HDC-P50A

Compact and highly versatile 4K/HD HFR compatible POV (Point of View) system camera, combining a 3-chip 2/3-inch 4K CMOS sensor for extremely high picture quality with the flexibility of SDI and IP output options to suit a wide range of live production environments.

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Exceptional live production versatility

Providing extremely high quality images for 4K*[1]/HD HDR and 4K*[1]/HD HFR*[2] production workflows, the HDC-P50A is a Point of View (POV) system camera that's ideal for sport and other live applications. Integrating smoothly in SDI production infrastructure, its flexibility is further increased by the addition of a direct IP output for incorporation in ST 2110 productions*[3].
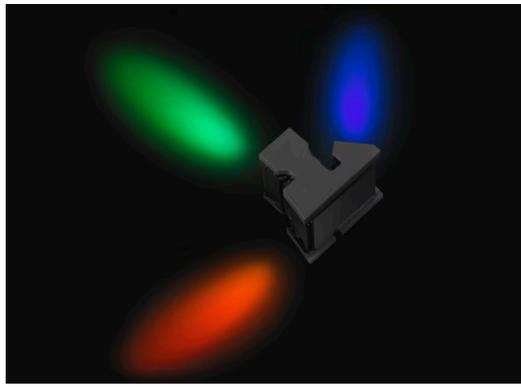

Compact, light and easy to handle, the HDC-P50A POV camera offers broad possibilities for rich visual expression in a range of shooting situations. It can output remarkably crisp, clear 4K*[1]/HD images directly from the camera head over SMF (or SDI) with no need for SDI to SMF converter when operating wirecam. HD HFR*[2] up to 6x can be output directly from the camera's SDI output, rising to 8x via a connected CCU. Similarly 4K*[1] HFR*[2] up to 4x is available via SDI (requires camera connection to CCU) *[4]. HD HFR up to 8x is also available via a connected CCU.
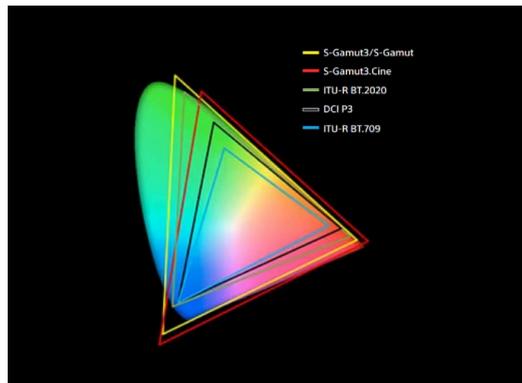

Used standalone or part of a multi-camera shoot, the HDC-P50A can be crane-mounted or operated as a fixed camera position. It's also ideal for a wide range of other shooting situations – such as in combination with a camera stabiliser, in handheld mode, during wireless shooting or while filming aerial footage from a helicopter.

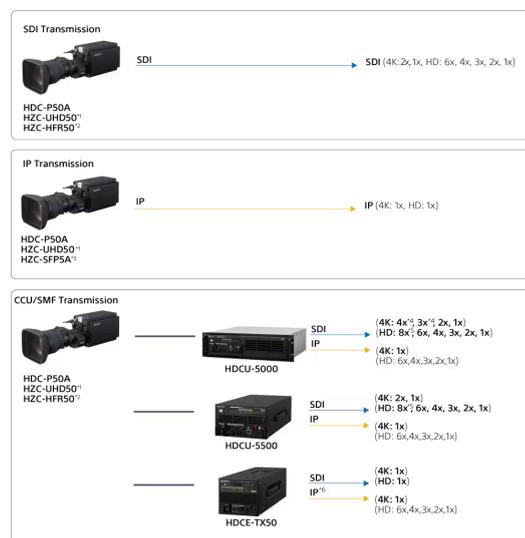## 3-chip 2/3-type CMOS Sensor with Global Shutter

The HDC-P50A incorporates a 3-chip 2/3-inch 4K CMOS sensor optical block with global shutter technology that delivers exquisite picture quality. This high performance sensor is combined with a specially developed Digital Signal Processing Circuit, achieving very high sensitivity and extremely low noise levels to suit a wide range of shooting scenarios.

Wide colour space and dynamic range

The advanced optical system of the HDC-P50A supports the ITU-R BT.2020 colour gamut, enabling exceptionally wide, precise colour reproduction in live broadcasts. From sports to concerts and special events, you'll see the difference with vibrant, true-to-life images that make viewers feel as if they're really there. HDR operation is available for 4K*[1] and HD simultaneous live operation.

Direct IP output

In addition to its conventional SDI output, the HDC-P50A can also output HD or 4K*[1] pictures via IP (ST 2110)*[3] for integration with today's IP-based production infrastructures. The camera's direct IP output allows connection to a Camera Control Unit (CCU) to allow long-distance transmission over single mode fibre.*[3]

HFR output up to 4K 4x / HD 8x

The HDC-P50A can output High Frame Rate images in HD[2] at up 8x when connected to a Camera Control Unit via SDI or IP. It can also output 4K[1] at up to 4x HFR[2] when connected to a CCU via SDI.[4]

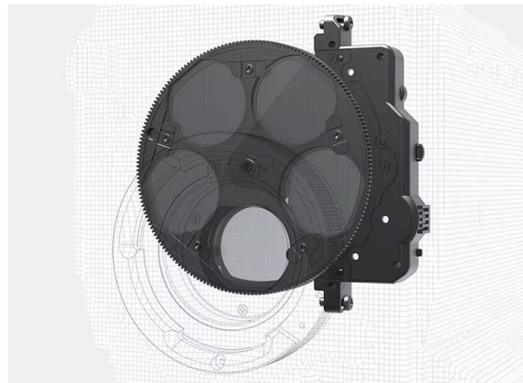|	
SDI 4K	4x, 3x (CCU output) 2x, 1x (Standalone output & CCU output)
SDI HD	8x (CCU output) 6x, 4x, 3x, 2x, 1x (Standalone output & CCU output)
IP (ST 2110) 4K	1x (Standalone output & CCU output)
IP (ST 2110) HD	1x (Standalone output) 6x, 4x, 3x, 2x, 1x (CCU output)

Light, compact and energy efficient

The HDC-P50A packs impressive imaging performance into a light, compact camera body that's ideal for use in space-limited situations such as housing, helicopter camera mounts or operated as a fixed camera position. Low power consumption* is complemented by minimal operating noise levels.

The HDC-P50A is powered by local power supply only.

Adaptable variable ND filter

Dual optical filter wheels for Neutral Density (ND) and Colour Correction (CC) open up even wider creative possibilities, with the ability to control both filters from a remote control panel or master setup unit. Since the variable ND filter can be adjusted seamlessly during operation, the HDC-P50A is ideal for integration with crane mounted or wirecam systems, allowing control over exposure without affecting depth of field as the camera moves in changing lighting conditions, such as at a sports stadium.

Seamless integration into Sony live production workflows

The HDC-P50A joins Sony's acclaimed HDC Series family of live production solutions. Integrating seamlessly with existing HD infrastructures – including lenses, remote control panels and other accessories, it gives ambitious programme makers exciting new possibilities for creating HD, 4K[1] HDR and HD HFR[2] productions. Production flexibility is broadened further still by smooth integration with third-party control systems.

[1] Requires optional 4K license HZC-UHD50
[2] Requires optional HFR license HZC-HFR50

*3 Requires optional IP license HZC-SFP5A
*4 HKCU-UHF50 installed HDCU-5000 is required
*5 HD 8x only output from CCU
*6 HZCE-DIR50 installed HDCE-TX50 is required

Gallery

Specifications

General	
Power requirements	DC IN connector: 10.5 V to 17 V DC, 8.1 A (max.) FIBER connector: 48 V DC, 1.9 A (max.)
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)	119 x 140 x 206 mm
Weight	Approx. 2.5 kg (5 lb 8.2 oz) (Unit only)

Imager	
Imager	2/3-inch type CMOS sensor with global shutter
Method	3-chip, RGB

Electrical characteristics

Sensitivity	F10 with 1080/59.94P F11 with 1080/50P (at 2000 lx with 89.9% reflectance) F12 with 1080/59.94P F13 with 1080/50P (at 2000 lx with 89.9% reflectance, VIDEO SENSITIVITY: HIGH) F14 with 1080/59.94P F15 with 1080/50P (at 2000 lx with 89.9% reflectance, VIDEO SENSITIVITY: HIGH+)
Signal-to-noise ratio	–62 dB
Horizontal resolution	2000 TV lines (4K: screen centered) 5% or higher modulation
Geometric distortion	Negligible (not including lens distortion)

Optical system specifications

Spectrum system	F1.4 prism
Built-in filters	Color temperature conversion filters A: Cross filter, B: 3200K (clear), C: 4300K, D: 6300K ND filters 1: CLEAR, 2: 1/4ND, 3: 1/8ND, 4: 1/16ND,5: 1/64ND

Input/output connectors

LENS	12-pin (x1) 10.5 V to 17.0 V DC 1.0 A (max.) at 10.5 V 0.6 A (max.) at 17 V
DC IN	XLR 4-pin (x1), DC 10.5 V to 17 V
SDI	SDI 1, SDI2, SDI3 : BNC (x1 each)
SDI MONI	BNC (x1)

Input/output connectors

PROMPTER/GENLOCK	BNC (x1) SYNC HD: BTA-S001A, tri-level sync, 0.6 Vp-p, 75 ohms SD: Composite sync, 0.3 Vp-p, 75 ohms HD SYNC/SD SYNC selectable GENLOCK HD: SMPTE ST274, tri-level sync, 0.6 Vp-p, 75 ohms SD: Black burst (NTSC: 0.286 Vp-p, 75 ohms/ PAL: 0.3 Vp-p, 75 ohms) PROMPTER 1 Vp-p, 75 ohms
REMOTE	8-pin (x1) 10.5 V to 17.0 V DC 1.0 A (max.) at 10.5 V 0.6 A (max.) at 17 V Total of three LENS, DC OUT (EXT I/O), and REMOTE outputs is 2.0 A (max.).
EXT I/O	D-Sub 15-pin, female (unified thread) (x1) 10.5 V to 17.0 V DC 1.0 A (max.) at 10.5 V 0.6 A (max.) at 17 V This may be limited by the imposed load or input conditions.
USB	USB 2.0 Type A 4-pin (x1) (for connecting USB drive)
NETWORK TRUNK	RJ-45 type 8-pin (x1)

Supplied accessories

Supplied accessories	Before Using This Unit (x1) Operating Instructions (CD-ROM) (x1) Number plate x(1)

Information on EU Data Act: Click here to check if your Sony product and/or related service is subject to the EU Data Act.

Accessories

HZC-UHD50 / HZC-UHD50M / HZC-UHD50W

Software licenses for shooting and transmission of 4K video and 1080 progressive video

HZC-HFR50 / HZC-HFR50M / HZC-HFR50W

Software licenses for shooting Max. HD 8x slow motion with HDC-5500 system camera

HZC-SFP5A

Software license for IP output from HDC-P50A.

CBK-RPU7

HEVC 4K/HD remote production unit

Related products

RCP-3500

Remote-control panel for HDC/HSC/HXC series cameras

RCP-3100

Joystick type of remote control panel for HDC/HSC/HXC series cameras.
5 units in 19-inch EIA rack.

CNA-2

Camera Control Network Adapter

MSU-3500

Master setup unit, multi camera remote control panel for system cameras (vertical type)

MSU-3000

Master setup unit, multi camera remote control panel for system cameras (horizontal type)

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