Discover the Next Level in Live Production Shooting
HDC-4300
No compromise
4K/HD live productions
It’s going to change sports production.
Flexibility to Build the System That Works for You

The HDC-4300 system camera with real 4K imagers seamlessly integrates with HD infrastructures and accessories, and with the world’s most advanced 4K live production workflows. Software upgrade options add 4K image capture*1 to standard HD outputs and enable amazing 2x 4K and 8x HD super slow motion*2, giving you great flexibility to create the live production system you need.

*1 The SZC-4001 software option enables 4K capture.
*2 The SZC-4002 software option increases standard 3x HD super slow motion to 4x, 6x and 8x HD super slow motion, and also 2x 4K slow motion with the SZC-4001.
HDC-4300

Three 2/3-inch 4K imagers bring new capabilities to live sports and multi-camera productions

World’s first three 2/3-inch 4K imagers for 4K and HD multi-platform output

The HDC-4300 delivers superb 4K images thanks to its three 2/3-inch 4K imagers with the latest Sony-designed optical system supporting ITU-R BT.2020 and providing a wide color gamut. This camera delivers true-to-life images that make the audience feel as if they are actually there.

Direct installation of B4-mount lenses

Thanks to the 2/3-inch camera mount, the HDC-4300 works directly with B4 lenses. This B4 mount supports both HD and 4K lenses, allowing you to use B4-mount high power large lenses to capture sports scenes with deep depth of field.

Versatile Focus Assist functions

The HDC-4300 has a wide variety of beneficial Focus Assist functions that display enhanced area in various ways within the viewfinder.

DYNAMIC FOCUS function displays a 4K resolution-specific focus point helping the operator to focus the object in a short period of time.

This displays a marker on the viewfinder, derived from the luminance and color signals, for the area where 4K resolution signal is being output.  

FOCUS POSITION METER function displays the lens focus position as a meter.  

This allows you to place a marker for any focus values, which acts as a guide to adjust focus.

FOLLOW FOCUS function enables adjusting focus from the camera (via a focus demand), and RCP-1500-series remote control device, when a supported lens is attached. You can adjust focusing from the camera directly as well as from RCP-1500-series remote control devices as a further fine control.
In addition, current Focus Assist functions for HD camera systems such as VF DETAIL and FOCUS ASSIST INDICATOR are also available to support focusing operation.

*1 Available only when shooting in 4K

*2 Lenses, that support lens command control with a serial communication interface, are required.

*3 Lenses, that support lens command control Ver. 1.04 or later with a serial communication interface, are required.

12G-SDI Transmission Capability
To meet the growing demand for 4K live production systems, the HDC-4300 provides a sophisticated method to enable 4K capture. Using a newly developed signal processing device, it achieves powerful 12G-SDI signal transmission. This offers you highly reliable and stabilized operation, similar to existing SDI operation.

4K 2x and HD 8x Super Slow Motion
The HDC-4300 captures 4K images up to 2x, and 1920 x 1080 high-definition images up to 8x super slow motion with an optional software upgrade*4. This provides an amazing maximum frame rate of 479.52 fps (60 Hz) or 400 fps (50 Hz) in HD, and 119.88 fps (60 Hz) or 100 fps (50 Hz) in 4K, allowing you to create sensational super-slow-motion sequences of key moments in a game or 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.

*4 Select the SZC-4002 software option for 4x, 6x, and 8x HD super slow motion, and the SZC-4002 and SZC-4001 4K upgrade software options for 2x 4K slow motion.

Smooth and Easy Migration from HD to 4K
This powerful system camera is designed to fit into the growing Sony 4K live production environment alongside the PMW-F55 and F65 live camera configurations. With an optional software upgrade*5, the HDC-4300 enables 4K capture for multiple 4K and HD outputs, working directly with the BPU-4000 baseband processor unit and the HDCU-2000 or HDCU-2500 camera control unit.

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

Seamless Integration into Sony’s HD Workflows
The HDC-4300 is part of Sony’s acclaimed and widely adopted HDC Series of live production solutions, and benefits from direct compatibility with its wide range of accessories, including viewfinders, large lens adaptors, remote control panels, and camera control units.
Advanced 4K/HD Live Production Workflows Based on the HDC-4300

In combination with the BPU-4000 baseband processor unit and the HDCU-2000 or HDCU-2500 camera control unit, the HDC-4300 forms a new 4K live camera system. This configuration enables the camera to be controlled and powered through a standard SMPTE fiber cable. Real-time fine adjustment of image factors and other camera settings can also be controlled by Sony’s RCP-1000 Series remote control panels or MSU-1000 Series master setup units.

By simply adding this system to an existing HDC-2000 Series camera system, you can achieve multi-source operation. HD signals from HDC-2000 Series cameras and from the HDC-4300 can be adjusted to match colorimetry. With the 4K optional software*1 for the HDC-4300, the camera system can process multiple HD and 4K outputs. The camera system also works seamlessly with the PMW-F55 live camera configurations (PMW-F55 and CA-4000*2).

As a next step, further key products in the 4K live production workflow include the PWS-4500 4K/HD multi-port AV storage unit, which enables HD and 4K recording and super-slow-motion capture and replay, the MVS-8000X and MVS-7000X multi-format switchers, capable of real-time 4K signal processing, and the BVM-X300 4K OLED master monitor and PVM-X300 4K LCD picture monitor, for the highest 4K monitoring performance.

With the latest technologies from Sony, you can choose a complete 4K live production solution, ideal for pure 4K live production, or you can be assured of a smooth and easy migration from HD to 4K production simply by extending the capabilities of existing HD systems. Both routes enable delivery of spectacular 4K imagery to audiences worldwide.

*1 SZC-4001 : 4K upgrade software
*2 CA-4000 : Camera system adaptor
Connectivity with Next-Generation IP-Based Infrastructure

By adopting in your system the BPU-4500A baseband processor unit, which comes with Sony’s Networked Media Interface, you can easily connect with an IP-based infrastructure without any modification.

There has been a rapid increase in demand for “beyond HD” resolution, and professionals expect 4K and higher frame rates in studio and OB truck production environments. But there is a bandwidth bottleneck in the current 3G SDI-based production infrastructure.

To create a future-proof practical solution to this industry demand, Sony has been developing a next-generation production infrastructure using 10 GbE IP networking, culminating in a practical solution for IP live production systems – Sony’s Networked Media Interface. This interface is available with the BPU-4500A baseband processor unit. You can connect with any IP live production environment simply by adding this to the system, allowing video and audio signals to be received and transmitted over an IP network.

Combine this with the PWS-4500 4K/HD live server system, XVS-80000 multi-format switcher, and BVM-X300 4K OLED master monitor and you can operate efficient IP live production.

Space-Constrained Applications

A new camera control system, the HDCU-4300, integrates the baseband processor function and is only 2U in height. The unit’s compact chassis solves the problem of space constraints. It is easy to install in small OB trucks and can be positioned in the background at live events.

When you install the optional HKCU-4002 12G-SDI Extension Kit in the HDCU-4300, 12G-SDI signals can be output. And when you install the optional HKCU-IP43F Networked Media Interface Board in the HDCU-4300, you can simply connect the system*¹ to the IP network. In addition, when you install the optional HKCU-4001 ST 2110 Interface Kit, the HDCU-4300 can handle ST 2110 IP signals.*²

*¹ To use IP output, the optional OTM-10GSR1 is required.
*² To use IP output, the optional OTM-10GSR1 or optional OTM-25GSR is required.
Sony’s Innovation with New Camera System Technology

Superb 4K capability with wide dynamic range and wide color space
(with optional SZC-4001 software for the HDC-4300)

You can accurately capture 4K images with the HDC-4300. Sony has brought together its leading-edge technologies and deep experience to design and build the world’s first three 2/3-inch 4K imagers and combine this with ultra-precision alignment technology that mounts the chips to a newly developed prism. This new optical system supports the wide color gamut of ITU-R BT.2020, enabling more precise color reproduction in live broadcasts.

High-frame-rate capture for 8x HD and 2x 4K super slow motion (with optional software, SZC-4002 for BPU-4000, BPU-4500A or HDCU-4300)

The HDC-4300’s real 4K imagers capture images at four times the resolution of HD. In HD shooting, this can be used to achieve extreme high-speed image capture at a maximum of 479.52/400 fps with the optional software upgrade. Capture rates of 59.94/50, 119.88/100, and 179.82/150 fps are available as standard. In 4K shooting, up to 119.88/100 fps images are captured with the optional software upgrade.

The full digital process is applied to each frame even at high frame rates in the BPU-4000, BPU-4500A, and HDCU-4300, producing the same image quality as at normal speed. Both the high-speed image and the normal-speed image can be adjusted by individual paint parameters*. Captured images can be recorded to the PWS-4500 4K/HD multi-port AV storage unit for super-slow-motion replay**.

*1 4K 2x slow motion is not available from the HDCU-4300. The HDCU-4300 delivers up to HD 4x 1080p slow motion. Beyond this speed, 1080i or 720p slow motion is supported.

*2 Some third-party manufacturer servers may also be used. For 8x slow-motion replay, the PWS-4500 system requires the V1.4 software upgrade.

Simulated image
Sony’s Innovation of New Camera System Technology

HD cutout function for clear images (with optional SZC-2001 software for the BPU-4000, BPU-4500A, and HDCU-4300)

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 close-up 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, two portions can be cut out at the same time. Sony’s cutouts and zooms give viewers a surprisingly clear image.

The cutout region can be controlled with a mouse or other devices connected to the controllers, such as the CNA-1 camera control network adaptor. The cutout images and the 4K full-source image can be output simultaneously from the BPU-4000, BPU-4500A, or HDCU-4300. The HD images down-converted from the 4K full-source image can be output from them and the HDCU-2000/HDCU-2500. In addition, a wire frame indicating the cutout region can be displayed on the signal from the BPU-4000, BPU-4500A, or HDCU-4300.

Picture adjustment functions of HDC Series cameras supported in the 4K live camera system

- Dynamic focus (4K focus-assist):
  On the viewfinder, a focus point can be displayed with a marker when 4K resolution is obtained for easy focusing. This function is extremely useful when shooting 4K live programs.
- Auto lens aberration compensation 2 (ALAC2)
- Color reproduction adjustments
- Gamma table selection
- User gamma
- Natural skin-tone detail
- Knee saturation
- Low-key saturation

Zoom & Perspective mode:

Simple HD mode:
Live HDR (High Dynamic Range)

A big wave is coming to live image production. Along with this trend, live image reproduction achieves an impressive new reality with the combination of HDR (high dynamic range) and BT.2020 (wide color space). Furthermore, high-frame-rate shooting and deeper bit depth are key elements for the next generation of high-quality live image production.

Take the example of watching a sporting event on live video. When the stadium is sunny, it is hard to see high contrast (both bright and shaded images at the same time) in SDR (standard dynamic range). Instead, the HDR function dramatically improves the images and offers your audience 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.

As of now, you can achieve excellent workflow in post-production editing with a system consisting of the HDC-4300 with the BPU-4000/4500\(^1\) outputting S-log 3/HLG-type HDR with a fixed “PAINT control” value. Now you can expand the operability in live event shooting to enable adjustment of the “PAINT control” value with the system of the HDC-4300 with the BPU-4000/4500\(^2\) via an RCP Series remote control panel and MSU Series master setup unit.

\(^1\) The system of the F55 with the CA4000 and the BPU-4000 is also capable.
\(^2\) The system of the HDCU-4300 is also capable

BPU-4000/4500 can output 4K and HD signals simultaneously. It also enables the assignment of different OETF (Opto-Electrical Transfer Function) curve onto the various formatted outputs independently, so that HDR and SDR in 4K/HD simultaneous production can be carried out from one single camera chain.

One of the most important advantages of performing simultaneous productions from a single camera chain is that the tone and/or look of the pictures can be maintained between the various output signals. On the other hand, there are many scenes where the operator wants to adjust optimally the brightness levels for each of the HDR and SDR output signals. For example, if the aperture of the iris of the camera is adjusted to make the white reference level of the SDR signal equal to 100%, then the HDR picture will look unsatisfactory, exhibiting a dim overall brightness and lack of contrast.

Alternatively, if the diffuse white level of the HDR signal is set to around 300%, then the HDR signal will look “punchy” and with great contrast, but at the expense of the SDR image being washed out and with its highlight elements clipped.

Making use of the multiple processing engines in the BPU, Sony has invented and introduced a “SDR Gain” adjustment feature in the camera system. This feature allows the setting of the optimal gain difference between the HDR and SDR signal paths, allocating perfectly the brightness range necessary for each of the HDR and SDR signals.

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* HDR Processor
* SDR Processor
* HDC-4300
* BPU-4000/4500A

SDR image

HDR image
System Configuration Examples (IP-based system)

4K 100p/120p*

HDC-4300
BPU-4500A + HDCU-2500

HDC-4300
HDCU-4300 + HKCU-IP43F

F65 + SKC-4065 + CA-4000
BPU-4500A + HDCU-2500

PMW-F55 + CA-4000
BPU-4500A + HDCU-2500

PWS-4500 + PWS-110PR1
PWSX-4403, PC Monitor

XVS-Series

IP Switch

IP Switch

10GbE

Video over IP

USB3.0

HDD

Optical Disc Archive

PWS-110MG1

Control

PWS-110NM1

* 4K 100p/120p will be available with a future upgrade.
System Configuration Examples (SDI-based system)
Related Products

Baseband Processor Unit
BPU-4000
The BPU-4000 offers real-time 4K digital signal processing. The signal can be simultaneously down-converted to an HD signal and output when connected to the HDC-4300 via an optical fiber cable. The detail process can be optimally adjusted in each signal.
- Parallel processors for 4K/HD
- Down-conversion from 4K to HD
- HD cutout and HD high-frame-rate operation by installing optional software (SZC-2001 for the HD cutout function; SZC-4002 for the high-frame-rate function)

Baseband Processor Unit
BPU-4500A
The BPU-4500A is is can be equipped with Sony’s Networked Media Interface by installing an optional SKC-IP45AF Networked Media Interface kit.
The BPU-4500A can also comply with SMPTE ST2110 standard with an optional SKC-4001 Interface kit*1.
The BPU-4500A can handle 12G-SDI signals as standard. It can also connect to an HDCU-2000 Series or HDCU-3100 Series Camera Control Unit to form a 4K video multi-camera system, supplying power to the camera and transferring various signals (intercom, tally, prompter, audio, etc.).

4K Multi-Purpose Camera
HDC-P43
The Sony HDC-P43 SUPER MOTION Compact POV Camera can capture the image of the moment impressively in 4K*2 resolution and at a high frame rate (HFR).*3
With the same three 2/3-inch 4K imagers 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.

HDCU-4300
The HDCU-4300 Camera Control Unit integrates a baseband processor function and a conventional camera control function.
It connects directly to an HDC-4300.
With its compact body, this unit is very suitable for space-constrained applications, and is easy to install in OB trucks or in the background at live events.

Camera Control Unit
HDCU-2000
HDCU-2500
The full-rack-size HDCU-2000 and half-rack-size HDCU-2500 are available for the 4K live camera system. These deliver power to the camera, interfacing with peripheral equipment and transferring Intercom, Tally, Prompter, Audio, and other signals. The optical fiber transmission system used in these units maintains the camera’s high picture quality.
Even without an HDCU-2000/HDCU-2500 unit, the 4K live camera system can operate by supplying power to the HDC-4300 locally in a simple configuration. This is particularly useful when you need to minimize equipment (e.g., during location shooting).

Camera Control Unit
HDCU-3100
The HDCU-3100 is the next generation camera control unit that connects to a Sony HDC-2000 Series*4 or HSC-300RF/100RF HD Color Camera with an optical fiber cable, and performs signal processing, provides an interface with external equipment, and supplies power to the camera.

*1 An optional SFP+ transceiver module is required to output IP.
*2 The 4K upgrade requires the SZC-4001 software option.
*3 The HFR upgrade requires the SZC-4002 software option; it supports 2x at 4K and max. 8x at HD.
*4 HDC2000 series: HDC20002500/2400/1700
The PWS-4500 is capable of recording images in the highly efficient XAVC™ recording format, offering flexible I/O configurations, high-frame-rate recording, an intuitive user interface designed for professional operators, and much more. It is integral to creating an efficient multi-port slow-replay server system for live sports production in both 4K and HD infrastructures.

With Sony’s Networked Media Interface, achieved by installing an optional board, system efficiency and flexibility are enhanced by a Share Play file-sharing feature. Combine this unit with the BPU-4500 to achieve superior IP-based live production.

To establish the PWS-4500 as the replay server in a live server system, three units are required; for example, the PWSK-4403 Control Panel, the PWS-110PR1 Production Control Station, and the PWS-110MG1 Media Gateway Station. This provides intuitive GUI operation for slow-replay control, high-light editing, and a touch-panel capability.

The PWS-110MG1 transfers content to/from removable media (e.g., USB HDDs, an optical disk archive).

HDLA-1500, HDLA-1505, and HDLA-1507 adaptors do not require any cable wiring. Utilizing an unprecedented interlocking mechanism, this solution passes the power, video, and control signals on directly from the portable camera to the HDLA Series adaptor. This unique mechanism also allows the portable camera to be attached and detached without removing large lenses. Furthermore, a lens can be removed even when the camera is mounted on the HDLA-1500 or HDLA-1505 adaptor. The interlocking mechanism therefore allows for astonishingly quick and smooth setup.
**Optional Interface kit for IP Live production**

**HDCU-4300**

HKCU-4001 ST 2110 Interface Kit

HDCU-4300 can output and input video signals and audio signals of standard IP signal ST 2110 by installing an HKCU-4001 ST2110 INTERFACE KIT.

HKCU-IP43F Networked Media Interface Board

HDCU-4300 can output video signals and audio signals as IP signals by installing an HKCU-IP43F Networked Media Interface Board.

**BPU-4500A**

SKC-IP45AF Networked Media Interface Board

BPU-4500A can output video signals and audio signals as IP signals by installing an SKC-IP45AF Networked Media Interface Board.
Name and Function of Parts

**BPU-4000**

**Front**
- Yellow tally light
- Red Tally Indicator
- Green tally light
- CCU number display
- Menu control block
- Status display indicators
- Menu lock switch
- Assignable button
- Network indicator
- Optical signal condition indicators

**Rear**
- Reference sync signal input/output
- Remote
- LAN
- Return video input (SDI1, SDI2)
- AC IN
- Camera control unit
- Camera control unit
- 3G/HD SDI output
- HD SDI output
- 12G/3G/HD SDI output

**BPU-4500A**

**Front**
- Yellow tally light
- Red Tally Indicator
- Green tally light
- CCU number display
- NMI LAN STATUS Indicators
- Menu control block
- Status display indicators
- Menu lock switch
- Assignable button
- Network indicator
- Optical signal condition indicators

**Rear**
- REMOTE connector (round type, 8-pin)
- Option slot
- REFERENCE IN/OUT (reference sync signal) connectors
- SDI1 and SDI2
- CAMERA
- AC IN
- Camera control unit
- Camera control unit
- HD SDI OUT
- 3G/HD SDI output
- 12G/3G/HD SDI output
- 3G/HD SDI output
- 3G/HD SDI output
- 3G/HD SDI output

**HDCU-4300**

**Front**
- Yellow tally light
- Red Tally Indicator
- Green tally light
- CCU number display
- NMI LAN STATUS Indicators
- Status display indicator
- Menu lock switch
- Assignable button
- Menu control block
- Power indicator
- CABLE ALARM indicators
- Optical signal reception status indicator
- MENU control block
- Call button
- INTERCOM audio input/output and control block
- Menu lock switch
- Assignable button

**Rear**
- TRUNK A connector (round 12-pin)
- RCP/CNU connector (round 8-pin)
- AUDIO OUT CH1, CH2
- 3G/HD SDI output
- 3G/HD SDI output
- 3G/HD SDI output
- RETURN VBS IN 3/4
- INPUT area
- 3G/HD SDI 1/O 1/2
- RETURN SDI 1/2
- 3G/HD SDI output
- Option slot
- AC IN
- OUTPUT area
- NETWORK TRUNK
Optional Accessories

- **MSU-1000**
  Master Setup Unit

- **MSU-1500**
  Master Setup Unit

- **RCP-1000**
  Remote Control Panel

- **RCP-1001**
  Remote Control Panel

- **RCP-1500**
  Remote Control Panel

- **RCP-1501**
  Remote Control Panel

- **RCP-1530**
  Remote Control Panel

- **HDVF-EL75**
  7.4-inch*1 OLED Color Viewfinder

- **VFH-790**
  Outdoor Hood for HDVF-EL70/EL75

- **HDVF-L770**
  7-inch*1 LCD Color Viewfinder

- **HDVF-EL20**
  0.7-inch*1 OLED Viewfinder

- **HDVF-EL30**
  0.7-inch*1 OLED Viewfinder

- **BKP-7911**
  Script Holder

- **CAC-6**
  Return Video Selector

- **CAC-12**
  Mic Holder

- **HDRC-4000**
  HDR Production Converter Unit

- **CNA-1**
  Camera Control Network Adaptor

- **HDCE-100**
  Camera Extension Adaptor

- **HKCU-SM100**
  CCU Extension Adaptor

- **OTM-10GSR1**
  SFP+ Transceiver Module

*1 Viewable area measured diagonally.
## Specifications

### BPU-4000

<table>
<thead>
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<th>General</th>
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<td>Power requirements</td>
<td>AC 100 V to AC 240 V, 50/60 Hz</td>
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<tr>
<td>Operating temperature</td>
<td>5°C to 40°C (41°F to 104°F)</td>
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<tr>
<td>Storage temperature</td>
<td>-20°C to +40°C (-4°F to +104°F)</td>
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<tr>
<td>Mass</td>
<td>Approx. 6.8 kg (15 lb)</td>
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</table>

### Input/output connectors

- **Camera**: Optical fiber (LEMO 3K.93C connector)  
  - 8-pin multi-connector (x1)
- **CCU**: Optical fiber (LEMO 3K.93C connector)  
  - 8-pin (x1)
- **Remote**:  
  - 8-pin multi-connector (x1)
- **LAN**:  
  - 8-pin (x1)
- **SDI input**:  
  - BNC (x2)
  - 3G-SDI: SMPTE ST2082, 0.8 Vp-p, 75 Ω, 11.880 Gbps/11.868 Gbps
  - 3G-SDI: SMPTE ST424/425 Level-A/B, 0.8 Vp-p, 75 Ω, 5.940 Gbps/5.934 Gbps
- **Reference input**:  
  - BNC (x1)
  - 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)

### Supplied accessories

- Number plates (1 set), Operation Guide (1), Operation Manual (CD-ROM) (1)

*1 12G-SDI signal transmission is available for the Lemo connector model, with serial numbers 15,000 and above.

### OTM-25GSR

- **SFP28 Tranceiver Module**

### HKCU-4001

- **ST 2110 Interface Kit**

### HKCU-IP43F

- **Networked Media Interface Board**

### SKC-IP45AF

- **Networked Media Interface Board**

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### Specifications Table

#### HDC-4300

<table>
<thead>
<tr>
<th>General</th>
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</thead>
<tbody>
<tr>
<td>Power requirements</td>
<td>AC 240 V, 1.4 A (max.), DC 180 V, 1.0 A (max.), DC 12 V, 7 A (max.)</td>
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<tr>
<td>Operating temperature</td>
<td>-20°C to +45°C (-4°F to +113°F)</td>
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<td>Storage temperature</td>
<td>-20°C to +60°C (-4°F to +140°F)</td>
</tr>
<tr>
<td>Mass</td>
<td>Approx. 6.8 kg (15 lb)</td>
</tr>
</tbody>
</table>

#### Camera section

- **Pickup device**: 3-chip 2/3-inch type CMOS
- **Spectrum system**: F1.4 prism
- **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**: F8.0 (2000 lx, 89.9% reflection)
- **Signal-to-noise ratio**: -62 dB (HD/NY.94)
- **Horizontal resolution**: 2,000 TV lines (at center) in 4K, 5% or higher modulation

#### Input/output connectors

- **BPU**: Optical/electrical multi-connector (LEMO 3K.93C connector) (x1)
- **Audio input (CH1, CH2)**: XLR-type connector 3-pin, female (1 each)
  - For MIC: -60 dBu (can be set to a value up to -20 dBu using the menu or from the HDCU2000/2500), balanced
  - For LINE: 0 dBu, balanced
- **Mic input**: XLR-type connector 3-pin, female (x 1)
- **Return control**: 6-pin (x1)
- **Prompter/Genlock**: BNC (x1), 1 Vp-p, 75 Ω
- **Prompter 2**: BNC (x1), 1 Vp-p, 75 Ω
- **DC input**: XLR-type connector 4-pin (x1), DC 10.5 V to 17 V
- **OS output**: 4-pin (x1), DC 10.5 V to 17 V, 0.5 A (max.)
  - 2-pin (x1), DC 10.5 V to 17 V, 2 A (max.)
  - (Limitations may apply, depending on the load and input conditions.)
- **Test out**: BNC (x1)
- **SDI (1, 2)**: BNC (x1), 1 Vp-p, 75 Ω
- **SDI Monitor**: BNC (x1)
- **Earphone**: Stereo mini jack (x1)
- **Tracker**: 10-pin (x1)
- **Crane**: 12-pin (x1)
- **Intercom (1, 2)**: XLR-type connector 5-pin, female (1 each)
- **Remote**: 8-pin (x1)
- **Network trunk**: RJ-45 8-pin (x1)
- **Lens**: 12-pin (x1)
- **Viewfinder**: 20-pin (x1)
- **USB**: USB 2.0, Type A, 4-pin (x1)
- **Supplied accessories**: Operation manual (1), Cable clamp belt (1 set), Number plates (1 set), Screws (+B3x8) (2)

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### HKCU-IP43F

- **Networked Media Interface Board**

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### SKC-IP45AF

- **Networked Media Interface Board**

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*1 EE-SDI signal transmission is available for the Lemo connector model, with serial numbers 15,000 and above.*
## Specifications

### BPU-4500A

<table>
<thead>
<tr>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power requirements</strong></td>
</tr>
<tr>
<td><strong>Current consumption</strong></td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
</tr>
<tr>
<td><strong>Storage temperature</strong></td>
</tr>
<tr>
<td><strong>Mass</strong></td>
</tr>
</tbody>
</table>

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<tr>
<th>Input/output connectors</th>
</tr>
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<tbody>
<tr>
<td><strong>Camera</strong></td>
</tr>
<tr>
<td><strong>CCU</strong></td>
</tr>
<tr>
<td><strong>Remote</strong></td>
</tr>
<tr>
<td><strong>LAN</strong></td>
</tr>
</tbody>
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<thead>
<tr>
<th>Input connectors</th>
</tr>
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<tbody>
<tr>
<td><strong>AC IN</strong></td>
</tr>
<tr>
<td><strong>SDI IN</strong></td>
</tr>
<tr>
<td><strong>REFERENCE IN</strong></td>
</tr>
<tr>
<td><strong>SD</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output connectors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>12G/3G/HD SDI OUTPUT (SLOT1)</strong></td>
</tr>
<tr>
<td><strong>3G/HD SDI OUTPUT (SLOT2)</strong></td>
</tr>
<tr>
<td><strong>3G/HD SDI OUTPUT (SLOT3)</strong></td>
</tr>
<tr>
<td><strong>HD SDI OUTPUT (SLOT4)</strong></td>
</tr>
</tbody>
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<tr>
<th><strong>REFERENCE OUT</strong></th>
</tr>
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<tr>
<td><strong>SFP+</strong></td>
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### HDCU-4300

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<td><strong>INTERCOM/TALLY/PGM</strong></td>
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<tr>
<td><strong>RCP/CLI</strong></td>
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<tr>
<td><strong>NETWORK TRUNK</strong></td>
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<tbody>
<tr>
<td><strong>AUDIO OUT CH1, CH2</strong></td>
</tr>
<tr>
<td><strong>VBS MONITOR</strong></td>
</tr>
<tr>
<td><strong>CHARACTER/SYNC</strong></td>
</tr>
<tr>
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### Supplied accessories

- Number plates (1 set), Operation Guide (1), Operation Manual (CD-ROM) (1)
- Supplied accessories
  - Camera: Optical fiber connector (LEMO 3K.93C connector) (x1)
  - CCU: Optical fiber connector (LEMO 3K.93C connector) (x1)
  - Remote: 8-pin multi-connector (x1)
  - LAN: 8-pin (x1)

### Optional accessories

- United States and Canada: Plug holder B (2-990-242-01) Other areas: Plug holder C (3-613-640-01)
- United States and Canada: Power cord set (1-551-812-XX) Other areas: Power cord set (1-782-929-XX)
- CCA-5-3 Connection Cable (3 meters), CCA-5-10 Connection Cable (10 meters)
- Maintenance manual

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