

SONY



**DXC-D55 Series**  
Digital Video Cameras

[www.sonybiz.net/live](http://www.sonybiz.net/live)



# 14-BIT FULL-DIGITAL PRODUCTION CAMERA

## Offers Top-quality SDTV Video Production Opportunities

**T**HE SONY DXC SERIES Standard Definition (SD) digital production camera has been widely accepted by thousands of video professionals, around the world, thanks to its excellent picture performance, system versatility and value. Sony are now proud to introduce the new DXC-D55 Series. To further enhance the DXC portfolio, this uses the latest 14-bit A/D conversion circuitry as well as the field-proven 2/3-inch type Power HAD™ EX CCDs.

The DXC Series consists of two cameras: the DXC-D55P 4:3 model and the DXC-D55WSP 16:9/4:3 switchable model. Both models incorporate three 2/3-inch type Power HAD™ EX CCDs and the latest 14-bit A/D conversion circuitry. These key devices deliver excellent sensitivity together with reduced smear and noise. In addition to superb picture quality, these cameras offer extremely precise and flexible image controls such as highlight, contrast and detail control, thanks to the sophisticated DSP LSI with more than 30 bits accuracy.

Another important characteristic of the Sony DXC-D55 Series is the system flexibility. Two types of camera control unit are available – the CCU-D50P for multi-core operation and the CCU-TX50P for triax operation. Furthermore, the RCP-D50/D51 Remote Control Unit is also available for the series.

With class-leading SD picture quality, operational convenience and system flexibility, the Sony DXC-D55 Series brings new opportunities for higher-quality, more creative productions to a wider range of video professionals at an affordable price.



# FEATURES

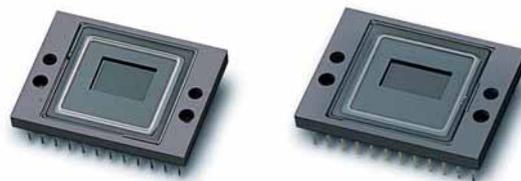
## Excellent Picture Quality

### Three-chip 2/3-inch Type Power HAD EX CCDs

The DXC-D55 Series is equipped with the field-proven three-chip 2/3-inch type Power HAD EX CCDs, offering high horizontal resolutions of 920\* TV lines. These high-performance CCDs also provide excellent sensitivity of F11 (at 2000 lux, 3200K), a remarkable signal-to-noise ratio of 63 dB and extremely low smear level of -145 dB (typical).

\* On DXC-D55P model

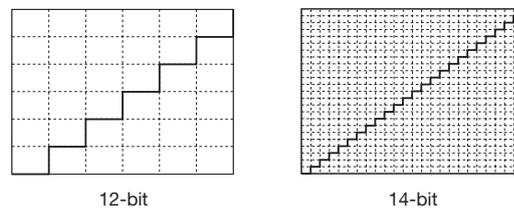
Power HAD EX CCDs



### 14-bit A/D Conversion

The Sony DXC-D55/D55WS incorporates a high-quality 14-bit A/D conversion circuit that allows images captured by the Power HAD EX CCDs to be processed with four times the precision than 12-bit A/D converters. In particular, this higher resolution reproduces the contrast more faithfully in mid-to-dark-tone areas of the picture. In addition, the 14-bit accuracy helps to eliminate pre-knee signal compression at highlight areas, and allows the camera to clearly reproduce a high-luminance subject.

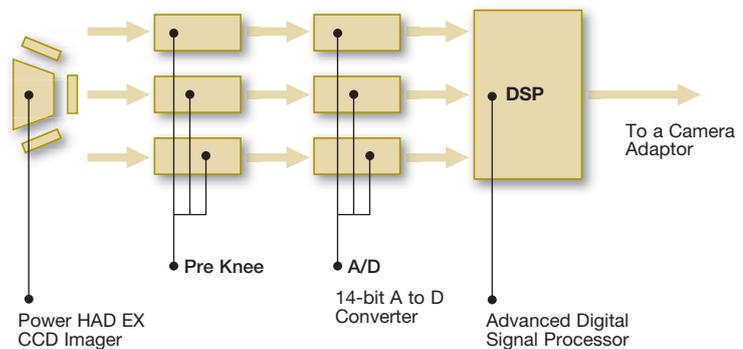
High-integrity 14-bit A/D Conversion



### Advanced Digital Signal Processing (ADSP)

A key indicator of quality in a digital camera is how many bits are used in its nonlinear processes, such as gamma correction. The DXC-D55 Series has more than 30 bits, thus minimising rounding errors and maintaining the high-quality images captured by the Power HAD EX CCDs. This advanced digital signal processing (ADSP) also enables highly sophisticated image controls, such as knee saturation, adaptive highlight control and skin-tone detail controls.

High-performance Digital Signal Processing



# Creative Versatility

## Knee Saturation Control

Shooting objects with very bright areas, such as key-light reflections from a person's forehead, can reduce colour saturation and change the hue in the highlight areas. The knee saturation control function incorporated in the DXC-D55 Series effectively reduces this 'washed-out' effect and reproduces far more natural colour in highlight areas.



Knee Saturation Control Off



Knee Saturation Control On



### Adaptive Highlight Control

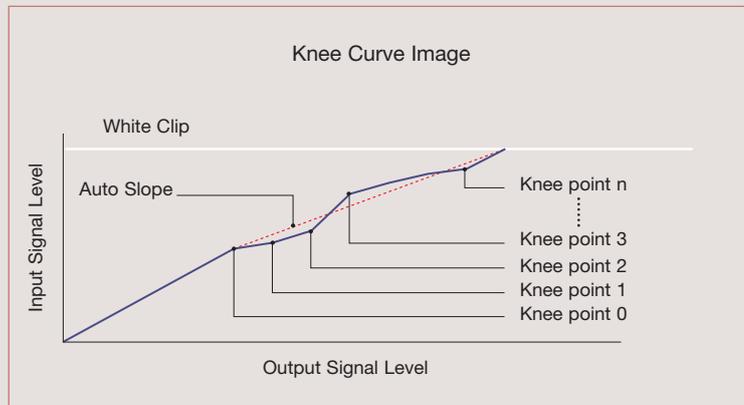
The DXC-D55 Series offers outstanding over-exposure control by applying multiple knee-points/slopes to handle highlight areas in a progressive manner. By analysing the highlight areas of a scene, the camera automatically sets and optimises multiple knee points/slopes accordingly. This enables the reproduction of extremely difficult scenes (for example, an interior scene with a bright illuminant such as sunlight in the background) with much more over-exposure latitude. The adaptive highlight control applies only to input video level in excess of the knee point; the middle and low-luminance parts of the video signal are unaffected by this control.



Adaptive Highlight Control Off



Adaptive Highlight Control On

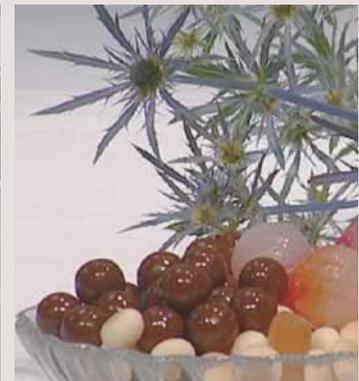


### Low Key Saturation

With conventional cameras, low-light areas can be subject to reduced saturation, resulting in the colour in these areas being lost. The low-key saturation function incorporated in the DXC-D55 Series helps eliminate this problem by optimising the amplification of colour saturation at low light levels, providing more natural colour reproduction.



Low Key Saturation Off



Low Key Saturation On

### Skin-Tone Detail Control

The skin-tone detail control function in the DXC-D55 Series allows softening of the skin-tone detail in the facial area, while maintaining the sharpness of other parts of the picture. The skin-tone detail area can be selected simply and quickly, using an area-detect cursor in the viewfinder screen. The colour range for skin-tone detail, and the skin-detail level, can also be selected manually, using the viewfinder menu system.



Skin-Tone Detail Control Off



Skin-Tone Detail Control On

# Operating Versatility

## Enhanced Ease of Operation

Recognising the importance of making camera operation as quick and straightforward as possible, DXC-D55 Series cameras provide several convenient functions enabling operators to start shooting with minimum setup procedures and in less time.

### EZ Focus

The EZ Focus function allows accurate focus adjustments without manually opening the lens iris. Simply by pushing the EZ Focus button, the iris automatically opens to reduce the depth of field and make focusing significantly easier. At the same time, the electronic shutter is automatically set to obtain the correct exposure.

### EZ Mode

Settings for key camera parameters are instantly set to the default position simply by pressing the EZ Mode button – making the camera instantly ready for shooting. This feature is very convenient when operators require the fastest camera setup.

### Auto-Tracing White Balance (ATW)

The DXC-D55 Series cameras feature a convenient Auto Tracing White Balance (ATW) function, which automatically adjusts white balance as the lighting conditions change. This function is very useful when shooting in rapidly changing lighting conditions, such as when moving from indoor to outdoor locations.

## Built-in Optical ND Filter and Electronic CC Function

The DXC-D55 Series provides optimum light and colour temperature control by using a built-in optical ND (Neutral Density) filter-wheel and electronic CC (Colour Correction) function. The use of electronic colour correction allows all filters in the filter wheel to be of the ND type, providing the operator with greater flexibility in depth-of-field and exposure control. Electronic colour correction can also be controlled using a remote controller, for even easier operation.

## Easy-to-see Viewfinder

The DXC-D55P/D55WSP\* is equipped with the DXF-801 1.5-inch\*\* 4:3 monochrome viewfinder as standard. The DXF-20W 2.0-inch\*\* 16:9 monochrome viewfinder is available as an option. Furthermore, for studio operations, the wider DXF-51 5.0-inch\*\* monochrome viewfinder can be mounted on the camera adaptor.

\* The DXF-801 is not included in the DXC-D55PH or DXC-D55WSPH

\*\* Viewable area measured diagonally



VF Light



### Backlit Switch Panel

The switch panel is backlit, allowing operators to see switch positions in the dark.

### Memory Stick™ Storage of Camera Setup Parameters

Users of the DXC-D55 Series can save and recall setup parameters such as scene files, reference files and lens files, very easily by means of a Memory Stick. This allows effective management of camera parameters for individual scenes, plus individual operators' camera-setup preferences, such as viewfinder indicator settings. Setup parameter files stored on a Memory Stick can be transferred to another DXC-D55 Series camera or an RCP-D50/D51 Remote Control Unit, allowing quick, easy setup matching in multiple camera systems. What's more, setup files can be loaded to a PC equipped with a Memory Stick slot, enabling them to be e-mailed as attachments and shared with other cameras.

\* The MSH-128 is the only "Memory Stick" media that has been operationally tested with this product. (The MSH-64/32 is no longer available.)



### Factory-preset Matrix

The DXC-D55 Series is equipped with several types of factory-preset matrix files which allow operators to instantly set up camera parameters that match common lighting situations, such as STANDARD, HIGH SATURATION, FLUORESCENT, etc.

### Other Convenient Features

- > Programmable gain (-3/0/3/6/9/12/18/24/30/36 dB)
- > Variable-speed electronic shutter
- > Clear Scan™ (CLS) function: 60.1 (NTSC)/50.2 (PAL) Hz to 6000 Hz
- > Monitor output
- > Built-in 1 kHz audio reference
- > Date-and-time superimposition on the video signal and viewfinder
- > Enhanced Vertical-Definition System (EVS)
- > Auto iris mode (spot, backlight)
- > Mic low cut
- > Dual zebra

### Adjustable Shoulder Pad

The position of the shoulder pad can be adjusted – either forwards or backwards – to provide the operator with a comfortable, well-balanced camera when docked with a camera adaptor.



# System Versatility

The high picture quality and operability of DXC-D55 Series cameras is supported by a range of peripherals that make camera system installation very smooth, both in the studio and out in the field. The DXC-D55 Series can be configured in two main operating styles: Multi-core CCU and Triax CCU operation. Easy-to-use remote control panels are also available for added operational convenience.

## Triax CCU Operation – for Wide-bandwidth Transmission



CA-TX50P Rear Panel



CCU-TX50P Rear Panel

## CCU-TX50P and CA-TX50P

With the CA-TX50P Triax Camera Adaptor attached, the DXC-D55 Series can be remotely controlled from the CCU-TX50P Camera Control Unit using a triax cable, the use of which enables sophisticated remote control over extended operating distances. A wide-bandwidth transmission system is employed, enabling the higher resolution images of DXC-D55 Series cameras to be transmitted with virtually no drop in resolution.

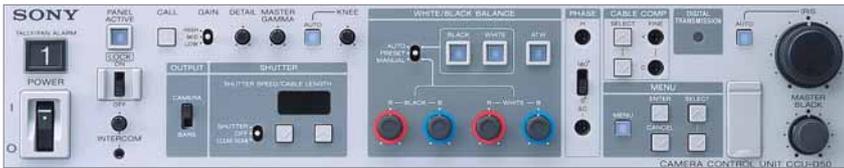


CCU-TX50P Front Panel

The CCU-TX50P supports the following features:

- > Wide-bandwidth transmission (10 MHz for Y and 4.5 MHz for R-Y/B-Y)
- > High-quality analogue component video transmission
- > Long-distance transmission (eg. 1500 m via a 14.5 mm Ø cable)
- > Compact design – half rack width and 3U height
- > Wide range of advanced control functions
- > Compatibility with the RCP-D50 and RCP-D51 Remote Control Panels
- > Three SDI outputs or three composite outputs
- > One component output (Y/R-Y/B-Y or R/G/B selectable)
- > Three inputs for return video (BNC type)
- > Teleprompter support
- > Red/Green tally indication
- > Support for major intercom systems (four-wire/RTS/Clearcom)
- > Programme audio input
- > Two-channel microphone system (two XLR connectors)

\* Upgrading is required for the existing CCU-TX50P to interface with the DXC-D55P.



CCU-D50P Front Panel



CCU-D50P Rear Panel

## Multi-core CCU Operation – for End-to-End Digital Systems

### CCU-D50P and CA-D50

With the CA-D50 Camera Adaptor attached, the DXC-D55 Series can be remotely controlled from the CCU-D50P Multi-core Camera Control Unit using a CCZ-A cable (26-pin). The video and audio output of the CA-D50 Camera Adaptor are transferred to the CCU-D50P Camera Control Unit as a component digital-SDI signal\*1 through a CCZ-A cable up to 75 m (246 feet) long. This combination allows the establishment of a fully digital acquisition system.

The CCU-D50P supports the following features:

- > Digital or analogue signal switchable transmission
- > Up to 75 m (246 feet) digital-SDI transmission via a CCZ-A cable (26-pin)
- > Up to 200 m (656 feet) digital-SDI transmission using a separate low-loss coaxial video cable in addition to a CCZ cable
- > Analogue transmission for longer control distances of up to 300 m (984 feet) via a CCZ-A cable
- > Analogue composite output and one of the following outputs: SDI, Y/R-Y/B-Y, RGB, Y/C
- > Wide variety of control functions
- > Compatibility with RCP-D50 and RCP-D51 Remote Control Panels
- > Support for major intercom systems (two-wire/four-wire/RTS/Clearcom)
- > Teleprompter support
- > Red/Green tally indication\*2
- > Fan alarm LED\*2

\*1 Embedded audio is not supported

\*2 The tally and fan alarm share the same LED

## Remote Controllers

Two types of remote controllers are available for remote operation of the DXC-D55 Series cameras, each offering direct camera control.

### RCP-D50 (Joystick Type)

### RCP-D51 (Dial Type)

The RCP-D50 and RCP-D51 have been designed for use with Sony DXC-D55 Series cameras. The RCP-D50 is a joystick-type controller, while the RCP-D51 is a dial-type controller. Both are equipped with a 3.5-inch\* colour touch panel LCD screen and offer extensive control of camera functions through easy-to-use menu-based operations. The LCD also allows the incoming camera image to be monitored – a feature that comes in handy when identifying which RCP is controlling which camera in multi-camera systems.

Another convenient feature is the Memory Stick system, which allows various scene files to be stored on and recalled from a Memory Stick and loaded to either a different RCP-D50/D51 controller, or to a DXC-D55 Series camera.

\*Viewable area measured diagonally

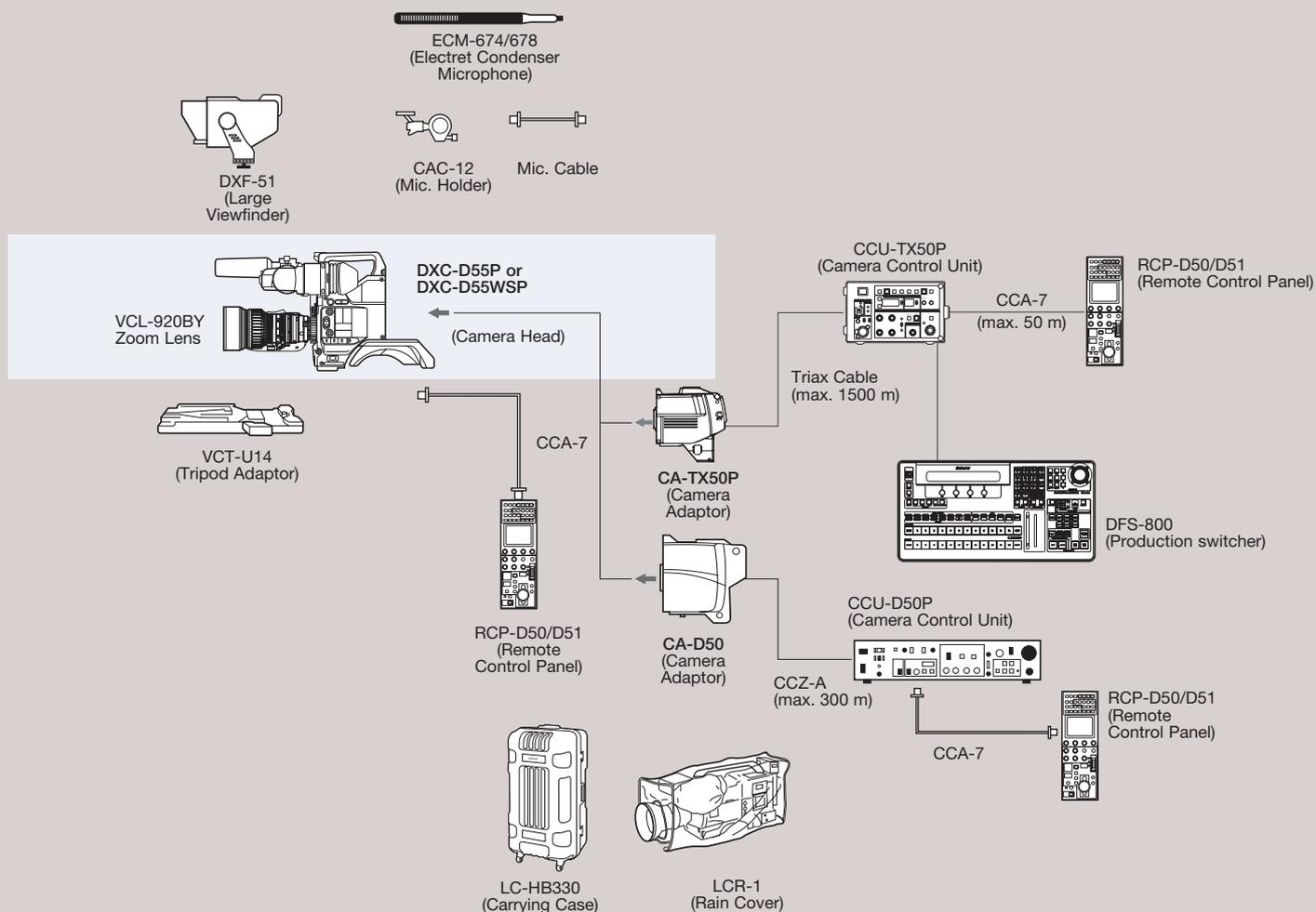


RCP-D50 (Joystick)



RCP-D51 (Dial)

# System Configuration



## Product Configurations

	4:3 model	16:9/4:3 model			
	DXC-D55PH	DXC-D55PL	DXC-D55PK	DXC-D55WSPH	DXC-D55WSPL
VCT-U14 Tripod Adaptor	Option	Supplied	Supplied	Option	Supplied
DXF-801/801CE Viewfinder	Option	Supplied	Supplied	Option	Supplied
Microphone	Option	Supplied	Supplied	Option	Supplied
Lens (VCL-920BY)	Option	Option	Supplied	Option	Option

# Optional Accessories



**CA-D50**  
Camera Adaptor  
(Multi-core)



**CA-TX50P**  
Camera Adaptor (Triax)



**CCU-D50P**  
Camera Control Unit  
(Multi-core)



**CCU-TX50P**  
Camera Control Unit  
(Triax)



**RCP-D50/D51**  
Remote Control Panel  
(RCP-D50: joystick type;  
RCP-D51: dial type)



**DXF-801**  
1.5-inch\*1 4:3  
Monochrome Viewfinder



**DXF-20W**  
2-inch\*1 16:9  
Monochrome Viewfinder



**DXF-51**  
5-inch\*1 4:3 Monochrome  
Viewfinder



**VCT-U14**  
Tripod Adaptor

**VCL-920BY**  
x20 Zoom Lens



**AC-DN10**  
AC Adaptor



**ECM-674/678**  
Electret Condenser  
Microphone



**CAC-12**  
Microphone Holder



**WRT-8B**  
UHF Synthesised  
Transmitter



**WRR-862B**  
UHF Synthesised Tuner



**CCA-7-5/25/50/100**  
Connecting Cable  
(10-pin ~ 10-pin)



**CCZ-A5/A10/A25**  
Connecting Cable  
(26-pin ~ 26-pin)



**MSH-128**  
Memory Stick



**LCR-1**  
Rain Cover



**LC-HB330**  
Hard Carrying Case

\*1 Viewable area measured diagonally

## Lenses from Other Manufacturers



**YJ20x8.5B**  
IRS/VRS/KRS  
(Canon)



**YJ13x6B** IRS/KRS  
(Canon)



**A13x6.3** BERM/BRM  
(Fujinon)



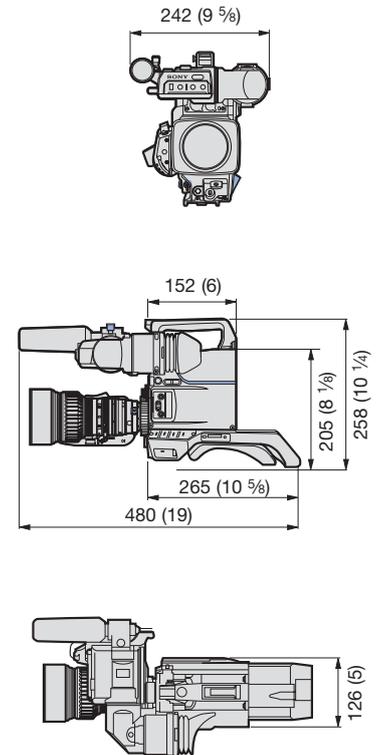
**A20x8.6** BERM/BRM  
(Fujinon)

For details, please contact each manufacturer

# Specifications

	DXC-D55P	DXC-D55WSP
<b>GENERAL</b>		
Power requirements	DC 12 V (10.5 to 17 V)	
Power consumption	14 W	
Operating temperature	-10 °C to +45 °C (+14 °F to +113 °F)	
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)	
Operating humidity	Less than 85%	
Mass (camera head only)	2.2 kg (4 lb 13 oz)	
<b>SIGNAL INPUTS/OUTPUTS</b>		
Video output	Analogue composite, BNC, 1.0 Vp-p, sync negative	
Monitor output	Analogue composite, BNC, 1.0 Vp-p, sync negative	
Microphone input	XLR-3-pin	
<b>OTHER INPUTS/OUTPUTS</b>		
Camera/VTR interface	Pro 76-pin Digital, Pro 50-pin	
Lens	12-pin	
VF	20-pin	
Remote	10-pin	
<b>CAMERA PERFORMANCE</b>		
Pickup device	3-chip 2/3-inch type Power HAD EX CCD	
Aspect ratio	4:3	16:9/4:3 switchable
Total picture elements (H x V)	1038 x 1188	
Effective picture elements (H x V)	980 x 582	
Optical system	F1.4 prism system	
Built-in filters	1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND	
Lens mount	Sony 2/3-inch bayonet mount	
Signal system	PAL colour system	PAL colour system
Scan format	2:1 interlaced, 625 lines, 50 fields/s	2:1 interlaced, 625 lines, 50 fields/s
Horizontal scan frequency	15,625 Hz	
Vertical scan frequency	50 Hz	
Sync system	Internal and External with the VBS or BS signal	
A/D conversion	14 bits	
Sensitivity	F11 at 2000 lx (3200 K, 89.9% reflectance) (typical)	
Minimum illumination	0.5 lx with F1.4, Hyper gain (36 dB)/0.8 lx with F1.8, Hyper gain (36 dB)	
Smear level	-145 dB (typical)	
Video S/N ratio (typical)	63 dB	
Horizontal resolution	920 TV lines	850 TV lines (4:3 mode) 800 TV lines (16:9 mode)
Vertical resolution	480 TV lines (without EVS) 530 TV lines (with EVS)	
Shutter speed	OFF, 1/60, 1/250, 1/500, 1/1000, 1/2000 s	
Clear scan	50.2 to 6000 Hz	
Gain selection	-3, 0, 3, 6, 9, 12, 18, 24, 30, 36 dB	
Registration	0.05% (all zones, without lens)	
Geometric distortion	Below measurable level	
<b>VIEWFINDER: DXF-801</b>		
(supplied with DXC-D55PL/D55PK/ D55WSP package)		
Indicators	REC TALLY (2), TAKE TALLY, BATT, SHUTTER, GAIN UP	
Horizontal resolution	600 TV lines	
Power requirements	DC 12 V	
Power consumption	2.4 W	
Mass	620 g (1 lb 9 oz)	
Dimensions (W x H x D)	241 x 91 x 203 mm (9 1/2 x 3 5/8 x 8 inches)	
<b>LENS: VCL-920BY</b>		
(supplied with DXC-D55PK package only)		
Focal length	8.5 to 170 mm	
Zoom	Manual or power selectable	
Zoom ratio	20x	
Maximum aperture	1:1.8	
Aperture	Manual or automatic selectable	
Focusing range	Infinity to 0.9 m	
Filter attachment threads	82 mm dia. 0.75 mm pitch	
Mounting	Sony 2/3-inch type bayonet mount	
Mass	Approx. 1.3 kg (2 lb 14 oz) including lens hood	
Dimensions (W x H x D)	122 x 102 x 210 mm (4 7/8 x 4 1/8 x 8 3/8 inches) including lens hood, excluding lens grip	
<b>SUPPLIED ACCESSORIES</b>		
DXC-D55PH/D55WSPH: Operating instructions (x1), Lens mount cap (x1), Flange focal length adjustment test chart (x1)		
DXC-D55PL/D55WSP: Operating instructions (x1), Lens mount cap (x1), Flange focal length adjustment test chart (x1), DXF-801 Viewfinder (x1), Microphone (x1), Wind screen (x1), VCT-U14 Tripod adaptor (x1)		
DXC-D55PK: Operating instructions (x1), Lens mount cap (x1), Flange focal length adjustment test chart (x1), DXF-801 Viewfinder (x1), Microphone (x1), Wind screen (x1), VCT-U14 Tripod adaptor (x1), VCL-920BY Zoom lens (x1)		

## Dimensions Unit: mm (inches)



- > Halogenated flame retardants are not used in the cabinets and the printed wiring boards.
- > Lead-free solder is used for soldering.

## Services from Sony

### > Working with you, working for you

Recognising that every company and every challenge is unique, we offer a complete and comprehensive range of services all the way through consulting, planning, financing, implementation, training, servicing, maintenance and support. Choose exactly what's right for you, when and where you need it.

### > Sony Professional Services

Tailor-made design, installation and project management of audio-visual and IT (AV/IT) systems using skills developed over 25 years of systems integration.

### > Sony Financial Services

Innovative and flexible finance solutions designed to meet budgetary and financial requirements and constraints, enabling businesses to always have the most current technology.

### > Sony Training Services

A range of off-the-shelf or customised training services from basic operation through to high-level technical maintenance.

### > Sony Support Services

Fully integrated and customised support for products and systems throughout their operational life, combining proactive and reactive technical services.

Not all services are available in all countries. If you'd like to find out more about what we do, who we do it for and how we do it, visit [www.sonybiz.net](http://www.sonybiz.net) or contact your local Sony office.

## Silver Support

### > 2-year Support

The Silver Support Pack extends the support period from the standard 1-year warranty to 2 years with the option to extend to a 3-year period. Not only that, extra features and services are also included.

### > Operational Helpdesk

Operational phone support is provided to give advice and help so that you can get the most out of your DVCAM equipment and maximise its performance. The multi-lingual helpdesk is available from Monday to Friday.

### > Collection Anywhere

In the event of equipment failure, Sony will arrange for the collection, repair and return of the unit directly to your location, anywhere in mainland EU, Norway or Switzerland. That makes it simpler, quicker and even more convenient for you.

### > Repair within 7 days

Sony will collect, repair and return the unit to your preferred location within 7 working days. So, minimum downtime, increased confidence and the ability to plan your business are guaranteed.

### > Loan

If the repair is likely to exceed 7 working days, Sony will contact you and offer to send a loan unit for the remainder of the repair.

# SONY

Specialist

Dealer

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[www.sonybiz.net/dealer](http://www.sonybiz.net/dealer)



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CA DXC-D50 Series/GB-02/08/2006