

# SONY®



**CINEALTA™**

Sony Digital Camcorder  
**HDW-F900**

Sony Digital Recorder  
**HDW-F500**

Sony High Definition Switchers  
**HDS-7300 System**  
**HDS-7250 System**  
**HDS-7150 System**  
**HDS-7100 System**

Sony High Definition Digital Multi Effect  
**HDME-7000**

# Exploring New Horizons in Movie Making

Leveraging Sony's unique digital heritage and its unrivalled experience in the art of imaging, a ground-breaking digital movie production system is being launched.

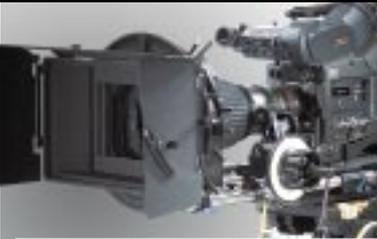
The system consists of HDW-F900 Digital Camcorder, HDW-F500 Digital Recorder, HDS-7000 Series High Definition Switchers and HDME-7000 High Definition Digital Multi Effect. We give the name of [CineAlta™] to this product line, which is already being accepted as ideal for exploring new horizons in digital movie-making.

Physically resembling established and highly successful models, to ensure operational familiarity and ease of use, a significant new capability is being added – 24 frame HD progressive image capture.

Moving pictures are digitally imaged by the HDW-F900 camcorder, according to the new CIF (Common Image Format) ITU standard, which specifies a digital sampling structure of 1920 active pixels horizontally by 1080 active pixels vertically. These are digitally recorded on 1/2-inch tape, and can be played back with the HDW-F500 VTR at the native film frame rate of 24 frames per second. Post processing with the HDS-7000 Series High Definition Switchers and the HDME-7000 High Definition Digital Multi Effect are also done at 1080/24P. Thus, a highly reliable and cost-effective movie-production chain is complete.

Because of its outstanding picture quality and operational flexibility, the CineAlta digital 24P production has acquired a remarkable momentum even before the arrival of actual product.

What makes Sony's CineAlta so universally exciting is that, as well as recording at 24P, it is switchable to also record at 25P/30P, and at 50/60 Hz interlaced. Thus, CineAlta signifies flexible program origination for both 50 Hz and 60 Hz broadcasting. It is also film-friendly and computer-friendly. Simply stated CineAlta is the first complete HD production solution specifically created to meet the needs of Motion Picture, HDTV, television broadcasting, DVD, Internet, future E-Cinema and all other electronic and digital distribution mediums.



**HDW-F900** – Digital Camcorder

8,9



**HDW-F500** – Digital Recorder





10,11



**HDS-7300/7250/7150/7100** – High Definition Switchers

12,13



**HDME-7000** – High Definition Digital Multi Effect 13



## CineAlta™ — Liberating Movie Makers

CineAlta – a name we proudly introduce to symbolize the bond between cinematography and Digital High Definition imaging. It distinguishes a Sony family of products and systems that offer new creativity in the production, post production and exchange of motion pictures. It brings together the quality and universality of 24-frame cinematography with the real-time capability, efficiency and flexibility of Digital High Definition technology. It stimulates the convergence of Motion Picture Film and Digital High Definition production on a global basis.

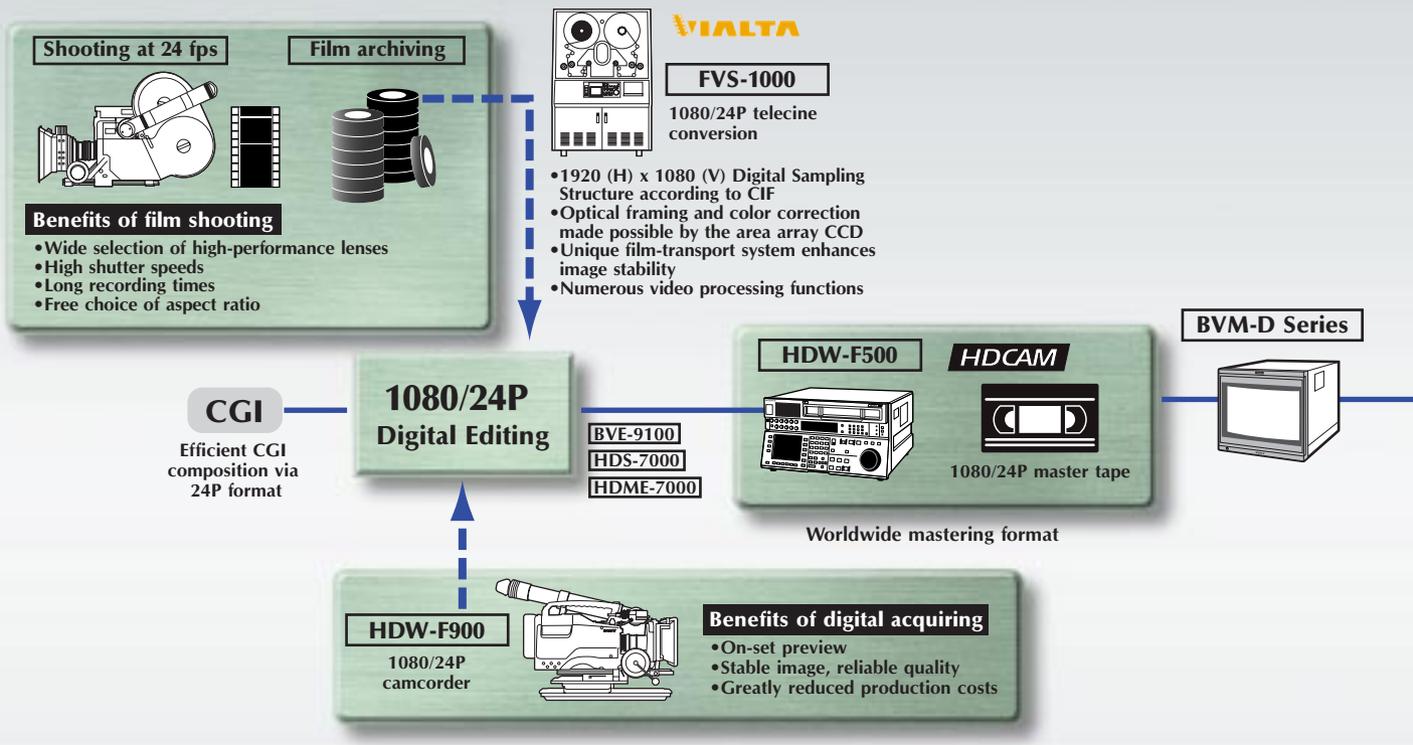
CineAlta products, delivering cinema-quality pictures at selectable frame-rates, are simplifying International Programme Exchange by minimizing the need for standards conversion. Equally, they are opening up new possibilities for international co-production.

Movie making has been liberated with the creative empowerment of the cinematographer. It is facilitated by real-time HD image evaluation on-set, instant replay of a full-color high-resolution digital “take”, real-time image optimization while shooting, a 50-minute shooting load and, most importantly, by the significant cost-benefits associated with this digital medium.

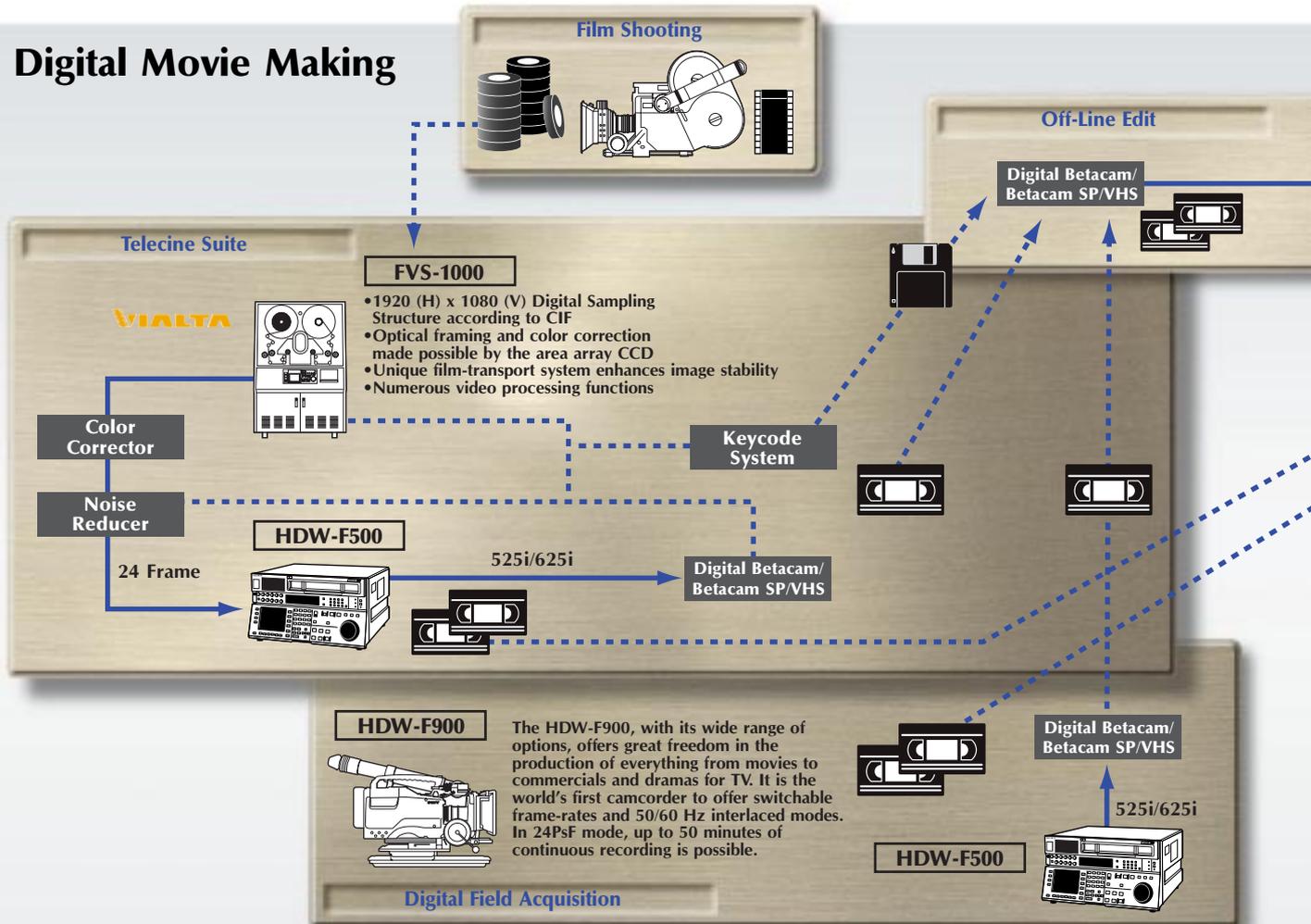
CineAlta products also ensure a seamless bridge between 24-frame film originals and a final 24P digital master. A frame of film now has a one-to-one correspondence with a progressive HD frame. The CineAlta environment readily interfaces with the computer graphics world, liberating post production. The direct color conversion of progressive 24P masters to film, and to a multiplicity of international digital HDTV and SDTV distribution formats, are the final liberation.

# DIGITAL 24P PRODUCTION

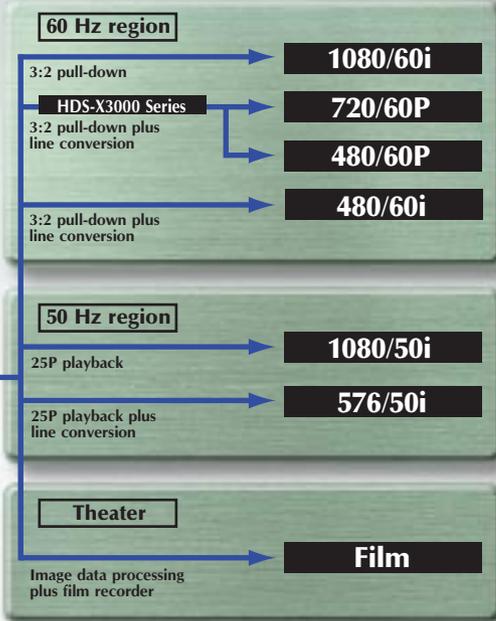
## HDCAM™ — The Universal Master



## Digital Movie Making



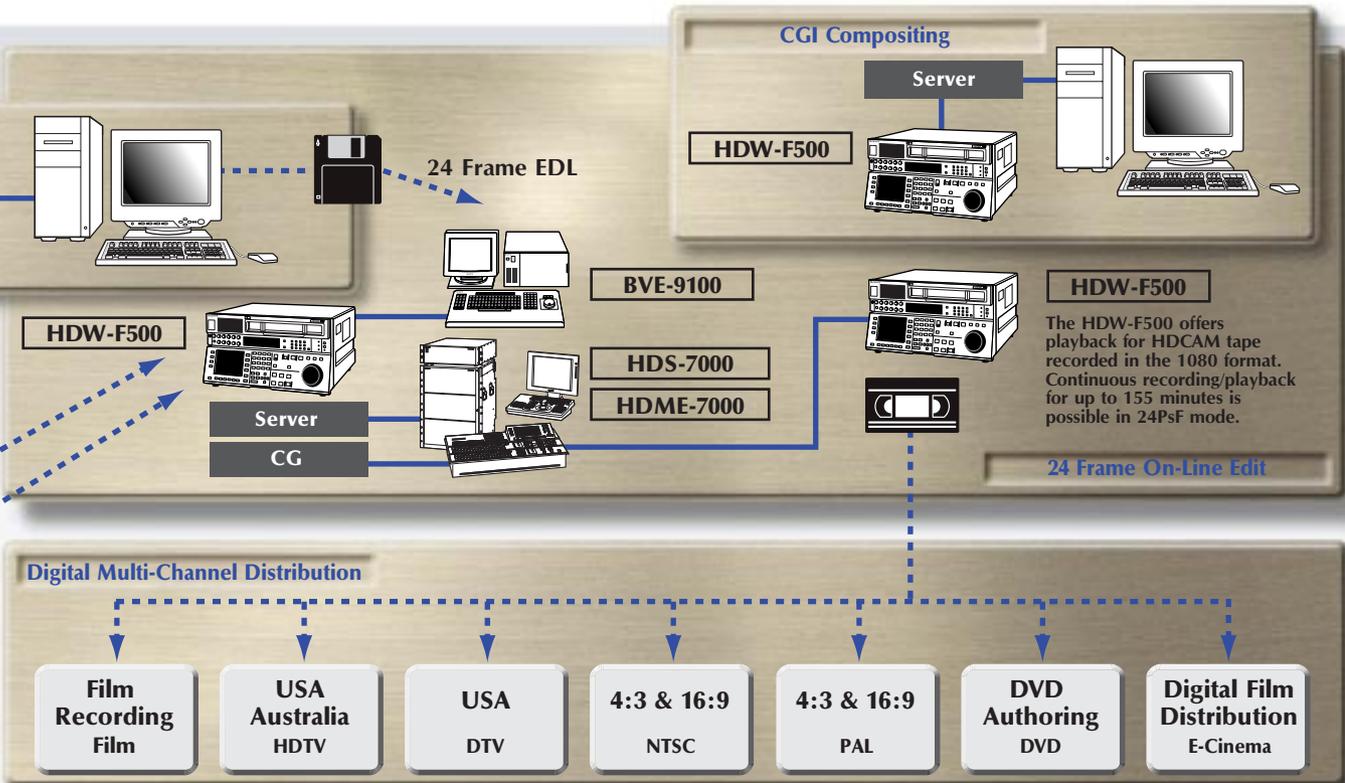
### Conversion from 1080/24P master to multiple formats



Multi-format converter ensures compatibility with various worldwide broadcasting and imaging formats including DTV, DVB, DVD, Internet and Movie-production.

### Companies supporting the 1080/24P Production System

Avid Technology	Non-linear editing systems
Chyron Corporation	Character generators
Da Vinci System	Telecine color correctors
Digital Vision	Noise reducers
Discreet*	HDCAM software codecs, CGI
Evertz Microsystems	24P metadata management systems
Faroudja Labs	Signal converters
Graham Pattern Systems	Audio mixers
Leader Electronics Corp.	Waveform monitors, test signal generators
Leitech/ASC	Multiple-signal converters
N VISION	Test signal generators
Panavision	Cinema-style lenses and accessories
Pandora International	Telecine color correctors
Philips Electronics	Telecine conversion
Pluto Technology International	Server systems
Post Impression	Server systems
Quantel	Server systems, non-linear editing systems
Sierra Design Lab	Disc recorders
Silicon Graphics	Graphics workstations, server systems
ShibaSoku Co., Ltd.	Test signal generators
Snell & Wilcox	Multiple-signal converters
Sony/Tektronics Corporation	Test signal generators, waveform monitors
Synthesys Research	Signal analyzers
Yamashita Engineering Manufacture Inc.	Multiple-signal converters



- Combining the benefits of both film and digital technologies to expand the expressive potential of the moving image.
- Switchable capability between 1080/24P, 1080/60i and 1080/50i improves the working ratio of entire system.
- Efficient conversion from 1080/24P to various digital broadcasting formats.



**HDW-F900 – Digital Camcorder**



The HDW-F900 digital HDCAM camcorder combines a 3-CCD HD color digital camera, where each RGB imager has 1920 (H) x 1080 (V) sensors, with an HDCAM compact digital 1/2-inch cassette recorder. These superb new CCDs, a 12-bit A/D converter and advanced DSP processing combine to make a camcorder ideal for digital cinematography. The introduction of new techniques of HD signal processing improves the image quality even further while also simplifying the overall setup operation.



## Digital Camcorder

### HDW-F900

- Camera image capture complies with the ITU-R.BT 709-3 Recommendation for High Definition Production and International Programme Exchange.
- Equipped with newly developed 2/3-type, 2,200,000 sensor FIT solid-state imager in the camera section, providing high-resolution 16:9 pictures.
- Compact, lightweight and robust body design with cinematography accessories attached.
- Continuous recording time is up to 50 minutes (24P mode).
- Newly developed LSI for ADSP (Advanced Digital Signal Processor) improves picture quality, ensuring picture stability and operational reliability while reducing total power consumption.
- A new Memory Stick™ setup system memorizes various parameter settings and provides instant recall at any time.
- Electronic shutter functions such as ECS and Super EVS provide blur-free images.
- A simple switch operation enables automatic adjustment and black set, black balance and white balance.
- Various indicators for operational reliability.
- Dual filter wheels for neutral density and color temperature control.



**HDW-F500 – Digital Recorder**

**HDS-7300/7250/7150/7100 – High Definition Switchers**

**HDME-7000 – High Definition Digital Multi Effect**



The HDW-F500 is a high definition digital editing recorder used in conjunction with the HDW-F900 HDCAM camcorder. Comparable to a conventional 1/2-inch VTRs in size, weight and ease-of-use, the HDW-F500 is a small, lightweight high definition VTR using integrated circuit technology. It has a multi-format recording/playback capability of 23.976/24/25/29.97/30 Progressive and 50/59.94/60 Hz interlace. The input-output interfaces are according to the 1920 x 1080 CIF digital sampling structure (the Common Image Format). The HDW-F500 thus complies with the ITU-R.BT 709-3 Recommendation for High Definition Production and International Programme Exchange.



## Digital Recorder

### HDW-F500

- Superb picture quality of HDCAM format and playback compatibility with existing HDCAM tapes recorded at 59.94 or 60 Hz.
- Longer recording time of Max. 155 minutes (24P mode).
- High performance, high accuracy heads and drum with Dynamic Tracking™ technique. Also equipped with pre-read head.
- Various output interfaces, including D1 SDI (480/576), D2 SDI (480 only) and analog composite (optional HKDV-501A required).
- Easy-to-maintain plug-in boards such as down converter and pull-down engine.
- Several remote interfaces, including RS-422A, RS-232C and Parallel 50-pin (optional BKDW-509 required).
- AES/EBU digital audio and analog audio input/output.
- Dolby®-E operation.
- Internal time code generator and reader.
- Computer servo system.
- Self-diagnostic system.
- 19-inch rack mountable.

\*Dolby is a registered trademark of Dolby Laboratories.

The HDS-7000 Series High Definition Switchers and the HDME-7000 High Definition Digital Multi Effects systems have been in service for a wide range of HDTV program productions and applications. They have a proven performance in live sporting events, and episodic productions, in addition to post production applications throughout North America and Japan. The new ITU-R.BT 709-3 capability is now added to all these switchers and DME, and thus the full range of digital 24P-production system is now available. They are switchable in operation between 24/25/30 Progressive and 50/59.94/60 Hz interlace mode to meet various worldwide needs. They retain the familiar operability of previous Sony models – such as track ball and the Z-ring of the DME system. Those operator's accustomed to Sony's other digital switchers/DMEs will immediately find it familiar and easy to use. Extremely high quality digital video signal processing, at a sampling rate of 74.25 MHz/10-bit, enables attractive effects and accurate picture switching for your requirements.

## High Definition Switcher

### HDS-7300/7250 system

- Accepts various formats includes 1080/24, 1080/25, 1080/30 Progressive and interlaced 1080/50, 1080/59.94, 1080/60 Hz and 1035/59.94 Hz.
- HD-SDI for all video inputs and outputs, conforming to SMPTE 292M.
- Specially designed for both live and post operations with a compact yet comprehensive control panel including a Large EL display.
- Four alternative control panels available include 3M/E type and 2M/E with P/P type.
- 30 HD-SDI primary inputs and 10 auxiliary buses.
- Two powerful key processors and a color background generator are equipped as standard function on each M/E.
- A high quality chroma keyer with auto chroma key function is also available as optional function for each M/E.
- Various mix and wipe effects, such as NAM, Super Mix, etc.
- The DME-LINK™ function.
- Processed key function.
- 16:9/4:3 operation mode switchable.
- Optional redundant power supply.

### HDS-7300/7250 System Control Panels



#### BKDS-7011

- 3 M/E
- Source name display on each M/E
- FlexiPad in-line type



#### BKDS-7012

- 3 M/E
- Double key rows on M/Es
- FlexiPad offset type



#### BKDS-7025

- 2 M/E with PMG/PST
- Source name display on each M/E
- FlexiPad in-line type



#### BKDS-7026

- 2 M/E with PMG/PST
- Double key rows on M/Es
- FlexiPad offset type

\* The BKDS-7026 may not be available in some countries. Please contact your local Sony office.



## High Definition Switcher

### HDS-7150/7100 system

- Accepts various formats includes 1080/24, 1080/25, 1080/30 Progressive and interlaced 1080/50, 1080/59.94, 1080/60 Hz and 1035/59.94 Hz.
- HD-SDI for all video inputs and outputs, conforming to SMPTE 292M.
- Compact and comprehensive control panel.
- Control panels: 1M/E wit P/P type for HDS-7150 and 1M/E type for HDS-7100.
- 15 HD-SDI primary inputs and 6 auxiliary buses for the HDS-7150 and 10 HD-SDI inputs and 2 auxiliary buses for the HDS-7100.
- Powerful key processors: Two key processors and a DSK function for the HDS-7150 and one key processor for the HDS-7100 equipped as standard.
- Color background generators: Two for HDS-7150 and one for HDS-7100 as a standard.
- High-quality chroma key with optional HKDS-7031.
- RGB color corrector with optional HKDS-7051.
- Various mix and wipe effects, such as NAM, Super Mix, etc.
- The DME-Link™ function.
- 16:9/4:3 operation mode switchable.
- Optional redundant power supply.

HDS-7150 System Control Panel



BKDS-7017

HDS-7100 System Control Panel



BKDS-2010

## High Definition Digital Multi Effect

### HDME-7000 system

- Accepts various formats, including 1080/24, 1080/25, 1080/30 Progressive and interlaced 1080/50, 1080/59.94, 1080/60 Hz and 1035/59.94 Hz.
- HD-SDI for all video inputs and outputs, conforming to SMPTE 292M.
- Advanced man-machine interface with color GUI and comprehensive operation using track ball and Z-ring.
- Powerful DME-Link function with HDS-7000 Series High Definition Switchers.



## HDW-F900 Specifications

General	
Mass	Approx. 8 kg (17 lb. 0 oz) with typical ENG lens, cassette and BP-L60A Battery
Power requirement	DC 12 V (+5.0 V/-1.0 V)
Power consumption	42 W (With 12 V power supply, REC mode, with HDVF-20A)
Operating temperature	0 °C to +40 °C (+32 °F to +104 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Operating humidity	25 % to 80 % (Relative humidity)
Continuous operating time	Approx. 80 min (With BP-L60A)
Inputs/outputs	
Genlock video input	BNC, 1.0 Vp-p 75 Ω
Time code input	BNC, 0.5 V to 18 Vp-p, 10 kΩ
Audio CH1/CH2 input	XLR-3-pin type (Female), -60 dBu/+4dBu selectable, high impedance, balanced
Mic input	XLR-3-pin type (Female), -60 dBu
Monitor output	BNC (x3, Y/Pb/Pr), 1.0 Vp-p, 75 Ω, unbalanced
Audio output	XLR-5-pin type (Male), 0 dBm
Time code output	BNC, 1.0 Vp-p, 75 Ω
Earphone	Mini-jack, 8 Ω, -∞ to -18 dBs variable
DC input	XLR-4-pin type (Male), 11 to 17 V DC
DC output	11 to 17 V DC, Max. 100 mA
Lens	12-pin
Remote	8-pin
VTR section	
Recording format	HDCAM
Tape speed	Approx. 77.4 mm/s (24P mode)
Playback/Recording time	Max. 50 min with BCT-40HD (24P mode)
Fast forward/rewind time	Approx. 6 min with BCT-40HD
Recommended tape	Sony BCT-40HD/22HD
Sampling frequency	Y: 75.25 MHz, Pb/Pr: 37.125 MHz
Quantization	10 bit/sample of input-output signals (8 bit sample for internal compression process)
Error correction	Reed-Solomon code
Error concealment	Adaptive three dimensional
Audio performance (Playback with Standard HDW-F500)	
Frequency response	20 Hz to 20 kHz, +0.5 dB/-1.0 dB
Dynamic range	More than 85 dB (Emphasis ON)
Distortion	0.08 % Max.
Cross talk	-70 dB
Wow & flutter	Below measurable limit
Camera section	
Pickup device	3-chip 2/3-type FIT type CCD
Picture elements	2,200,000 pixels
Optical system	F1.4 prism system
Built-in filters	A: Cross B: 3200K C: 4300K D: 6300K; 1: Clear 2: 1/4ND 3: 1/16ND 4: 1/64ND
Shutter speed (1080/60i mode)	1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (sec)
Clear scan	(ECS) 24 to 7000 Hz (Minimum setting depends on frame rate selected)
Lens mount	Special bayonet mount
Sensitivity	f10.0 at 2000 lux, 89.9 % reflective, At 24 fps, with a 1/48-second shutter speed (equivalent to a 180° film camera shutter setting), the exposure index is approximately equivalent to 300 ISO.
Viewfinder	
CRT	2.0-type monochrome
Controls	Brightness control, Contrast control, Peaking control, Tally switch, Zebra Pattern switch, Display/Aspect switch
Horizontal resolution	500 TV Line (At center)
Microphone	Ultra-directional (Detachable)
Supplied Accessories	
	HDVF-20A, HD Electric Viewfinder (1) Microphone, Super cardioid directional, external power supply type (1) VCT-14, Tripod Adapter (1) Shoulder strap (1) Rain cover (1) Operation manual (1) Maintenance manual (1)
Optional Accessories	
	HDCA-901, HD-SDI adapter HDVF-C750W, HD LCD Color Viewfinder BP-L60A, Lithium-ion battery BC-L100/L100CE, Battery charger AC-550/550CE, AC adapter BCT-40HD/22HD, HDCAM tape cassette BKW-401, Viewfinder rotation bracket RM-B150, Remote control unit C-74, Microphone LC-HD7, Carrying case Part No. 1-547-341-11, Fog-proof filter Part No. 3-174-685-01, 1/8 ND filter Part No. 3-174-683-01, 1/32 ND filter Part No. 3-174-682-01, Cross filter Part No. 3-186-442-01, Mounting ring Part No. A-8314-798-A, Viewfinder eyepiece (High performance x3, with soft cushion) Part No. A-8262-537-A, Viewfinder eyepiece (High magnification) Part No. A-8262-538-A, Viewfinder eyepiece (Low magnification) Part No. A-8267-737-A, Viewfinder eyepiece (Standard magnification with special compensation for aberrations)

## HDW-F500 Specifications

General	
Power requirements	100 to 240 V AC ( $\pm 10\%$ , 50/60 Hz)
Power consumption	230 W
Operating temperature	+ 5 °C to +40 °C (+41 °F to +104 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Operating humidity	25 % to 80 % (Relative humidity)
Mass (Approx.)	35 kg (77 lb. 2 oz)
Dimensions (W x H x D)	427 x 237 x 520 mm (16 3/4 x 9 3/8 x 20 1/2 inches)
Tape speed	77.4 mm/s (24P mode)
Digital recording/Playback time	Max. 155 min with BCT-124HDL cassette (24P mode)
Fast forward/rewind time	Approx. 3 min with BCT-124HDL cassette
Search speed range	$\pm 60$ times normal playback speed (24P mode)
Servo lock time	1.0 sec or less (From standby on)
Load/unload time	6.0 sec or less
Input/output	
HD serial V/A input	BNC (x1 with a monitoring loop-through), Serial digital (1.485 Gb/s), SMPTE 292M/BTA S-004/ITU-R.BT 709
HD reference video input	BNC (x1, with a loop-through), Tri Level sync, 0.6 Vp-p, 75 $\Omega$ , sync negative
SD reference video input	BNC (x1, with a loop-through), Black Burst, 0.286 Vp-p, 75 $\Omega$ , sync negative
Digital audio input (CH1/2, CH3/4)	BNC (x2, with 2 loop-through), AES/EBU
Analog audio input (CH1/2/3/4/Cue)	XLR-5-pin type (Male) Low OFF: -60 dBu, high impedance, balanced High OFF: +4 dBu, high impedance, balanced High ON: +4 dBm, 600 $\Omega$ termination, balanced
Time code input	XLR-3-pin type, (Male x1), 0.5 to 18 Vp-p, 10 k $\Omega$ , balanced
HD serial V/A output	BNC (x4, with a character out), Serial digital (1.485 Gb/s), SMPTE 292M/BTA S004/ITU-R.BT 709
Pull-down output (Optional BKDV-507 required)	BNC (x2), with character
Standard Definition V/A output (Optional BKDV-501A required)	BNC (x3, with a character out), D1 serial digital (270 Mb/s), SMPTE 259M
Analog I/O down converted output (Optional BKDV-501A required)	Composite: BNC (x1 with a character out) 1.0 Vp-p, 75 $\Omega$ sync negative SD sync: BNC (x1, Black Burst, 0.286 Vp-p, 75 $\Omega$ , sync negative)
Analog I/O reference output	1125 Sync: BNC (x2), Tri Level sync, 0.6 Vp-p, 75 $\Omega$ , sync negative
Digital audio output (CH1/2 CH3/4)	BNC (x2), AES/EBU, unbalanced
Analog audio output (CH1/2/3/4/Cue)	XLR-3-pin type, (Female x5), +4 dBm, (With a 600 $\Omega$ load), low impedance, balanced
Monitor output (L/R)	XLR-3-pin type, (Female x2), +4 dBm, (With a 600 $\Omega$ load), low impedance, balanced
Time code output	XLR-3-pin type, (Female x1), 2.2 Vp-p low impedance, balanced
Phones	JM-60 stereo phone jack, $-\infty$ to -12 dBu (With an 8 $\Omega$ load), unbalanced
HD SDTI input/output	BNC (x2), Input/output, Serial digital
Remote 1 input	D-sub 9-pin, Female, Sony 9-pin remote interface
Remote 1 output	D-sub 9-pin, Female, Sony 9-pin remote interface
RS-232C	D-sub 25-pin, Female
Video control	D-sub 9-pin, Female (For optional HKDV-503)
Parallel remote (Optional BKDV-509 required)	D-sub 50-pin, Female
Panel remote	D-sub 15-pin, Female
Digital video performance	
Sampling frequency	Y: 74.25 MHz, Pb/Pb: 37.125 MHz
Quantization	10 bits/sample of input-output signals (8 bits sample for internal compression process)
Compression	Coefficient recording system
Channel coding	S-NRZI PR-IV
Error correction	Reed-Solomon code
Error concealment	Adaptive three dimensional
Analog composite output performance (With optional HKDV-501A)	
Bandwidth	Y: 0 to 5.75 MHz +5.0 dB/-3.0 dB
S/N ratio	56 dB or more
Y/C delay	15 ns or less
K Factor (2T Pulse)	1 % or less
Output SCH phase	Based upon RS-170A/CCIR R.624-3
Digital audio performance	
Sampling frequency	48 kHz (Synchronized with video)
Quantization	20 bits/sample
Wow & flutter	Below measurable level
Headroom	20 dB (Or 18 dB selectable)
Emphasis	T1 = 50 $\mu$ s, T2 = 15 $\mu$ s (on/off selectable in recording mode)
Analog audio output performance	
A/D quantization	20 bits/sample
D/A quantization	20 bits/sample
Frequency response	20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at 1 kHz)
Dynamic range	More than 95 dB (At 1 kHz emphasis ON)
Distortion	Less than 0.05 % (At 1 kHz, emphasis ON, reference level)
Cross talk	Less than -90 dB (At 1 kHz, between any two channels)
Cue track	
Frequency response	90 Hz to 12 kHz $\pm 3$ dB
S/N ratio	More than 45 dB (At 3 % distortion level)
Distortion	Less than 2 % (T.H.D at 1 kHz, reference level)
Wow & flutter	Less than 0.2 % rms
Supplied Accessories	
	AC power cord (1); RCC-5G, 9-pin remote cable (1); PSW4 x 16 screws, for rack mounting (4); SRAM 64 KB memory card (1); Operation manual (1); Maintenance manual part 1 (1)
Optional Accessories	
	HKDV-501A, HD-SD Converter board HKDV-502, HD Line converter board HKDV-503, HD Digital Video Controller HKDV-506A, SDTI input and output board HKDV-507, HD Pull-down board BKDW-509, Parallel 50-pin interface kit RMM-110, Rack Mount Adapter BCT-HD12CL, Cleaning Cassette BCT-124HDL/64HDL/40HD/22HD, HDCAM tape cassette

# HDS-7000 Series Specifications

System	HDS-7300 System	HDS-7250 System
<b>Video inputs/outputs</b>		
Signal standard	HD SDI conforming to SMPTE 292M	HD SDI conforming to SMPTE 292M
Primary inputs	HD SDI, 30 ch	HD SDI, 30 ch
Program outputs	HD SDI, 3 ch	HD SDI, 3 ch
M/E program outputs	HD SDI, 2 ch per M/E-1 and M/E-2	HD SDI, 2 ch per M/E-1 and M/E-2
Preview output	HD SDI, 1 ch	HD SDI, 1 ch
M/E preview output	—	—
Clean output	HD SDI, 1 ch	HD SDI, 1 ch
Auxiliary bus output	HD SDI, 10 ch (including Edit Preview)	HD SDI, 10 ch (including Edit Preview)
Analog reference input	SD Black Burst, with loop-through output	SD Black Burst, with loop-through output
Analog reference output	HD Tri-level Sync	HD Tri-level Sync
<b>System interface</b>		
Switcher panel 1 and 2	D-sub 9-pin or 25-pin, RS-422A	D-sub 9-pin or 25-pin, RS-422A
Built-in DME panel	D-sub 9-pin, RS-422A (for BKDS-7011/7012)	D-sub 9-pin, RS-422A (for BKDS-7025/7026)
DME panel for HDME-7000 system	D-sub 9-pin or 25-pin, RS-422A	D-sub 9-pin or 25-pin, RS-422A
Editor (Switcher)	A and B (2 ch): D-sub 9-pin, RS-422A	A and B (2 ch): D-sub 9-pin, RS-422A
Editor (DME)	D-sub 9-pin, RS-422A	D-sub 9-pin, RS-422A
External DME	D-sub 9-pin, RS-422A (x2 ch)	D-sub 9-pin, RS-422A (x2 ch)
GPI (Switcher)	D-sub 25-pin, 8 inputs/8 outputs, programmable	D-sub 25-pin, 8 inputs/8 outputs, programmable
GPI (DME)	D-sub 25-pin, 7 inputs/7 outputs, programmable	D-sub 25-pin, 7 inputs/7 outputs, programmable
Serial tally	D-sub 9-pin, RS-422A	D-sub 9-pin, RS-232C
Terminal	D-sub 9-pin, RS-232C	D-sub 9-pin, RS-232C
<b>General</b>		
Power requirement	DC 5 V, 3.3 V, 12 V, -5 V (from power supply unit)	DC 5 V, 3.3 V, 12 V, -5 V (from power supply unit)
Dimensions (W x H x D, approx.) for processor unit excluding protruding parts for control panel for EL Display panel	424 x 620 x 492 mm (16 3/4 x 24 1/2 x 19 3/8 inches) 1290 x 142 x 532 mm (50 7/8 x 5 5/8 x 21 inches) 499 x 45 x 197 mm (19 3/4 x 1 3/4 x 7 7/8 inches)	424 x 620 x 492 mm (16 3/4 x 24 1/2 x 19 3/8 inches) 1290 x 142 x 532 mm (50 7/8 x 5 5/8 x 21 inches) 499 x 45 x 197 mm (19 3/4 x 1 3/4 x 7 7/8 inches)
Mass for processor unit (approx.) for control panel (approx.)	70 kg (154 lb. 5 oz) 36 kg (79 lb. 6 oz)	70 kg (154 lb. 5 oz) 36 kg (79 lb. 6 oz)
<b>Power supply unit</b>		
	<b>HKDS-7690</b>	<b>HKDS-7690</b>
Power requirements	AC 100 to 120 V, 50/60 Hz	AC 100 to 120 V, 50/60 Hz
Current consumption	30 A Max.	30 A Max.
Dimensions (W x H x D, approx.)	424 x 132 x 542 mm (16 3/4 x 5 1/4 x 21 3/8 inches)	424 x 132 x 542 mm (16 3/4 x 5 1/4 x 21 3/8 inches)
Mass (approx.)	20 kg (44 lb. 1 oz)	20 kg (44 lb. 1 oz)
<b>Supplied Accessories</b>		
For processor unit	Rack mounting angles (pre-installed, 1 set) 75 Ω terminator (1), Operation manual (1) Installation manual (1), Maintenance manual part 1 (1)	Rack mounting angles (pre-installed, 1 set) 75 Ω terminator (1), Operation manual (1) Installation manual (1), Maintenance manual part 1 (1)
For control panel	Key top removing tool (1), Switch chips (11), Operation and Installation Guide (1)	Key top removing tool (1), Switch chips (11), Operation and Installation Guide (1)

## System Components and Optional Accessories for HDS-7300 System

### Processor Unit

HDS-7000, Production Switcher Chassis  
 HKDS-7031, Chromakey Board (1 channel)  
 HKDS-7041, Frame Memory Board  
 HKDS-7051, Color Correction Board  
 HKDS-7061, Video Modifier Board  
 HKDS-7071, Digital Multi Effects Board  
 HKDS-7690, Power Supply Unit  
 (Either primary or redundant)

\*When HKDS-7071 is installed, the HKDS-7061 is also required for DME-Link functions.

### Control Panel

BKDS-7001, Control Port Expansion Board  
 BKDS-7003, Source Name Display  
 BKDS-7011, 3 M/E Switcher Control Panel  
 (for HDS-7300 system, with Source Name Display on each M/E, FlexiPad In-line type)  
 BKDS-7012, 3 M/E Switcher Control Panel (for HDS-7300 system, with Double Key Rows on M/Es, FlexiPad Offset type)  
 BKDS-7030, Key Frame Control Panel Unit  
 BKDS-7031, DME Control Panel Unit  
 BKDS-7033, Memory Recall Control Panel Unit  
 BKDS-7075, Control Panel Remote Adapter  
 BKDS-7090, Redundant Power Supply Unit for BKDS-7011/7012/7025/7026

\*BKDS-7075 is required when BKDS-7030/7031/7033 is installed.

### Peripherals

BKDS-2010, M/E Remote Control Panel  
 BKDS-6080, Tally Interface Unit for basic tally functions  
 BKDS-7060, Keyer Remote Control Panel  
 BKDS-7700, Tally Interface Unit for advanced tally functions with router interface  
 BKDS-8060, Remote Panel Interface Unit  
 BKDS-8061, Memory Recall Remote Panel  
 BKDS-8062, AUX Bus Remote Panel  
 BKDS-7090, Redundant Power Supply Unit for BKDS-7011/7012/7025/7026  
 HZS-7020, Operation Software

## System Components and Optional Accessories for HDS-7250 System

### Processor Unit

HDS-7000, Production Switcher Chassis  
 HKDS-7031, Chromakey Board  
 HKDS-7051, Color Correction Board  
 HKDS-7061, Video Modifier Board  
 HKDS-7071, Digital Multi Effects Board  
 HKDS-7690, Power Supply Unit

\*BKDS-7075 is required when BKDS-7030/7031/7033 is installed.

### Control Panel

BKDS-7001, Control Port Expansion Board  
 BKDS-7003, Source Name Display  
 BKDS-7025, 2.5 M/E Switcher Control Panel  
 (for HDS-7250 system, with Source Name Display on each M/E, FlexiPad In-line type)

BKDS-7026, 2.5 M/E Switcher Control Panel  
 (for HDS-7250 system, with Double Key Rows on M/Es, FlexiPad Offset type)  
 BKDS-7030, Key Frame Control Panel Unit  
 BKDS-7031, DME Control Panel Unit  
 BKDS-7033, Memory Recall Control Panel Unit  
 BKDS-7075, Control Panel Remote Adapter  
 BKDS-7090, Redundant Power Supply Unit for BKDS-7011/7012/7025/7026

\*BKDS-7075 is required when BKDS-7030/7031/7033 is installed.

### Peripherals

BKDS-2010, M/E Remote Control Panel  
 BKDS-6080, Tally Interface Unit for basic tally functions  
 BKDS-7060, Keyer Remote Control Panel  
 BKDS-7700, Tally Interface Unit for advanced tally functions with router interface  
 BKDS-8060, Remote Panel Interface Unit  
 BKDS-8061, Memory Recall Remote Panel  
 BKDS-8062, AUX Bus Remote Panel  
 BKDS-7090, Redundant Power Supply Unit for BKDS-7011/7012/7025/7026  
 HZS-7020, Operation Software

\*24P capability is available as order-based or factory-configured for the HDS-7300 and the HDS-7250 systems. For the details, please contact your nearest Sony office.

HDS-7150 System	HDS-7100 System
HD SDI conforming to SMPTE 292M	HD SDI conforming to SMPTE 292M
HD SDI, 15 ch	HD SDI, 10 ch
HD SDI, 3 ch	HD SDI, 3 ch
HD SDI, 2 ch	—
HD SDI, 1 ch	HD SDI, 1 ch
HD SDI, 1 ch	—
HD SDI, 1 ch	HD SDI, 1 ch
HD SDI, 6 ch (including Edit Preview)	HD SDI, 2 ch (including Edit Preview)
SD Black Burst, with loop-through output	SD Black Burst, with loop-through output
HD Tri-level Sync	HD Tri-level Sync
D-sub 9-pin or 25-pin, RS-422A	D-sub 9-pin or 25-pin, RS-422A
D-sub 9-pin, RS-422A (for BKDS-7017)	—
D-sub 9-pin or 25-pin, RS-422A	D-sub 9-pin or 25-pin, RS-422A
A and B (2 ch): D-sub 9-pin, RS-422A	D-sub 9-pin, RS-422A (x1 ch)
D-sub 9-pin, RS-422A	D-sub 9-pin, RS-422A
D-sub 9-pin, RS-422A (x2 ch)	D-sub 9-pin, RS-422A (x1 ch)
D-sub 25-pin, 8 inputs/8 outputs, programmable	D-sub 25-pin, 8 inputs/8 outputs, programmable
D-sub 25-pin, 7 inputs/7 outputs, programmable	D-sub 9-pin, 7 inputs/7 outputs, programmable
D-sub 9-pin, RS-422A	D-sub 9-pin, RS-232C
D-sub 9-pin, RS-232C	D-sub 9-pin, RS-232C
DC 5 V, 3.3 V, 12 V, -5 V (from power supply unit)	DC 5 V, 3.3 V, 12 V, -5 V (from power supply unit)
424 x 620 x 492 mm (16 3/4 x 24 1/2 x 19 3/8 inches) 850 x 200 x 496 mm (40 5/8 x 7 7/8 x 19 5/8 inches)	424 x 620 x 492 mm (16 3/4 x 24 1/2 x 19 3/8 inches) 424 x 120 x 400 mm (16 3/4 x 4 3/4 x 15 3/4 inches)
70 kg (154 lb. 5 oz) 30 kg (66 lb. 2 oz)	70 kg (154 lb. 5 oz) 10 kg (22 lb. 1 oz)
<b>HKDS-7695</b>	<b>HKDS-7695</b>
AC 100 to 120 V, 50/60 Hz	AC 100 to 120 V, 50/60 Hz
30 A Max.	30 A Max.
424 x 132 x 542 mm (16 3/4 x 5 1/4 x 21 3/8 inches)	424 x 132 x 542 mm (16 3/4 x 5 1/4 x 21 3/8 inches)
20 kg (44 lb. 1 oz)	20 kg (44 lb. 1 oz)
Rack mounting angles (pre-installed, 1 set) 75 Ω terminator (1), Operation manual (1) Installation manual (1), Maintenance manual part 1 (1)	Rack mounting angles (pre-installed, 1 set) 75 Ω terminator (1), Operation manual (1) Installation manual (1), Maintenance manual part 1 (1)
Key top removing tool (1), Switch chips (11), Operation and Installation Guide (1)	Key top removing tool (1), Switch chips (11), Operation and Installation Guide (1)

## HDME-7000 Specifications

Video inputs/outputs	
Signal standard	HD SDI conforming to SMPTE 292M
Video inputs	HD SDI, (A and B, each for HDME channel 1 and 2)
Key input	HD SDI, (A and B, each for HDME channel 1 and 2)
Video outputs	HD SDI, 2 ch (Channel 1/Channel 2 or combined)
Key outputs	HD SDI, 2 ch (Channel 1/Channel 2 or combined)
External video input	HD SDI, 1 ch
External reference input	HD Tri-level sync, with loop-through output
System interface	
Control panel	D-sub 9-pin or 25-pin, RS-422A
Editor 1 and 2	D-sub 9-pin, RS-422A
Switcher 1 and 2	D-sub 9-pin, RS-422A
Switcher panel	D-sub 9-pin, RS-422A
GPI	D-sub 25-pin, 7 inputs/7 outputs programmable
Terminal	D-sub 9-pin, RS-232C
General	
Power requirement	DC 5 V, 3.3 V, 12 V, -5 V (from power supply unit)
Dimensions (W x H x D, approx.) for processor unit, excluding protruding parts for control panel	424 x 620 x 492 mm (16 3/4 x 24 1/2 x 19 3/8 inches) 424 x 84 x 285 mm (16 3/4 x 3 3/8 x 11 1/4 inches)
Mass (approx.) for processor unit for control panel	70 kg (154 lb. 5 oz) 3.5 kg (7 lb. 11 oz)
Power supply unit HKDM-7690	
Power requirements	AC 100 to 120 V, 50/60 Hz
Current consumption	30 A Max.
Dimensions (W x H x D, approx.)	424 x 132 x 542 mm (16 3/4 x 5 1/4 x 21 3/8 inches)
Mass (approx.)	20 kg (44 lb. 1 oz)
Supplied Accessories	
For processor unit	Rack mounting angles (pre-installed, 1 set) D-sub 25-pin cable, 10 m (1) 75 Ω terminator (1) Operation manual (1) Maintenance manual part 1 (1)

### System Components and Optional Accessories for HDS-7150 System

#### Processor Unit

HDS-7150, Production Switcher Chassis  
HKDS-7031, Chromakey Board  
HKDS-7051, Color Correction Board  
HKDS-7061, Video Modifier Board  
HKDS-7071, Digital Multi Effects Board  
HKDS-7695, Power Supply Unit

\*When HKDS-7071 is installed, the HKDS-7061 is also required for DME-Link functions.

#### Control Panel

BKDS-7001, Control Port Expansion Board  
BKDS-7003, Source Name Display  
BKDS-7017, Switcher Control Panel  
BKDS-7030, Key Frame Control Panel Unit  
BKDS-7031, DME Control Panel Unit  
BKDS-7033, Memory Recall Control Panel Unit  
BKDS-7075, Control Panel Remote Adapter  
BKDS-7091, Redundant Power Supply Unit for BKDS-7017  
HZS-7040, Operation Software for HDS-7150 system

\*BKDS-7075 is required when BKDS-7030/7031/7033 is installed.

#### Peripherals

BKDS-2010, M/E Remote Control Panel  
BKDS-6080, Tally Interface Unit for basic tally functions  
BKDS-7060, Keyer Remote Control Panel

BKDS-7700, Tally Interface Unit for advanced tally functions with router interface  
BKDS-8060, Remote Panel Interface Unit  
BKDS-8061, Memory Recall Remote Panel  
BKDS-8062, AUX Bus Remote Panel  
BKDS-7091, Redundant Power Supply Unit for BKDS-7017  
HZS-7040, Operation Software for HDS-7150 system

### System Components and Optional Accessories for HDS-7100 System

#### Processor Unit

HDS-7100, Production Switcher Chassis  
HKDS-7031, Chromakey Board  
HKDS-7051, Color Correction Board  
HKDS-7061, Video Modifier Board  
HKDS-7071, Digital Multi Effects Board  
HKDS-7695, Power Supply Unit

\*BKDS-7075 is required when BKDS-7030/7031/7033 is installed.

#### Control Panel

BKDS-2010, Switcher Control Panel  
HZS-7060, Operation Software for HDS-7100 system

#### Peripherals

BKDS-2090A, Memory Pack

\*24P capability is available as a standard function for the HDS-7150 and the HDS-7100 systems.

### System Components and Optional Accessories for HDME-7000 System

HDME-7000, Single Channel Digital Multi Effect Chassis  
HKDM-7690, Power Supply Unit (either primary or redundant)  
HKDM-7020, Second Channel DME Board  
HKDM-7030, Wipe Graphics Effects Board  
BKDM-3010, DME Control Panel  
HZDM-7020, Operation Software

\*SVGA monitor required.

\*24P capability is available as order-based or factory-configured for the HDME-7000 system. For the details, please contact your nearest Sony office.

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24P is used as a generic name in this literature, describing the Sony 24PsF method.



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