

SONY

HDC-P43

4K Multi-Purpose Camera



4K

Never Miss That Vital Live Moment with Sony SUPER MOTION Compact POV Camera

Sports such as athletics and ball games often have a vital moment that decides the game. Similarly, rock concerts and other live music events can have a particular moment perhaps an on-stage gesture or a high note that attracts the audience. Everyone waits for that special moment and can be deeply moved by it. That's why live-event creators must respond to expectations and never miss that vital moment.

The Sony HDC-P43 SUPER MOTION Compact POV Camera can capture the image of that moment impressively in 4K^{*1} resolution and at a high frame rate (HFR).^{*2}

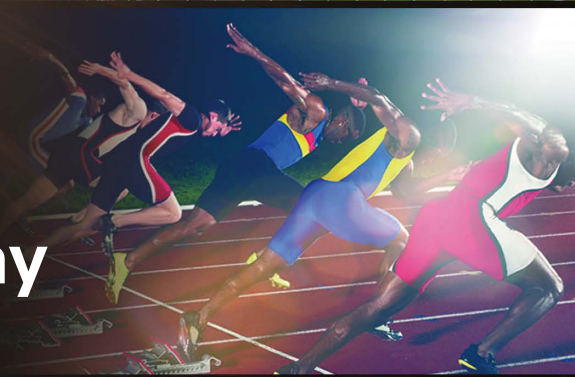
With the same three 2/3-inch CMOS sensors and circuitry design as the industry-acclaimed HDC-4300 4K/HD studio camera, this compact POV camera matches the performance levels and picture quality of the HDC-4300. Furthermore, the HDC-P43 incorporates Sony's S-Log3 gamma curve, and supports HDR (high dynamic range) image capturing with the ITU-R BT.2020 color space. HDR production brings great benefit to live production; it make live images immersive and realistic.

Since the HDC-P43 has the same camera characteristics and qualities as the HDC-4300 studio camera, system integration is optimized. You can use these cameras to unleash the best performance and efficiency in color matching applications. Furthermore, in combination with a baseband processor unit (BPU), this compact camera is flexible enough to expand its application styles from an individual camera system to a crane or robotic system.

^{*1} The 4K upgrade requires the SZC-4001 software option.

^{*2} The HFR upgrade requires the SZC-4002 software option; it supports 2x at 4K and max. 8x at HD.

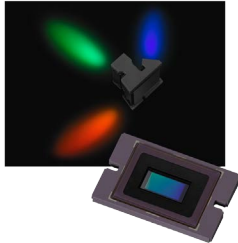
SUPER MOTION



Superb 4K Capability*¹ with Wide Dynamic Range and Wide Color Space

The HDC-P43 captures 4K images and incorporates Sony 2/3-inch 4K CMOS imagers with ultra-precision alignment technology, which mounts the chips to a newly developed prism. This is the same imager device and optical system as used in the industry-leading HDC-4300 system camera. Also this optical system supports the wide ITU-R BT.2020 color gamut, enabling more precise color reproduction in both HDR and SDR (standard dynamic range) productions including live operation.

*¹ The optional SZC-4001 4k upgrade software license is required.



4K 2x and HD 8x Super Slow Motion*¹

To capture 4K images up to 2x, and HD images up to 8x super slow motion requires an optional software upgrade.

This provides an amazing maximum frame rate, allowing you to create sensational super-slow-motion sequences of key moments in any game or other live event. Now you can offer audiences unprecedented views of subtle body movements, muscle action, and even sweat sprays – things that are normally invisible to viewers.

*¹ The optional SZC-4002 HFR software license is required. This software is installed in the BPU-4000/ BPU-4500 and HDCU-4300. See the next page for details. For 4K format operation, optional SZC-4001 4K software is separately required.



Smooth and Easy Migration from HD to 4K

This powerful system camera is designed to fit into Sony's growing 4K live production environment. With optional software installation*¹, the HDC-P43 enables 4K capture for multiple 4K and HD outputs, working directly with the BPU-4000 or BPU-4500 baseband processor unit and the HDCU-4300 camera control unit items that are already familiar 4K equipment for the HDC-4300 studio camera.

*¹ Select the SZC-4001 software option to enable 4K capture.

Direct Installation of B4-Mount Lenses

Thanks to the 2/3-inch camera mount, the HDC-P43 works directly with B4 lenses. Support for both HD and 4K lenses means that, you can use B4-mount high-power large lenses to capture sports scenes with substantial depth of field.

4K Live HDR (High Dynamic Range)

Unlike SDR, the HDR function dramatically improves high-contrast images and offers your audiences vivid image reproduction as if they are watching the game in person at the stadium, without you having to clip out the sunny portion or black out the shadowed area. And HDR mode enables you to deliver far more realistic pictures such as reflections on water and glass, laser lights at music concerts, and clearer details in studio sets than ever before.



SDR image



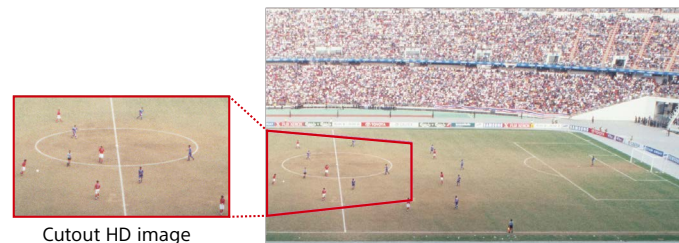
HDR image

* Simulated images

HD Cutouts from 4K Pictures*

Sony's innovative software technology enables a full HD image to be cut out from a 4K picture in real time. Two modes are available: you can select either Zoom & Perspective mode or Simple HD mode. Keeping the camera in a fixed position, any portion of the captured image can be cropped to provide a closeup HD image to viewers as if the camera had been panned. In Zoom & Perspective mode, one portion can be cut out while performing perspective transformation, according to the focal length of the lens. In Simple HD mode, any two HD-sized portions can be cut out at the same time. Sony's cutouts and zooms give viewers a surprisingly clear image while achieving both 4K and HD signal output.

* Requires optional SZC-2001 software for the BPU-4000, BPU-4500, and HDCU-4300.

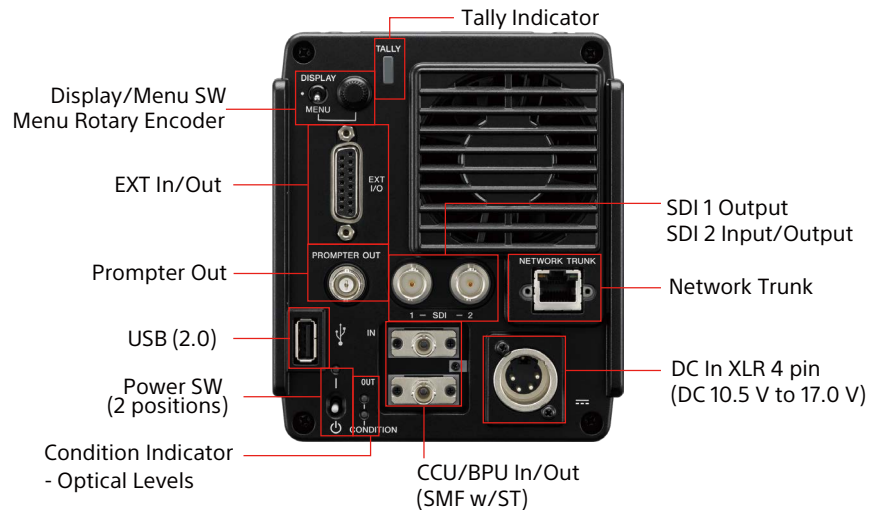


Cutout HD image

Original 4K full-source image

Versatile Camera Interfaces

Equipped with a wide range of inputs and outputs via the onboard connector panel, the HDC-P43 conveniently supports 3G-SDI and HD-SDI outputs, two single-mode fiber connections for BPU/CCU, and prompter signal output. Moreover, this camera provides trunk line, and assignable lines on the D-sub 15-pin connector, and USB (2.0).



Video Formats

The following table shows all of the formats that the HDC-P43 supports and includes software options. The listed formats require available video signals and total system integration with a BPU/CCU.

	Frame rate	HFR	Optional software required
4K HFR	119.88p 100p	x2@59.94p x2@50p	SZC-4001, SZC-4002*
4K	59.94p	x1	SZC-4001,
	50p	x1	
	29.97p	x1	
	25PsF	x1	
	24PsF	x1	
	23.98PsF	x1	

The frame pixel number is as follows (and can be selected at the BPU):

4K = 4096x2160 or 3840x2160

HD = 1920x1080

HD720p and NTSC/PAL are also available at the CCU output stage.

	Frame rate	HFR	Optional software required
HD HFR	479.52p	x8@59.94p*	SZC-4002
	400p	x8@50p*	
	359.64p	x6@59.94p*	
	300p	x6@50p*	
	239.76p	x4@59.94p	
	200p	x4@50p	
	179.82p	x3@59.94p	
	150p	x3@50p	
	119.88p	x2@59.94p	
	100p	x2@50p	
HD	59.94p	x1	
	50p	x1	
	59.94i	x1	
	50i	x1	
	29.97p	x1	
	25PsF	x1	
	24PsF	x1	
	23.98PsF	x1	

* The HDCU-4300 does not support 4K HFR.

The HDC-P43 also works at 50i/59.94i system frequency at only HD HFR 6x and 8x with the HDCU-4300. 50p/59.94p is available in combination with the BPU-4000/BPU-4500.

4K / HFR Upgrade Options

The HDC-P43 works with the BPU-4000/4500 baseband processor units and the HDCU-4300 camera control unit with direct connection via single mode fiber cable, allowing you to activate 4K, HFR, and HD Cutout with the same optional software keys as the HDC-4300. These capabilities let you add amazing 4K image capture to standard HD outputs and 4K 2x and HD 8x super slow motion as and when you want. All the flexibility and control you demand are right there in a single high-performance platform.

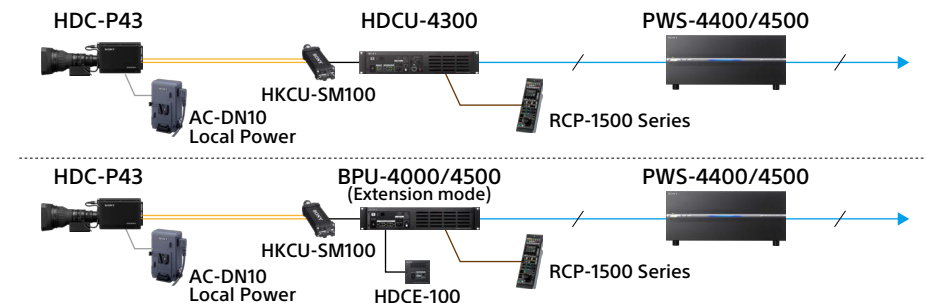
SZC-4001 4K Upgrade Software for HDC-P43

SZC-4002 HFR Upgrade Software for BPU-4000/BPU-4500 or HDCU-4300

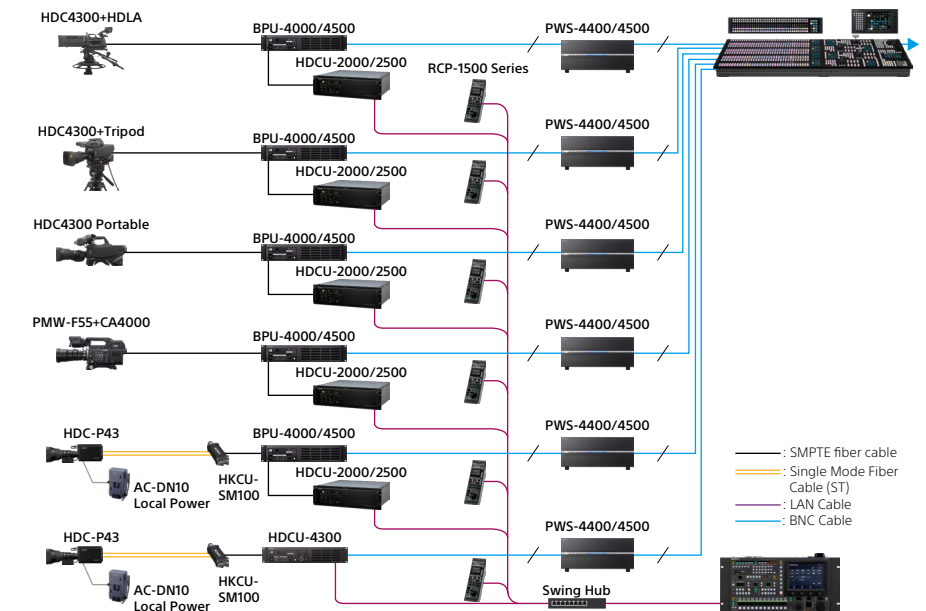
SZC-2001 HD Cutout Software for BPU-4000/BPU-4500 or HDCU-4300

System Configuration

• Standalone Operation



• System Operation with System Cameras



Specifications

General	
Power Requirements	DC12V, 6.4A (Max.)
Power Consumption	Approx. 40W
Operating Temperature	-20°C to +45°C -4°F to +113°F
Storage Temperature	-20°C to +60°C -4°F to +140°F
Dimensions (W x H x D) ^{*1}	119 x 140 x 212 mm 4 3/4 x 5 5/8 x 8 3/8 inches
Mass	2.0 kg (Body only) 4 lb 7 oz
Camera Section	
Pickup Device	2/3-inch type 9.8M pixels CMOS RGB 3-chip
Effective Picture Elements	4K ² : 4096(H) x 2160(V) QFHD ^{*3} : 3840(H) x 2160(V) HD: 1920(H) x 1080(V)
Spectrum System	F1.4 prism system
Lens Mount	Sony 2/3-inch type bayonet mount
Built-in Filters	CC: A: CROSS, B: 3200K, C: 4300K, D: 6300K ND: 1: CLEAR, 2: 1/4ND, 3: 1/8ND, 4: 1/16ND, 5: 1/64ND
Servo Filter Control	Yes
Sensitivity (at 2000 lx, 3200K, 89.9% reflectance)	F8.0 (2000 lx, 89.9% reflection) at 4K/59.94p ² or 4x HD/59.94p ³
Signal-to-noise Ratio	-62dB at HD/59.94i
Horizontal Resolution	2000 TV lines (at center) in 4K ² , 5% or higher modulation
Distortion	not recognizable except lens distortion
Input/Output	
Mic Input	(in EXT I/O 1ch) D-sub 15pin, female (x1)
Fiber Input/Output	ST type connectors for single mode fiber (2)
Prompter	BNC (x1), 1 Vp-p, 75 Ω
SDI Output	BNC (2) for Monitoring (SDI-2 is used for HD Trunk In.)
Distance of Fiber Cable (with BPU)	Approx. 5km
TRUNK Input/Output	(in EXT I/O 2ch RS232C or 1ch RS422A) D-sub 15pin, female (x1)
Network Trunk	RJ-45 8-pin (x1)
EXT Input/Output	D-sub 15Pin (female)
USB	USB 2.0, Type A, 4-pin (x1) for USB Memory
DC Input	XLR-type 4-pin (x1), DC 10.5V to 17V
DC Output	DC 10.5 V to 17 V, 1.5 A (max.) via D-Sub 15pin
Supplied Accessories	
	Number Plates (1set)
	Operation Manual CD-ROM (1)
	Operation Guide (1)

*1 : The values for dimensions are approximate.

*2 : 4K/QFHD format is available with option, SZC-4001

*3 : High frame rate is available with option, SZC-4002 at BPU/CCU.

Optional Accessories



MSU-1000
Master Setup Unit



MSU-1500
Master Setup Unit



RCP-1000
Remote Control Panel



RCP-1500
Remote Control Panel



AC-DN10
AC Adaptor



HKCU-SM100
CCU Extension Adaptor



HDCE-100
Camera Extension Adaptor

Related Products



HDC-4300
4K System Camera



BPU-4000
Baseband Processor Unit



BPU-4500
Baseband Processor Unit

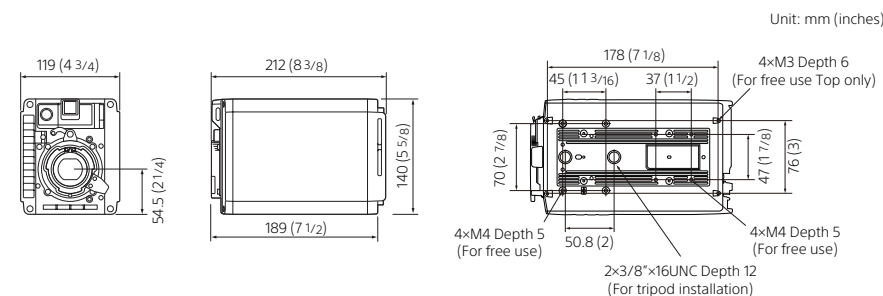


HDCU-4300
Camera Control Unit



HDCU-2000
HDCU-2500
Camera Control Unit

Dimensions



The screw holes for mounting are common on the top and bottom plates.

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