

SONY

HDC-4300

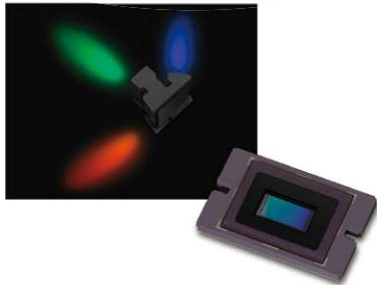
New 4K / HD Live Production Camera



Live Production

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HDC-4300 Main Benefits



- **Flexibility**

- Switch easily HD, HD Super slow motion and UHD in one model
- Cover from HD/UHD TV production to HDR/Wide-colour-space picture
→ **High rate of Usage, More Biz Opportunities**

- **Compatibility**

- Keep using a wide range of existing products and accessories.
- Same operability and workflows with current products and system.
- Attach directly a existing B4 mount HD or new 4K lenses, use of the HD power zoom Box lenses with HDLA
→ **Less investment and Training**

- **Upgradability**

- Start with HD 1x/2x/3x as standard format at lower investment.
- upgrade to 4K/UHD by the optional SW, and to HD HFR at 4x/6x/8x by the other optional SW. Permanent/Monthly/Weekly available
→ **Future Proof**

HDC-4300 Positioning



HDC-4300

New 4K and HD HFR

4K3CMOS

Live production camera system



HDC-2000 series

Flagship **HD** Live production
3G Fiber camera system

3CCD



HSC R series

Standard HD Live production
Digital Triax & Fiber camera system

3CCD



HXC-D70 series

Compact HD Live production
Affordable & flexible camera system

3CMOS

Key Specs and upgrade at IBC-2015

- 3-chip 2/3-inch type CMOS
4096x2160 (effective pixel)
- F1.4, Wide color space Prism
- Sensitivity : F8.8 @ 4K 50p,

HD 200p (4x) Slow (F12 @ 50i x1 normal speed* F10@50i x3 slow*

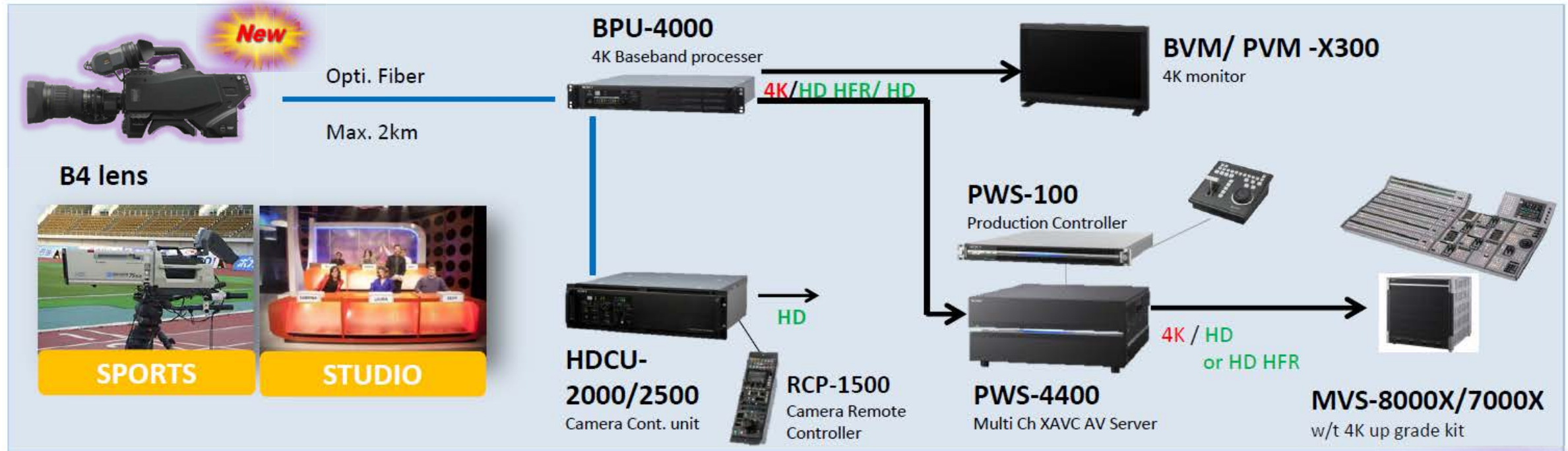
- S/N Ratio : -62dB @ HD 50i
- Horizontal Resolution :
2,000 TV line s (at center) in 4K
- Weight : Approx. 5.0 kg
- HD 2x, 3x Slow is standard
- SUPPORT **HDR Live** (S-Log3 + S.Log2 , ITU-709 and Matrix BT-2020 + 709)
- SUPPORT **4K 2x** High Frame Rate with the combination of SZC-4001 (4Koption SW) and SZC-4002 (HFR option SW) installed.



* Figure is calculation from the spec

HDC-4300	
General	
Power requirements	AC 240 V, 1.4 A (max.), DC 180 V, 1.0 A (max.), DC 12 V, 7 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. 5.0 kg (11 lb 0.37 oz) (unit only)
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/59.94i)
Horizontal resolution	2000 TV lines (at center) in 4K, 5% or higher modulation
Input/output connectors	
BPU	Optical/electrical multi-connector (1)
Audio input (CH1, CH2)	XLR-type 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 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 4-pin (x1), DC 10.5 V to 17 V
DC 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, 2.5 A (max.) (Limitations may apply, depending on the load and input conditions.)
Test out	BNC (x1)
SDI (1, 2)	BNC (1 each)
SDI Monitor	BNC (x1)
Earphone	Stereo mini jack (x1)
Tracker	10-pin (x1)
Crane	12-pin (x1)
Intercom (1, 2)	XLR-type 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)

HDC-4300 System



HDCE-100



NEW

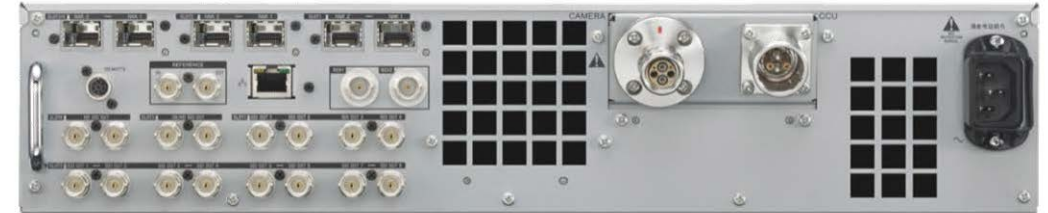


HKCU-SM100

New

• **NEW SINGLE MODE INTERFACE**

New IP NEW Ready Solutions BPU-4500



Direct NMI connection by 10Gb

- 2 NMI outputs of 4K,
- 1 NMI output of HD
- each output has redundancy

Hybrid System capable SDI & IP (NMI)

- 2U (H) x 19 inch rack mount (W).
- Same features as BPU-4000.
 - 4K/UGD and HD output simultaneously.
 - Up to 4K 2x* / HD 8x slow
 - HDR (S-Log3/S-Log2/709) and Wide Color Space (BT2020/S-Gamut**/ S-Gamut3.Cine**/709)

* 4K 2x and S-Log is not available at same time

** S-Gamut is only for F55/F65 Live system



HDC-4300 & 4K Live System

Fiber: SMPTE

* HDCU-1700 : Version 2.0 or later
+ HKCU-2007 installed

HDC4300

4K



PMW-F55

CA-4000
+SKC-PB40

4K



LA-FZB2

F65

CA-4000
+SKC-4065
+SKC-PB40

4K



HDC2500 Series

HD



CA-4000

4K Camera Adaptor



BPU-4000 or HDCU-2000/2500/1700*

BPU-4500

4K Baseband Processor



HDCU-1000/1500(3G)

Camera Control Unit



Income
TALLY
Return
GEN lock
Remote Etc...

HD

4K

F65:
4k x2

HD HFR

HDC4300 :
2x, 3x, 4x, 6x and 8x

PMW-F55:
4x and 6x

HD

Optional Software

SZC-4001 4K License for HDC-4300

- Option SW to install into HDC-4300 to enable 4K & QFHD Shooting
23.98p, 24p, 25p, 29.97p, 50p, 59.94p
- 4K & QFHD signal is available from BPU
- 3 types available:
 - SZC-4001 : Permanent
 - SZC-4001M : 30 days
 - SZC-4001W : 7 days



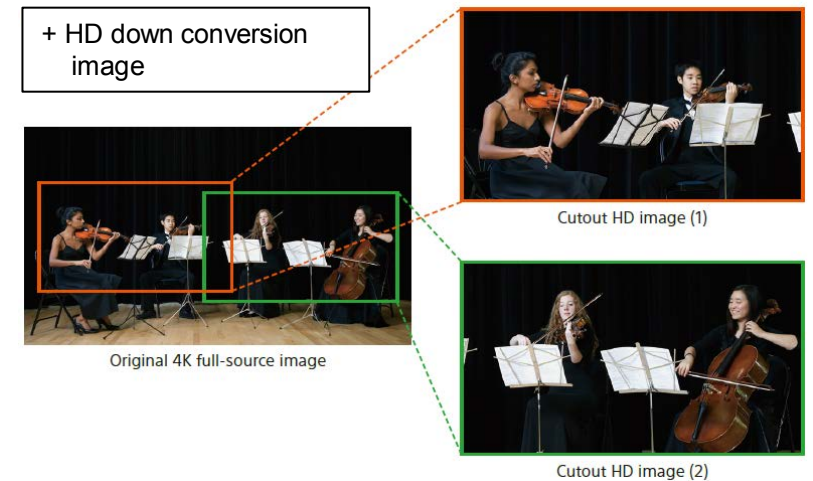
SZC-4002 HFR License for HDC-4300 & F55/F65 Live

- Option SW to install into BPU-4000 to enable High-Frame-Rate output
- **HDC-4300 system**
 - HD 4x, 6x, 8x , both in Interlace/Progressive
 - 4K 2x in combination with SZC-4001
- **F55 Live system**
 - HD 4x, 6x, both in Interlace/Progressive
- **F65 Live system**
 - 4K 2x, in progressive
- **3 types available:**
 - SZC-4002 : Permanent
 - SZC-4002M : 30 days
 - SZC-4002W : 7 days

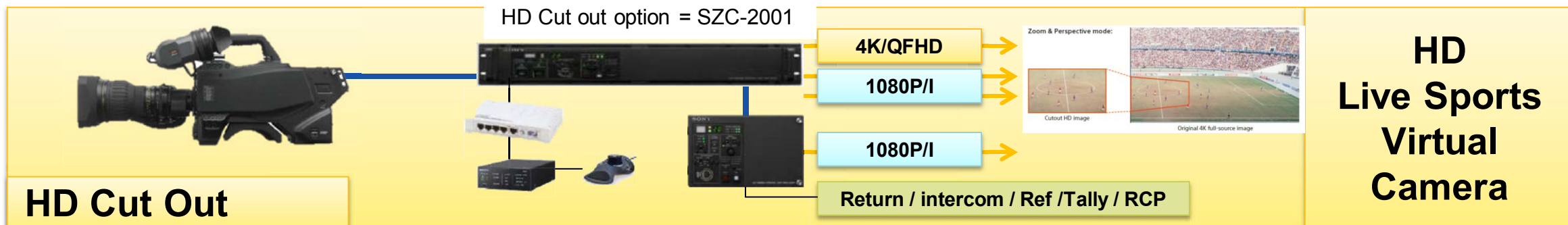
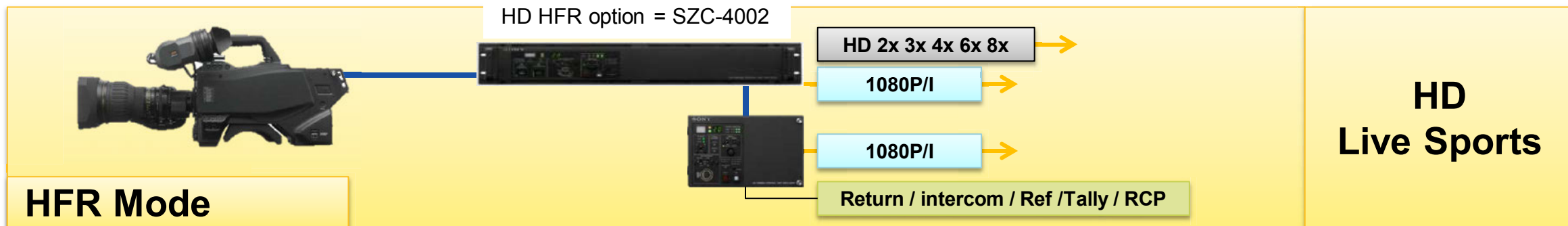
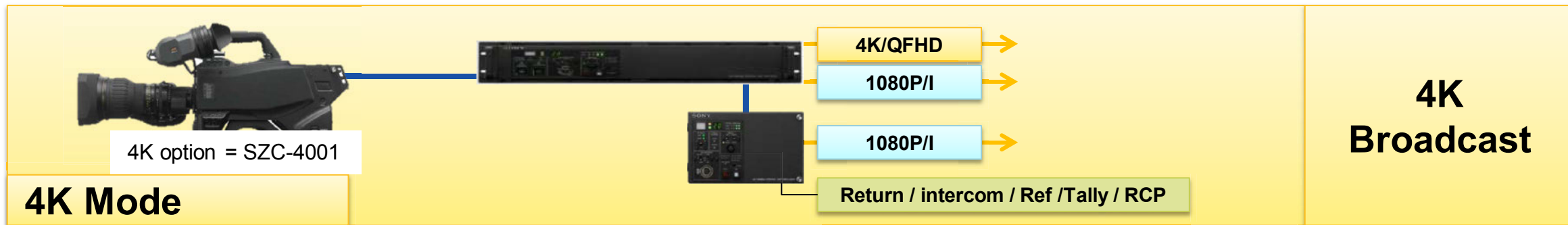


SZC-2001 HD Cut-out License for HDC-4300 & F55/F65 Live

- Option SW to install into BPU-4000 to enable HD Cut-out output
- HD Cut-out signal is available from BPU
- Use 4K for HD
 - Max 3 HD camera angles with 1 camera
 - Perspective Correction for wide angle
- Simple 3D Mouse operation with CNA-1
- 3 types available:
 - SZC-2001 : Permanent
 - SZC-2001M : 30 days
 - SZC-2001W : 7 days



Option Software



Related Accessories

Main Accessories

Baseband Processor Unit
BPU-4000



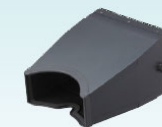
Camera Control Unit
HDCU-2000
HDCU-2500



Large Lens Adaptor
HDLA-1500, HDLA-1505, HDLA-1507



HDVF-20A
2.0-inch* CRT B/W Viewfinder



VFH-790
Outdoor Hood for HDVF-EL70/EL75



MSU-1000
Master Setup Unit



MSU-1500
Master Setup Unit



RCP-1000
Remote Control Panel



RCP-1500
Remote Control Panel



RCP-1530
Remote Control Panel



CNA-1
Camera Control Network Adaptor



HDCE-100
Camera Extension Adaptor



HDVF-EL75
7.4-inch* OLED Color Viewfinder



HDVF-L770
7-inch* LCD Color Viewfinder

Related Accessories

Multi Port AV Storage Unit **PWS-4400**



This unit records both 4K and HD video signals using as many as four 4K channels through the highly efficient XAVC video format. The recorded content can be easily handled for slow motion replay.

Production Control Station **PWS-100PR1**

Media Gateway Station **PWS-100MG1**

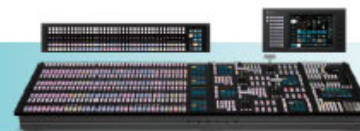
USB Control Device **PWSK-4403**



Operation for live slow motion is available by utilizing the PWS-100PR1 and PWSK-4403. PWS-100MG1 transfers content to/from removable media (e.g., USB-HDD and Optical Disc Archive unit).

For 8x slow motion replay, the PWS-4400 system requires software upgrade V1.4.

Multi-format Switcher **MVS-8000X, MVS-7000X**



These are Sony's flagship switchers supporting 3G (1080p). Optional upgrade software adds 4K support, and the optional MKS-8460X 4K format converter board enables high-performance HD-4K up-conversion.

Upgrade software:

BZS-8570X for MVS-8000X

BZS-7570X for MVS-7000X

4K OLED Master Monitor **BVM-X300**



This top-end monitor offers the inherent superb TRIMASTER EL™ OLED monitor performance. In addition, the BVM-X300 supports High Dynamic Range mode and wide color gamut conforming to DCI-P3 and most of the ITU-R BT.2020*1 color space.

*1 ITU-R BT.2020 is the specification of video format defined by ITU-R. The BVM-X300 does not cover it in full.

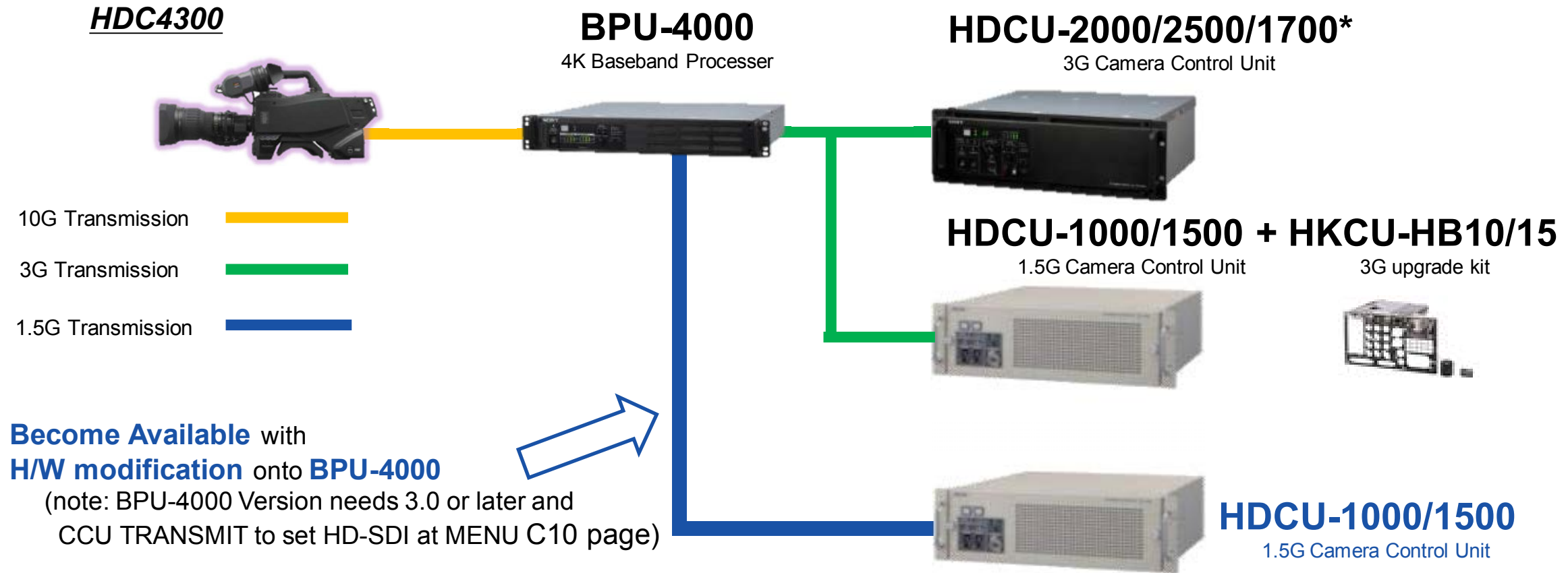
4K LCD Picture Monitor **PVM-X300**



This right-size, easy-to-use monitor fits for every element of the production workflow including 4K cinema production (on-set monitoring, dailies, and editing), 4K live production (camera control and program preview) and real-time 4K presentation.

HDCU-1500 series Support

* HDCU-1700 : Version 2.0 or later
+ HKCU-2007 installed



- **BPU-4000 modification for HDCU-1000/1500 use**

- Please contact Prime Support Plus, some service options are available
ie. BPU QTY pack including 1 day Onsite Engineer modification + Parts...

Other Key Functions

Other Key Functions

Focus assist functions

VF detail

Supports focusing on various scenes using a function that adds color to the VF detail signal displayed in the viewfinder, a function that applies modulation to flicker the VF detail signal, and a function that changes the level of the VF detail signal according to the zoom position.

Focus assist indicator

Displays a focusing level indicator in the viewfinder as a guide to the focus position. This allows the focus point to be determined easily by observing the fluctuation of the indicator.

Dynamic focus

Displays a 4K resolution-specific focus point. This displays a marker in the viewfinder, derived from the luminance signal and color signal, for the area where 4K resolution signal is being output (valid when shooting in 4K only).

Focus position meter

Displays the lens focus position as a meter, when a supported lens¹⁾ is attached.

This allows you to place a marker for any focus value which acts as a guide for focus control.

¹⁾ Lenses that support serial, lens command control.

Follow focus function

Enables focus control from the camera (focus demand), and both a MSU-1000/1500 and RCP-1000/15000-series device, when a supported lens¹⁾ is attached. This allows focusing with main control from the camera, and additional fine control from MSU-1000/1500 and RCP-1000/1500-series devices.

¹⁾ Lenses that support serial, lens command control Ver. 1.04 or later.

Selectable gamma table

Equipped with seven types of standard gamma tables and four types of hyper gamma tables. Hyper gamma enables cinema-like image reproduction with wide dynamic range that cannot be achieved with conventional video gamma.

User gamma

Gamma tables created using CvpFileEditor™ can be saved to a "Memory Stick," and registered in the camera from MSU-1000/1500 and RCP-1500 series devices.

Various color-reproduction adjustment functions

Adaptive-matrix function

This function controls the matrix calculation coefficients for more accurate color conversion when shooting. It provides accurate color conversion, even when shooting under conditions that would otherwise exceed the color conversion range of traditional matrix functions, such as under strong monochromatic blue light sources.

Multimatrix color correction

In addition to the standard 6-axis matrix function, the unit has a multimatrix function that permits you to adjust the hue and chroma independently for color components in 16-axis directions. This is quite useful in color matching among multiple cameras.

Knee saturation

This compensates the change of hue and decrease in chroma that occur in highlighted areas. This enables reproduction of natural skin tones under strong lighting.

Low key saturation

This compensates for saturation in low-key zones. It compensates for color reproduction in all zones, in combination with the matrix color compensation and knee saturation functions.

Other key Functions

Wide variety of input/output interfaces

In addition to 3G/HD/SD-SDI output and HD/SD-SDI input, the HDC4300 features a wide variety of input/output interfaces, including the following.

Network TRUNK function

The network TRUNK function (LAN port) allows for data transmission between the camera and CCU at speeds of up to 100 Mbps.

Note

The network TRUNK transfer rate differs depending on the video format. Jumbo frames are not supported.

HD prompter function

The HDC4300 supports an HD prompter function where HD-SDI equivalent digital data is sent from the HDCU2000/2500 to the HDC4300, separate from the return video signal.

Note

The HD prompter function can only be used when a single format is selected and the network TRUNK function is set to OFF.

Various viewfinder functions

Wide variety of viewfinder display options

You can display configuration settings, in addition to operation messages, a zebra pattern, a safety-zone marker, and a center marker in the viewfinder. Also, there are indicators along the top and bottom of the viewfinder, such as a tally lamp, battery warning indicator, and an indicator that warns you when one or more settings are not within standard range.

Menu-based operation function

You can make selections and settings related to viewfinder display items, safety zone marker, center marker, and screen size marker, etc. quickly and easily using the menu displayed in the viewfinder or on an external monitor.

PinP function

The return video signal or HD prompter picture can be displayed on the viewfinder in picture-in-picture mode.

Note

The PinP function cannot be used during standalone operation.

Versatile detail control functions

Skin-tone detail function/Natural skin detail function

Like HDC2500-series cameras, this function allows control (emphasis or suppression) of the detail level for a certain hue or chroma area in the image, by creating a detail gate signal from color components of your specified hue, such as skin tones. The detail levels of three hues can be adjusted independently at the same time.

The camera features a natural skin detail function that adjusts the detail gate signal in order to distinguish clearly between parts of skin you want to smooth from the parts you do not want to smooth, such as eyebrows.

Detail boost-frequency control

The boost frequency can be adjusted from 20 MHz to 30 MHz. This allows the thickness of the detail signal to be set appropriately for the subject, thus enabling high-definition image reproduction.

H/V ratio control

Adjusts the ratio between the applied horizontal and vertical detail.

White/black limiter

The white and black details can be limited independently.

PWS-4500 – General Information

Supports HD & 4K resolutions

- 4K, QDFH, 2K, HD
- HFR: 4k 2x, HD **8x** 6x 4x 3x 2x speeds

Highly secured & fast memory system

- 2Tb as standard, expandable up to 8Tb
- Redundant Power Supply as standard

Single File Recording in HD & 4K

- Use XAVC Codec – DnXHD as option
- HD Proxy generation in 4K Recording

3rd party integration with Media Gateway

- EVS Clip Exchange through XTAccess
- Avid ISI/Interplay Integration



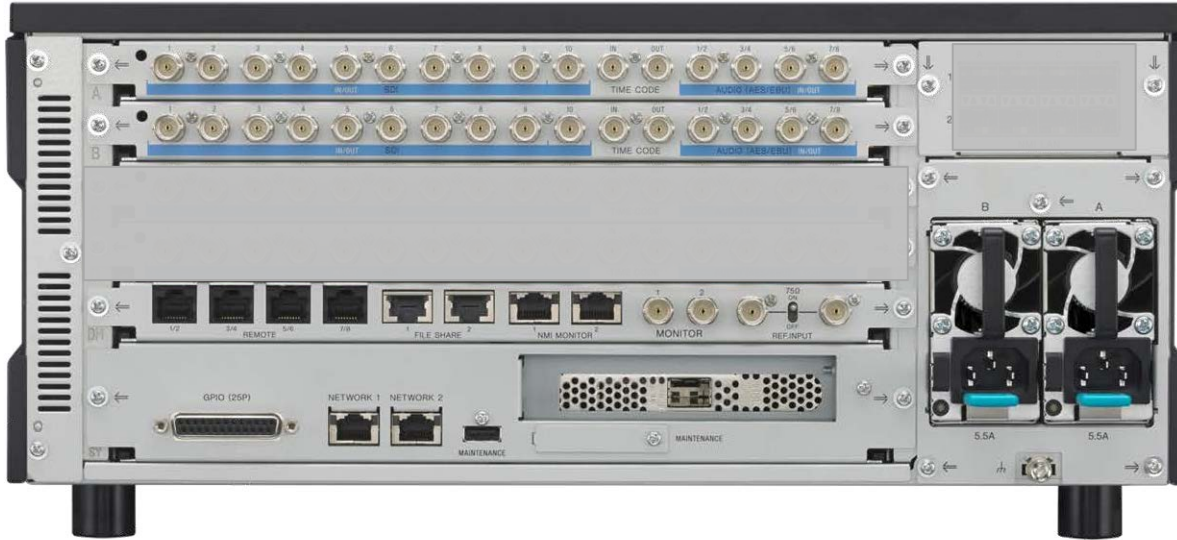
Easy Operations

- EVS Operator Panel Look & Feel
- Open interfaces: VDCP, FTP

High Performance

- 10Gb Fiber Interface for File Transfer
- **NMI network board** for Servers Interconnection

PWS-4500: Flexible Configuration



PWS-4500 Starting Configuration

- SDI I/O Board x 2
- HD operations only
- HD HFR 2x & 3x
- Real Time File Sharing PWS Network
- Redundant Power Supply
- 10GbE File Transfer Board

Options & Licenses for more flexibility

- SDI I/O Boards
- IP I/O Boards
- 4K operation License (available Permanent, 30-Days, 7-Days)
- HFR 4x, 6x, 8x HD operation License (available Permanent, 30-Days, 7-Days)
- DnXHD Codec License (for HD 50i/p operations only)

Software Support

How do I update my Camera Systems & Accessories ?

Sony often releases new feature software versions for system cameras. The easiest way to stay updated and keeping the products compatible over the complete product range is to subscribe a **Service Contract** that can even be tailored for your business needs.

Option 1: Sony Prime Support Plus “Software and Preventative Maintenance”
Annual site visit from a **Sony** engineer to perform regular software preventative maintenance tasks

Option 2: Sony Tailored Contract
Bespoke contracts offering the ultimate in customer support more fitting to exact customer requirements with **Sony** engineering support

Option 3: Sony Onsite Engineer
Site visit from a **Sony** engineer. Days can be purchased when required.

For a quote please call or email the Sony ONE STOP Helpdesk

International Freephone*	Direct Phone (UK)	Email
00800 7669 0000	0044 1256 683 871	sonysos@eu.sony.com

Software Support

Software and Preventative Maintenance

On-site Software & Preventative Maintenance* Annual site visit to perform preventative maintenance tasks. Monday - Friday 09:00 -18:00 CET, excludes local holidays. Covers up to 4 Cameras at the same location.	3 Years	€3,900	PSP.ONSITESWPM3
	5 Years	€6,050	PSP.ONSITESWPM5

* Technical Support needs to be purchased with this product (1 camera - 3 Years €750 PS.TECHSUPP1HDC3 OR 1 camera - 5 Years €1,200 PS.TECHSUPP1HDC5)

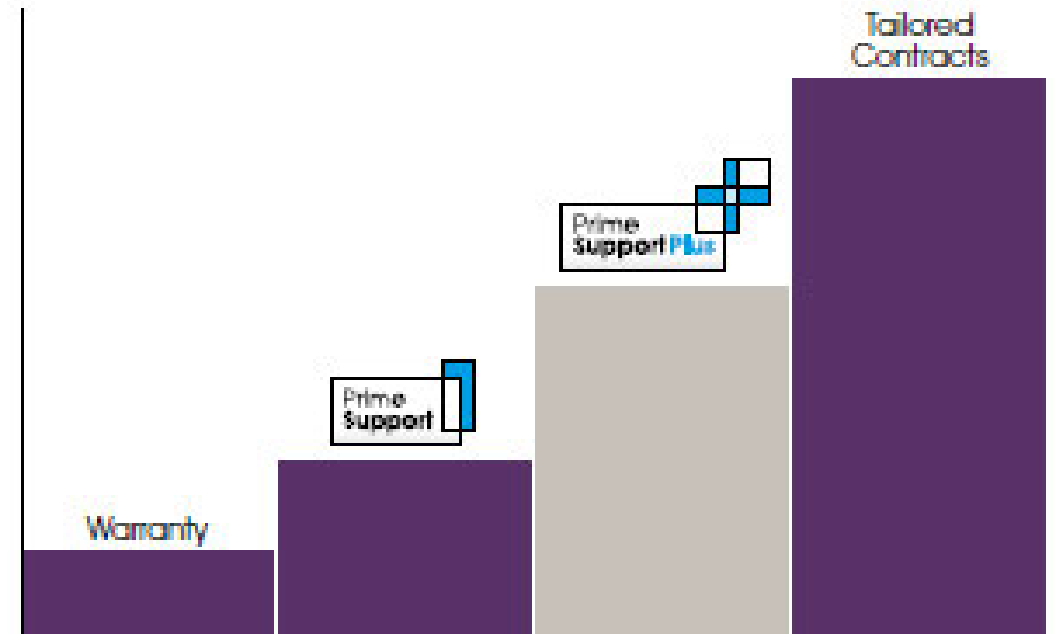
On-site Engineer

On-site Engineer The site visit will take place between Monday - Friday 10:00-17:00 CET, excludes local holidays. Days can be purchased when required.	N.S.W Europe	1 Day	€1,200	PSP.ENGINEER.1
	East Europe	1 Day	€850	PSP.ENGINEER.EAST1
On-site Engineer - Extended Hours The site visit will take place between Monday - Friday 17:00-22:00 and Saturday - Sunday 10:00-17:00 CET. Excludes local holidays. Days can be purchased when required.	N.S.W Europe	1 Day	€1,714	PSP.OOHRSENG.1
	East Europe	1 Day	€1,214	PSP.OOHRSENG.E1

Service & Support to System Camera

Service & Support Levels

- **Warranty** – Standard post sales product support offered by all manufacturers. Tends to be return to base (which means customer needs to arrange for return of faulty unit to their reseller and/or service centre).
- **PrimeSupport** – Enhanced post sales support offered by Sony Professional. Offers fully managed repair service, including collection from anywhere in the EU and return. Supplied **Free of Charge** on registration of product.
- **PrimeSupport Plus** – Extra add-on offerings including **additional warranty period** and value-add support such as a **loan unit** to support during any repair.
- **Tailored Contracts** – Bespoke contracts offering the ultimate in customer support more fitting **to exact customer requirements**.



Service & Support Options

For the 'mission critical' pieces of equipment that form an integral part of your daily business, 'Service & Support' offer you a level of backing in PrimeSupport Plus, tailored through a selection of options in this leaflet, to perfectly meet your twin requirements of both that 'extra peace of mind' and, more importantly, ensuring you get your product up and running and optimised as soon as possible.

Options

- **Initial System Set up and Configuration**
- **Technical support by Phone / Email**
- **Software feature updates and Preventative maintenance**
- **Express parts**
- **Priority repair & loan unit**
- **Onsite Engineering etc.**

Module options built to meet customer requirements, providing high end Sony specialist engineering support services.

PS Plus and Tailored Support: Enhanced cover with specialist Service & Support

Sony has more than 80 Field Engineers around Europe to tailored Support for Broadcast Equipments.

Sony can provide local Support with extended Phone & on site Repair / Diagnosis

Initial Set-up & Configuration The site visit will take place between Monday - Friday 09:00-18:00 CET, excludes local holidays. Covers up to 4 Cameras at the same location.		1 Day
Technical Support Monday - Friday 09:00-21:00 CET, excludes local holidays. Call back within 60 minutes from a Specialist Engineer. Covers 1 Camera.		3 Years
		5 Years
Extended Technical Support Monday - Sunday 09:00-21:00 CET, 365 days a year. Call back within 60 minutes from a Specialist Engineer. Covers 1 Camera.		3 Years
		5 Years
On-site Software & Preventative Maintenance* Annual site visit to perform preventative maintenance tasks. Monday - Friday 09:00 -18:00 CET, excludes local holidays. Covers up to 4 Cameras at the same location.		3 Years
		5 Years
Off-site Priority Repair* Priority repair, repair parts & logistics are included. Covers 1 Camera.		3 Years
		5 Years
Off-site Priority Repair & Loan Unit* Priority repair, repair parts & logistics are included. Loan unit (camera only) shipped next business day for calls logged before 15:00 CET. Covers 1 Camera		3 Years
		5 Years
On-site Engineer The site visit will take place between Monday - Friday 10:00-17:00 CET, excludes local holidays. Days can be purchased when required.	N.S.W Europe	1 Day
	East Europe	1 Day
On-site Engineer - Extended Hours The site visit will take place between Monday - Friday 17:00-22:00 and Saturday - Sunday 10:00-17:00 CET. Excludes local holidays. Days can be purchased when required. Excludes local holidays.	N.S.W Europe	1 Day
	East Europe	1 Day

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