

HDC-P50

4K/HD compact POV system camera



Overview

4K/HD compact POV system camera

The HDC-P50 is a light, compact Point of View (POV) system camera. Integrating seamlessly with existing HD infrastructure, lenses and accessories, it gives ambitious programme makers exciting new possibilities for creating HD, 4K HDR and HD HFR productions.

This light and compact POV system camera features the world's first 2/3-inch 4K global shutter three CMOS sensor system that delivers exceptional image with impressive sensitivity and wide dynamic range.

Thanks to ultra-high precision alignment technology, three 4K sensors on the newly-developed prism achieves ITU-R BT.2020 broadcast standard widened colour space. As a result, the HDC-P50 delivers exceptionally high-quality images in demanding 4K/HDR live production environments.

The camera can directly output remarkably crisp, clear 4K HDR* images directly from the camera head with no need for a separate processor unit. Moreover, HD HFR* up to 6x can be output from camera directly. Used standalone or part of a multi-camera shoot, the HDC-P50

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.

*4K HDR capability requires 4K License HZC-UHD50.

*HD HFR capability requires High Frame Rate License HZC-HFR50.

Features

Next generation imaging

The HDC-P50 features the world's first 2/3-inch 4K CMOS sensor with global shutter technology that eliminates the 'jello effect' and banding noise. This next-generation imager captures pristine 4K images with exceptionally low noise, impressive sensitivity and high dynamic range, while achieving the ITU-R BT.2020 broadcast standard widened colour space. It's teamed with a specially developed new Digital Signal Processor that fully realises the extraordinary imaging power of this new sensor.

Light, compact, quiet and energy efficient

The HDC-P50 packs impressive imaging performance into a light, compact camera body that's ideal for use in space-limited situations such as crane jibs, helicopter camera mounts or operated as a fixed camera position. Low power consumption* is complemented by minimal operating noise levels.

* The HDC-P50 is powered by local power supply only.

Wide colour space and dynamic range

The advanced optical system of the HDC-P50 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 and HD simultaneous live operation through the S-Log3 process.

Dual servo controlled optical filters

Dual optical filter wheels for Neutral Density (ND) and Colour Correction (CC)* open up even wider creative possibilities in changing light conditions. Both filters can be controlled from a remote control panel or master setup unit.

Seamless integration into Sony HD workflows

The HDC-P50 joins Sony's acclaimed HDC Series family of live production solutions. It benefits from direct compatibility with a wide range of accessories, remote control panels and camera control units. The camera is also designed for integration with third-party control systems.

Smooth migration from HD to 4K

The HDC-P50 fits seamlessly into the growing Sony 4K live production environment. With an optional software upgrade, the camera enables 4K capture for multiple 4K and HD outputs.

Direct HFR output up to 6x

The HDC-P50 can output HD 2x, 3x, 4x, 6x HFR output directly. Since the HFR output can be HDR picture, dynamic motion contents can be captured from variety of shooting location such as goal area or helicopters. The signal can be transmitted via only 2 12G-SDI cable to the live production server PWS-4500.

Specifications

General

Power requirements	DC 10.5 V to 17 V, 8.2 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)
Mass	2.4 kg (5 lb 5 oz)

Camera section

Imager	3-chip 2/3-inch type 4K CMOS with global shutter
Effective resolution (H x V)	QFHD: 3840 × 2160* ¹ , HD: 1920 × 1080 * ¹ Optional HZC-UHD50 is required.
Signal format	1080/50i, 1080/59.94i, 720/50p, 720/59.94p (1080/23.98PsF, 1080/24PsF, 1080/25PsF, 1080/29.97PsF, 50/59.94p, 4K/50p, 4K/59.94p: option)
Spectrum system	F1.4 prism
Lens mount	Sony bayonet mount
Built-in filters	ND: 1: CLEAR, 2: 1/4ND, 3: 1/8ND, 4: 1/16ND, 5: 1/64ND CC: A: CROSS, B:3200K, C:

	4300K, D: 6300K
Sensitivity (at 2000 lx, 3200K, 89.9% reflectance)	F10 (at 1080/59.94p, 720/59.94p), F11 (at 1080/50p, 720/50p)
Signal-to-noise ratio	-62 dB
Horizontal resolution	2,000 TV lines (at center)
Shutter speed	1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (1080/59.94i) 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (1080/50i)

Inputs/Outputs

Genlock input	BNC (x1) HD: SMPTE 274M, tri-level sync, 0.6 Vp-p, 75 Ω SD: Black burst (NTSC: 0.286 Vp-p, 75 Ω/PAL: 0.3 Vp-p, 75 Ω)
SDI 1 output	BNC (x1), 12G/3G/1.5G-SDI
SDI 2 output	BNC (x1), 12G/3G/1.5G-SDI
SDI 3 output	BNC (x1), 3G/1.5G-SDI
SDI 4 output	BNC (x1), 3G/1.5G-SDI
SDI MONI	BNC (x1), HD-SDI
EXT I/O	D-sub 15-pin (female) (x1)

Remote	8-pin (x1)
Lens	12-pin (x1)
LAN	RJ-45 (x1), 10BASE-T, 100BASE-TX
Supplied accessories	Tally number plate (1set), CD-ROM (1)

Related products



HZC-UHD50P

Portable UHD/1080p license for HDC-5500/HDC-P50



HZC-UG50 / HZC-UG50M / HZC-UG50W

Software licenses for shooting 1080/RGB 4:4:4 & User Gamma with HDC-5500/3500 series system camera



MSU-3000

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



RCP-3501

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



HZC-HFR50P

Portable HFR license for HDC-5500/HDC-P50



RCP-3500

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



HDRC-4000

HDR Production Converter Unit



HZC-HFR50 / HZC-HFR50M / HZC-HFR50W

Software licenses for shooting Max.

HD 8x slow motion
with HDC-5500
system camera



HZC-PSF50 / HZC- PSF50M / HZC- PSF50W

Software licenses
for shooting and
transmission of PsF
format video



HZC- QFR50 / HZC- QFR50M / HZC- QFR50W

Max. HD 4x Slow
motion with HDC-
3500 system
camera and others



HZCE- UHD30

Software license for
4K IP output from
HDCE-TX30 IP
camera extension
adaptor



RCP-3100

Joystick type of
remote control
panel for
HDC/HSC/HXC
series cameras.

5 units in 19-
inch EIA rack.



HZC- DFR50 / HZC- DFR50M / HZC- DFR50W

Software licenses
for shooting Dual
Frame Rate 2x slow
motion



MSU-3500

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

Gallery

