- Small camera head
- High picture quality
- 10 bit DSP
- i.LINK interface (IEEE 1394)
- DynaLatitude
- Frame memory
- Partial Enhance
- RS-232C interface
- 2 Automatic Exposure areas reset
- External synchronisation (HD/VD, VBS)
- User-friendly control panel

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What is IEEE 1394?

IEEE 1394 is a high-speed, non-proprietary, scalable digital serial bus that transports data at current rates of 100, 200 and 400 Mb/s. Its definition, development, compliance and application promotion are supported by more than 180 companies, grouped in the 1394 Trade Association (www.1394ta.org).

This standard has been adopted both in the consumer and industrial world with various formats known as DV, DV-CAM and D-CAM, because of its simplicity of use, its high speed and universal cable connection.

The Sony DXC-C33/P fully supports the DVCAM format.

Particularly, DVCAM provides superb picture quality from component digital recording. By using a wider track pitch, Sony ensures outstanding performance and higher reliability with DVCAM.

For more information about i-LINK interface and about DV, IIDC, and DVCAM protocols, please visit www.sony-vision.com/1394.


For more information about other DV-CAM compliant Sony products, please visit www.sonybiz.net/professionalvideo.



i.LINK: DSR-70A/P and DXC-C33/P

i.LINK Interface (IEEE 1394)

The i.LINK interface allows image recording into i.LINK interface-equipped VTRs with no quality deterioration. This feature is first introduced to small head 3CCD cameras. Sony guarantees the connection to any DVCAM compliant peripheral. Although possible, the connection to DV compliant peripherals might not be supported in certain software configurations* of the host computer.

i.LINK stands for the IEEE 1394-1995 compliant interface used in consumer areas with a DV stream.  is the logo for products that implement i.LINK.

* Please contact your local Sony sales office for the latest information about software compatibility.

Small Camera Head

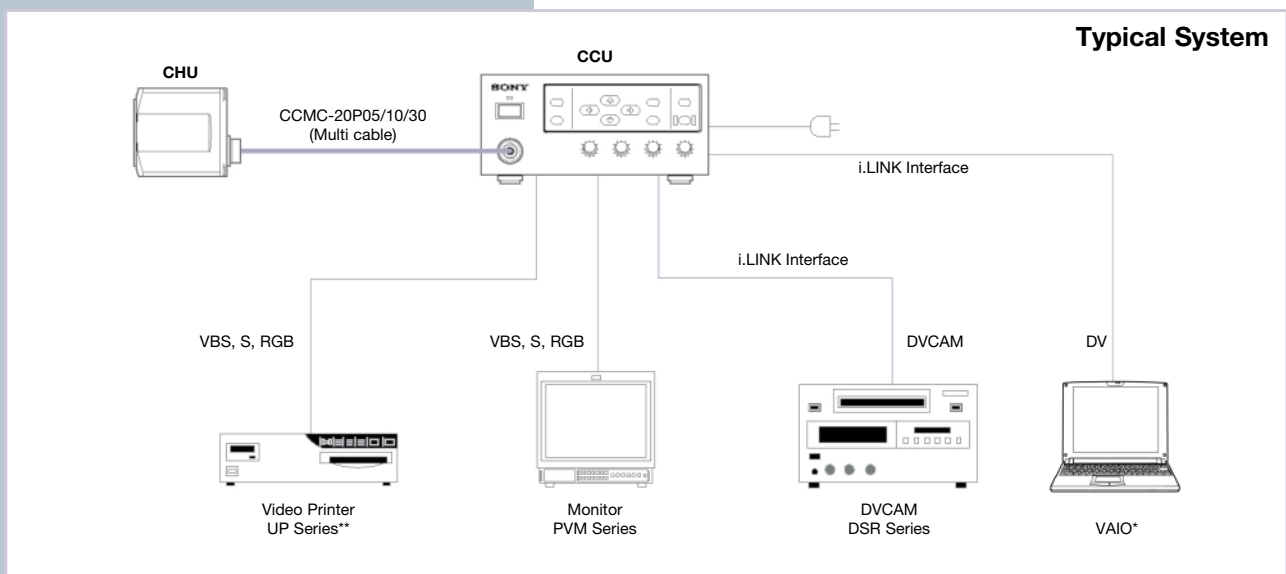
The DXC-C33/P can be installed in space-limited locations. The size of the camera head (CHU) is one of the smallest of all 1/3 type 3CCD cameras. It measures just 32 (W) x 38 (H) x 40 (D) mm and weighs only 48 g.

High Picture Quality

The DXC-C33/P can clearly capture detailed images of objects. The 1/3 type 3CCD allows the camera to realize 2000 lux at F8, S/N ratio of 62 dB (NTSC) or 61 dB (PAL) and achieve a horizontal resolution of 850 TV lines.

10 Bit DSP

The DXC-C33/P captures superior pictures by adopting full 10 bit Digital Signal Processing (DSP).



* See above paragraph on i.LINK interface.

** Supported depending on the computer software configuration.



DynaLatitude OFF



DynaLatitude ON
(Simulated picture)



Frame memory
Gain: 18 dB



Frame memory
Long Exposure: 32 frames

DynaLatitude

Automatically adjusts contrast corresponding to the brightness signal level of the entire image. Clear images can be captured even if both bright and dark areas exist within an image.

Partial Enhance

Allows a particular colour to be selected, and its hue, saturation and detail altered. In addition, the detail produced by the high resolution of the camera can be softened or emphasised in certain parts of the image by the Partial Enhance function.

RS-232C interface

Easy control and operation of all the camera functions by an external computer is possible.

Remote Head Feature

Using the especially designed CCMC-20P05/10/30 (5, 10 and 30 metre) cables, the camera head can be remotod up to 30 metres away from the camera control unit. With the automatic cable compensator built in the camera control unit, the picture remains unchanged. This feature is especially useful for surgical and broadcast applications.

External Synchronisation (HD/VD, VBS)

Allows for multiple camera operation, as well as external triggering for industrial applications.

Frame Memory

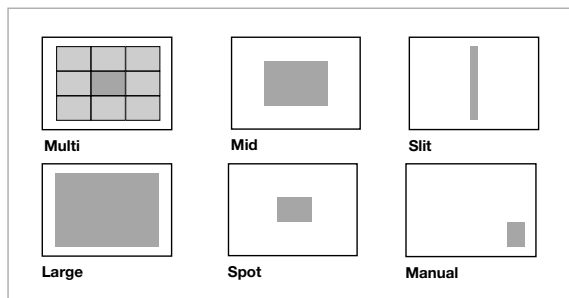
Built-in frame memory can provide a freeze image and a remarkably enhanced image in sensitivity by long-time exposure function.

User-Friendly Control Panel

The front panel is easy to use with smartly arranged controls and good-sized switches.

2 AE Areas Preset

The AE (Automatic Exposure) function is very useful for determining the best area for incoming light metering. Users can select and set up two of the six different AE modes and can easily switch them on the front panel.



Pin assignment

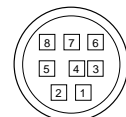
9-pin D-sub connector

MENU	D-sub VIDEO: VBS D-sub SYNC: C.SYNC	D-sub VIDEO: VBS D-sub SYNC: WEN	D-sub VIDEO: Y/C D-sub SYNC: C.SYNC	D-sub VIDEO: Y/C D-sub SYNC: WEN
1	VBS OUT (G)	VBS OUT (G)	Y/C OUT (G)	Y/C OUT (G)
2	RGB OUT (G)	RGB OUT (G)	RGB OUT (G)	RGB OUT (G)
3	R OUT (X)	R OUT (X)	R OUT (X)	R OUT (X)
4	G OUT (X)	G OUT (X)	G OUT (X)	G OUT (X)
5	B OUT (X)	B OUT (X)	B OUT (X)	B OUT (X)
6	VBS OUT (X)	VBS OUT (X)	Y OUT (X)	Y OUT (X)
7	C.SYNC OUT (X)	WEN OUT (X)	C.SYNC OUT (X)	WEN OUT (X)
8	C.SYNC OUT (G)	WEN OUT (G)	C.SYNC OUT (G)	WEN OUT (G)
9	(X)	(X)	C OUT (X)	C OUT (X)



MINI DIN 8-pin connector

1	INTER CONNECT
2	INTER CONNECT
3	DATA OUT
4	DC OUT (G)
5	DATA IN
6	NC
7	DC OUT (+)
8	NC



Rear view



DXC-C33/P CHU



DXC-C33/P CCU

i.LINK connector

Control panel



DXC-C33/P CCU

DXC-C33/P SPECIFICATIONS

Pick-up device	1/3 type IT (Interline Transfer) CCD
Effective picture elements	NTSC: 768 (H) x 494 (V) PAL: 752 (H) x 582 (V)
Sensing area	4.8 (H) x 3.6 (V) mm
Scanning system	NTSC: 2:1 interlaced, 525 lines PAL: 2:1 interlaced, 625 lines
Horizontal frequency	NTSC: 15.734 kHz PAL: 15.625 kHz
Vertical frequency	NTSC: 59.94 Hz PAL: 50 Hz
Sync system	Internal or External with VBS or HD/VD
Phase control	H/SC phase control
Horizontal resolution	850 TV lines
Lens mount	C mount
Flange back	17.526 mm in air
Sensitivity	F8.0 at 2000 lux (3200 K)
Minimum illumination	4 lux (F2, GAIN: HYPER)
S/N ratio	NTSC: 62 dB (Typical) PAL: 61 dB (Typical)
Gain	STEP/AGC/HYPER selectable STEP: 0 to 24 dB by 1 dB step AGC: 0 to 24 dB (Limit value: 6 dB, 12 dB, 18 dB, 24 dB selectable), HYPER: 30 dB
Electronic shutter	8.0 to 1/100,000 s
Lens	Manual Iris
AE area	Multi/Large/Medium/Spot/Slit/ Manual selectable
AE level	Variable
AE speed	Fast/Mid/Slow selectable
AE detect	Average/Peak selectable
Contrast Effect	Manual/DynaLatitude/DCC+ selectable
Knee Point	High/Normal/Low selectable (Contrast Effect: Manual)
Black stretch	Variable (Contrast Effect: Manual)
Gamma	ON/OFF (Variable at ON)
Pedestal	Master and R/B Manual adjustable
Black balance	ABB
White balance	AWB/ATW NORMAL/ATW WIDE/MANUAL/3200 K/5600 K selectable AWB or ATW R/B Paint, MANUAL R/B Gain
ATW area	NORMAL/ MANUAL selectable
ATW speed	FAST/ NORMAL/ SLOW selectable

Detail level	ALL/ TARGET/ OFF (Variable at ALL or TARGET)
Detail Frequency	HIGH/MID/LOW selectable
Linear matrix	ALL/TARGET/OFF
Linear matrix MODE	STANDARD/R Enhance/G Enhance/ B Enhance/Manual selectable
Partial Enhance	ALL/IN/OUT selectable
CCD integration mode	FIELD/ FRAME selectable
Shading Compensation	OFF/ON (Manual control)
Trigger Polarity	Positive edge trigger/Negative edge trigger selectable
Baud rate	19200/9600/4800/2400/1200 selectable
Sync	RGB/G/OFF selectable
Strobe	Slave
User File	A/B switchable (Two pattern memories)
Scene File	STANDARD/MICROSCOPE/ FULL AUTO/STROBE/FILE A or B
Output signal	i.LINK: IEEE 1394 Based VBS: 1.0 Vp-p, 75 Ω, sync negative RGB: 0.7 Vp-p, 75 Ω, sync switchable SYNC: 2 Vp-p, 75 Ω Y: 1.0 Vp-p, 75 Ω C: NTSC 0.286 VP-P, 75 Ω, without sync PAL 0.3 Vp-p, 75 Ω, without sync
Operating temperature	-5 to 45°C (23 to 113°F)
Storage temperature	-20 to 60°C (-4 to 140°F)
Power supply	100 to 240 V AC, 50/60 Hz
Power consumption	Max. 18 W
Dimensions	CHU: 32 (W) x 38 (H) x 40 (D) mm (1 1/8 x 1 1/2 x 1 5/8 inches) CCU: 200 (W) x 88 (H) x 242 (D) mm (7 7/8 x 3 1/2 x 9 5/8 inches)
Weight	CHU: 48 g (1.7 oz) CCU: 2.5kg (5 lbs 8 oz)
Connectors	DV OUT (6 pin jack) RGB/SYNC (9 pin D-sub) VIDEO OUT (BNC) S-VIDEO (4 pin mini DIN) FS/ TRIG IN (Stereo Mini jack) REMOTE (8 pin mini DIN) AC Inlet Camera (20 pin)

Optional accessories



**VCL-08WM
VCL-16WM
VCL-25WM**
Optional lenses



DSR-70A/P
Portable Editing Recorder



DVCAM™ Series
DSR-20MD/P



RM-C950
Remote Control Unit

VMC-IL6645 6-6 pin IEEE 1394 cable

VMC-IL4615/IL4635 i.LINK Cable (1.5/3.5 m)
4 to 6 pin cable for Sony VAIO laptop computer connection

CCMC-20P05/20P10/20P30
20-pin Multi Cable (5/10/30 m). This cable is for use between the camera head and the control unit.

CCMC-9DS 9-pin D-sub Cable

CCXC-9DB/9DD 9-pin D-sub Cable

Sony address/contact details/dealer stamp

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