SONY

HDC-3500

Three 2/3-inch 4K CMOS sensors portable system camera for fibre operation

NETWORKED LIVE

Overview

A new benchmark in creative flexibility

The HDC-3500 system camera brings new levels of image quality, portability and creative flexibility to live production environments. Enjoy premium 4K/HD/HDR picture quality – and anticipate tomorrow's production needs while maintaining full compatibility with today's workflows and system hardware.

Imaging power unleashed

Capture premium pictures with the world's first 2/3-inch 4K CMOS sensor with global shutter technology that eliminates the 'jello effect' and banding noise. This allows the HDC-3500 to capture pristine images with 4K high resolution (2000TVL), exceptionally low noise (-62dB), impressive sensitivity (F10 at 1080/59.94p or F11 at 1080/50p) and high dynamic range, while achieving the ITU-R BT.2020 broadcast standard wide colour space. It's teamed with a specially developed LSI Digital Signal Processor that fully realises the extraordinary imaging power of this new sensor.

More format flexibility (4K/HD)

The HDC-3500 can output 4K signals via the CCU's 12G-SDI and Quad 3G-SDI interfaces and 3G-SDI signals in a range of formats right up to 1080/50p. So you can benefit from maximum production convenience – and your viewers can enjoy premium picture quality.

Get the look

Broaden your creative possibilities and achieve exactly the look you want in any shooting situation. Low-key Saturation ensures rich, vibrant colours in low-light areas. Powerful gamma functions give absolute control over fine-tuning tonal values, contrast and detail.

Simultaneous HDR and SDR production

The HDC-3500 can capture High Dynamic Range images, supporting Sony's SR Live workflow for simultaneous HDR/SDR production with reduced inventory requirements.

This product contains pre-installed software and requires the purchase of licence keys to activate some functions.

Features

Easy transmission change

The HDC-3500 supports optical fibre transmission as standard, with a SMPTE-standard interface for connection with associated HDCU-3100/HDCU-2000 series Camera Control Units. It's quick and easy to reconfigure the camera at any time for fibre, third-generation digital triax or wireless operation with a choice of optional outside panels.

Wider workflow options

Support for Sony's SR Live for HDR workflow allows simultaneous 4K HDR and HD SDR production by a single team – reducing hardware and personnel costs for multi-format productions. In addition, the HDC-3500 can be upgraded by the optional software licenses to add functions to capture progressive signals, progressive segmented frame (PsF) signals, or double-speed acquisition for exquisite slow motion.

Simple solution for IP remote production

Adding the optional HDCE-TX30 IP camera extension adaptor allows the HDC-3500 to output ST 2110 signals directly without requiring a separate CCU (camera control unit), simplifying connection to an IP-based remote production system.

The go anywhere camera

Combining exceptional lightness and strength, the magnesium alloy body is complemented by carbon fibre reinforced plastic (CFRP) outside panels. Sure, stable handling is enhanced by the camera's low centre of gravity, easily adjustable shoulder pad and widened hand grip area. Also ideal for handheld operation, HDC series studio cameras offer exceptional user ergonomics in a wide range of studio and field-based production environments.

Seamless integration

Backwards compatibility with Sony's industry-acclaimed HDC-2000 series system cameras simplifies smooth integration with your current live production infrastructures, including cameras and CCUs.

4x slow motion

The HDC-3500 offers a quad-speed acquisition function, transmitting high-quality Full HD images to the HDCU-3500 Camera Control Unit (CCU).

Display camera number and tally

Assigned camera number is indicated on the camera body by a graphical electronic paper display. Displayed information is updated automatically to reflect system changes. There's also an LED tally lamp beside the camera number display.

Rich focus assist functions

The Viewfinder Detail function adds dedicated image-enhancing edge signals directly to the viewfinder, helping the operator to focus quickly and precisely in any shooting situation. It's complemented by a Focus Assist Indicator and advanced Focus Position Meter function.

Servo controlled ND and CC filters

Dual optical filter wheels for Neutral Density (ND) and Colour Correction (CC)* open up wider creative possibilities. Both filters

can be controlled from a remote control panel, master setup unit, or directly from the camera head.

Network TRUNK

Network TRUNK (via LAN port) allows high-speed data transmission between the camera and CCU at up to 1 Gbps to support configurability* with IP-based products and systems.

* Camera operating in fibre configuration.

Specifications

General	
Power requirements	AC 240 V, 1.4 A (max.), DC 240 V, 1.05 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	Approx. 4.9 kg (10 lb 13 oz) (Unit only) Approx. 5.1 kg (11 lb 4 oz) (when HKC-TR37 is attached) Approx. 4.9 kg (10 lb 13 oz) (when HKC-FB30 is attached)

Imager	
Imager	2/3 inch type 4K CMOS sensor with global shutter

Method	3-CMOS, RGB

Electrical characteristics

Sensitivity	F10 with 1080/59.94p F11 with 1080/50p (at 2,000 lx with 89.9% reflectance)
Signal-to-noise ratio	-62 dB
Geometric distortion	Negligible (not including lens distortion)

Optical system specifications

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

Input/output connectors

CCU	Electro-optical connector (LEMO 3K.93C connector) (x1)
LENS	12-pin (x1)
VF	20-pin (x1)

MIC 1 IN	XLR 3-pin, female (x1)
AUDIO IN CH1, CH2	XLR 3-pin, female (x1 each) AUDIO switch for MIC: –60 dBu (can be selected up to –20 dBu in the menu), balanced AUDIO switch for LINE: 0 dBu, balanced
INTERCOM 1, INTERCOM 2	XLR 5-pin, female (x1 each)
EARPHONE	4-pole mini jack (x1), (2-pole mono, 3-pole stereo, 4-pole CTIA standard, 4-pole OMTP standard)
DC IN	XLR 4-pin (x1), DC 10.5 to 17 V
DC OUT	4-pin (x1), DC 10.5 to 17 V, max. 0.5 A*1, 2-pin (x1), DC 10.5 to 17 V, Max. 2.5 A*1
SDI 1	BNC (x1)
SDI 2	BNC (x1)
SDI MONI	BNC (x1)
TEST OUT	BNC (x1)
	BNC (x1) PROMPTER 1 Vp-p, 75 Ω

PROMPTER/GENLOCK	GENLOCK HD: SMPTE ST274, 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)
PROMPTER2	BNC (x1), 1 Vp-p, 75 Ω
RET CTRL	6-pin (x1)
REMOTE	8-pin (x1)
TRACKER	12-pin (x1)
CRANE	12-pin (x1)
USB	USB 2.0 Type A 4-pin (x1) (for connecting USB drive)
NETWORK TRUNK	RJ-45 type 8-pin (x1)
Supplied accessories	Before Using This Unit (1), Operating Instructions (CD-ROM) (1), Cable clamp belt (1 set), Screws (+B3×8) (2), Attached label (1)

Note	
*1	This may be limited by the imposed load or inputs.
	In cases where a HDC3500 Series

Optical Low Pass Filter	camera's built-in Filter does not fully reduce the moire caused by some LED walls, the optional Optical Low Pass Filter (OLP) will help further reduce the moire effect (Part number; 1-856-731-31).

Related products

RCP-3100

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

HDCU-3500

IP-ready Camera Control Unit (CCU) for HDC-3500 4K/HD system camera

HZC-PRV50 / HZC-PRV50M / HZC-PRV50W

Software licenses for shooting and transmission of Progressive video

HKC-WL50

Wireless transmission adaptor for HDC-5500 and HDC-3500

HKC-TR37

Digital Triax Transmission Adaptor for HDC camera series

RCP-1500

Joystick type of Remote Control Panel for HDC/HSC/HXC series cameras. 4 units in 19-inch EIA rack.

MSU-1000

Master setup unit, multi camera remote control panel for HDC / HSC cameras (horizontal type)

MSU-1500

Master setup unit, multi camera remote control panel for HDC / HSC cameras (vertical type)

HDVF-EL75

7.4-inch OLED Viewfinder for portable cameras

HDVF-EL30

OLED 0.7-inch colour Full HD viewfinder with 3.5-inch sub-LCD

HZC-PSF50 / HZC-PSF50M / HZC-PSF50W

Software licenses for shooting and transmission of PsF format video

HZC-UG50 / HZC-UG50M / HZC-UG50W

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

HZC-DFR50 / HZC-DFR50M / HZC-DFR50W

Software licenses for shooting Dual Frame Rate 2x slow motion

HDCU-3100

IP enabled next generation Camera Control Unit

HDCU-5000

Camera Control Unit (CCU) for HDC-5500 and HDC-3500/3100 series system cameras

HKCU-REC55

Recording option for HDCU-5500 and HDCU-3500 CCU

PWA-RCT1

Recording Control Software for PWS-4500, HKCU-REC55 and HKCU-REC50

HKCU-REC50

Recording option for HDCU-5000

HDCE-TX30

IP camera extension adaptor for remote live production (transmitter)

HDCE-RX30

IP CCU extension adaptor for remote live production (receiver)

HZCU-UHD35

HZC-QFR50 /

HZCE-UHD30

HDRC-4000

4K HDR software license for HDCU-3500

HZC-QFR50M / HZC-QFR50W

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

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

HDR Production Converter Unit

HDLA-3501

Large Lens Adaptor

HDLA-3505

Large Lens Adaptor

HZC-CSM10

Master Setup Unit (MSU) PC Software

HZCE-JX50F / HZCE-JX50FM / HZCE-JX50FW

4K/HD JPEG XS SOFTWARE

HZCE-JX50H / HZCE-JX50HM / HZCE-JX50HW

HD JPEG XS SOFTWARE

HKC-VND50

Variable ND filter unit

HKCU-UHF50

4K 4x processor board for HDCU-5000

CNA-2

Camera Control Network Adapter

BRC-AM7

Premium PTZ Auto

Framing Camera with AI Analytics, 4K 60p, 20x optical zoom. High interoperability with other production systems

Gallery