SONY

PDW-F355 / PDW-F335
XDCAM HD Camcorders

PDW-F75
XDCAM HD Recording Deck

PDW-F30
XDCAM HD Viewing Deck

PDW-U1
Drive Unit

XDCAM HD
Professional Disc System

CINEALTA

Professional Disc™
DL

XDCAM™: The Sony Family of Tapeless Products for File-Based Production

Combining the best of the AV and IT worlds and ideal for quick turnaround projects where deadlines are tight.

XDCAM is the family name of the Sony line-up of tapeless camcorders and decks. The HD line-up is now stronger than ever, and with a choice of XDCAM EX, XDCAM HD and XDCAM HD 422, offers the most flexible path to file-based production. All use MPEG-2 HD data compression to record breathtaking pictures. Simply choose the format best suited to the programme being created.

Tapeless
file-based production

XDCAM EX*

XDCAM EX represents an exciting new low-cost entry point into the world of HD. The first professional HD camcorder to record onto Sony-manufactured "SxS PRO™" memory cards which comply with the ExpressCard™ standard, XDCAM EX can record up to 100 minutes of content onto two removable 16GB cards when recording at 35 Mb/s. Switchable between 1080 and 720 line operation and supporting the major international recording standards up to CineAlta 1080/23.98PsF, XDCAM EX makes it fast and easy to shoot, edit and distribute great quality high definition pictures.

XDCAM HD

XDCAM HD unites high definition picture quality with all the benefits of non-linear, file-based workflow and exceptionally affordable media costs. Featuring camcorders with 1/2-inch interchangeable lenses, and based on the same XDCAM Professional Disc™ technology that has already transformed operational efficiency in the Standard Definition world, XDCAM HD offers an elegant path to HD for cost-conscious users looking to switch analogue production or DVCAM™.

MPEG HD encoding ensures crisp, clear image quality with true 1080-line HD resolution. Recording rates of 18 Mb/s, 25 Mb/s and 35 Mb/s, and with the newest models now supporting 50GB Dual Layer Professional Disc, allows picture quality or record duration to be maximised. Support from more than 35 XDCAM partner vendors also ensures that XDCAM HD fits seamlessly into today's most popular non-linear editing environments.

XDCAM HD 422 (New for 2008)*

XDCAM HD 422 sits at the top of the range in the XDCAM family. The stunning HD picture quality delivered at recording and playback rates of up to 50 Mb/s, with 2/3-inch 1920 x 1080 resolution CCDs, 14 bit A/D conversion and 4:2:2 recording will increase the appeal of Professional Disc for applications such as European TV drama, documentary and for mainstream entertainment programmes that require a high quality look. File-based acquisition with thumbnail and proxy operation is also ideal for fast turnaround news and live applications where speed of production is a critical requirement.

* This brochure contains details of XDCAM HD products. Please refer to separate brochures for XDCAM EX and XDCAM HD 422 for further information on these models.

XDCAM HD

Disc-based Production with Powerful New Features

Sony introduced XDCAM HD in response to rapidly growing expectations for a wider choice of high definition (HD) video production tools. Since launch, XDCAM HD camcorders and decks have been widely adopted around the world by cinematographers, production facilities, broadcasters and video professionals. XDCAM HD not only offers breathtaking HD picture quality, but also enables advanced non-linear recording onto "Professional Disc" - an optical disc media based on blue-violet laser technology. Users have been quick to benefit from the many great features of disc-based operation, including instant random access to recorded material and network capability.

Sony has evolved its XDCAM HD family by introducing two new camcorders, the PDW-F355 and PDW-F335, and a new deck, the PDW-F75, to provide much greater operational flexibility. One of the most significant benefits of the new line-up is a longer recording time of approximately 4.5 hours of 1080i HD video. This is achieved by the use of a newly developed Dual Layer Professional Disc, the PFD50DLA, which has a large storage capacity of 50GB*.

The full line-up now comprises two 1/2-inch three-CCD camcorders, the new PDW-F355 and PDW-F335, plus two decks, the new PDW-F75 and the PDW-F30. The addition of the new PDW-U1 drive unit, which offers compact, mobile, and low cost operation puts the power of XDCAM onto the desktop. It serves as an external PC drive, connected via the Hi-Speed USB (USB 2.0) interface, and allows users to instantly view material recorded to Professional Disc media on their PC. It can also be used as a source feeder to non-linear editing systems.

With greater system flexibility and powerful new features, the enhanced line-up of Sony XDCAM HD products further expands the world of HD for all types of production.

* The PFD50DLA disc cannot be used in the PDW-F30 deck.

XDCAM HD
Versatile, Disc-based HD Recording System

XDCAM HD is a highly versatile production system from Sony that offers flexible recording features including a choice of video frame rates, interlace and progressive scanning, selectable recording data rates and both SD* and HD operation.

* Selectable between 16:9 and 4:3 aspect ratios.

HD 1080 Recording using "MPEG HD" Compression

XDCAM HD products record 1080-line high definition video using "MPEG HD" encoding that uses industry-standard MPEG-2 compression. The use of MPEG-2 compression ensures compatibility with many other devices such as non-linear editing systems and servers.

Selectable Bit Rates

Choosing the highest bit rate of 35 Mb/s results in the highest-quality pictures and a recording time of up to 150 minutes*. Choosing the 18 Mb/s bit rate provides a longer recording time of up to 265 minutes*.

*Approximate time in two-channel audio recording mode with the PFD50DLA (50 GB disc).

Wide Choice of Video Format – Interlace and Progressive Including Native "23.98P"Mode

XDCAM HD products offer a choice of video formats for both frame rates and scanning mode. These include 1080/59.94i, 50i, 29.97P, 25P, and native 23.98P.

High Quality Uncompressed Audio Recording

In addition to HD video recording, high quality audio is an equally significant feature of the XDCAM HD system. XDCAM HD products can record four-channel, 16-bit, 48-kHz uncompressed audio.

HD/SD Switchable Recording and Up/Down Conversion

XDCAM HD camcorders and the PDW-F75 deck* can record in DVCAM™ format in NTSC/PAL and in 16:9 and 4:3, as well as in the MPEG HD format. In addition, both the XDCAM HD camcorders and decks incorporate a down-converter that allows material recorded in HD to be converted to SD and output via the SD video output connectors (including SD composite and i.LINK™**). This enables users to view the material on an SD monitor or transfer it to other SD-based equipment such as a VTR or editor.
The PDW-F75 and PDW-F30 decks also feature an up-converter, which allows material recorded in the DVCAM format to be converted to HD and output via the HD-SDI*** or HD analogue component connectors. These features allow users to easily integrate XDCAM HD into their current infrastructure and to migrate to HD at their own pace.

* The PDW-F75 deck provides DVCAM recording via the SD-SDI or SD analogue composite interfaces, which require the optional PDBK-104.
** i.LINK is a Sony trademark used only to designate that a product is equipped with an IEEE1394 connector. Not all products with an i.LINK connector are guaranteed to communicate with each other. Please refer to the documentation that comes with any device having an i.LINK connector for information on compatibility, operating conditions, and proper connection.
*** HD-SDI output is only available on the PDW-F75.

XDCAM HD Recording Specifications

HD Video Codec	Compression	MPEG-2 MP@HL		
	Sampling Rate	4:2:0		
	Bit Rate and Recording Time* (approx.)		PFD50DLA(50 GB)	PFD23A(23.3 GB)
		HQ 35 Mb/s VBR	145 minutes (4-ch audio)	65 minutes (4-ch audio)
			150 minutes (2-ch audio)	68 minutes (2-ch audio)
		SP 25 Mb/s CBR	190 minutes (4-ch audio)	85 minutes (4-ch audio)
			200 minutes (2-ch audio)	90 minutes (2-ch audio)
		LP 18 Mb/s VBR	248 minutes (4-ch audio)	112 minutes (4-ch audio)
			265 minutes (2-ch audio)	122 minutes (2-ch audio)
	Number of Pixels	1440 x 1080		
SD Video Codec	Compression	DVCAM		
	Sampling Rate	4:1:1 (NTSC)/4:2:0 (PAL)		
	Bit Rate and Recording Time* (approx.)		PFD50DLA(50 GB)	PFD23A(23.3 GB)
		25Mb/s	185 minutes	85 minutes
	Active Lines Per Frame	480 (NTSC)/576 (PAL)		
Audio	Compression	None (Linear PCM)		
	Number of Channels	2 or 4, selectable		
	Sampling Frequency	48 kHz		
	Quantization	16 bits/sample		

*When recording in HQ (35 Mb/s) or LP (18 Mb/s) mode, recording time may be more than the above specified figures depending on the actual bit rate that is adopted during VBR encoding.

In addition to its impressive HD picture quality, what makes the XDCAM HD system unique is its file-based disc recording onto optical professional disc. This brings significant benefits including instant random access and IT connectivity.

Powerful Non-linear Recording onto Professional Disc Media

Professional Disc™ DL

XDCAM HD products use a large capacity non-linear optical disc for recording. This Professional Disc media has been developed by Sony specifically for professional recording applications. The PFD50DLA and PFD23A are 12 cm, reusable optical discs. The PFD50DLA is a Dual Layer Disc with a capacity of 50GB and the PFD23A is a Single Layer, 23 GB disc. The large capacity of the PFD50DLA makes it possible to record up to 265 minutes* of HD material. Professional Disc media is highly reliable and durable because it experiences no mechanical contact during recording or playback, and is packaged into an extremely durable and dust-resistant disc cartridge. The non-contact recording and playback also makes it an ideal media for long-term storage of AV assets.

*This figure is approximate. The precise recording duration will depend on the bit rate selected.

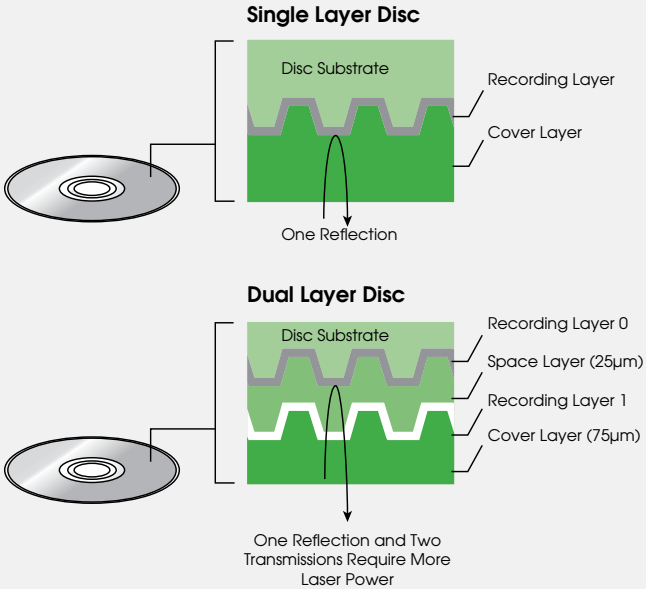
PFD50DLA
Professional Disc

State of the Art Dual Layer Recording

The development of the new Dual Layer Professional Disc, PFD50DLA brings a much longer recording time to the XDCAM HD system. This large capacity disc and compatible disc drive, is based on four new technologies:

1 > Increased recording density and the Dual Layer Disc structure offer more than twice the capacity of the Single Layer Disc.
2 > The new substrate and production method enhance the stable reflection and transmission of the laser.
3 > The new pickup uses much higher laser power - enough to record on a Dual Layer Disc, while maintaining a long life equivalent to the pickup used for Single Layer Disc recording.
4 > The newly developed servo-control mechanism - which is resistant to the noises that occur at laser reflections and transmissions at each layer - ensures fewer access errors, even in unstable situations.

In addition to these new technologies, the Dual Layer Disc provides the same exceptional robustness and reliability as the Single Layer Disc.



File-based Disc Recording

IT/Network Friendly

Sony XDCAM HD products record material as data files using the industry-standard MXF (Material eXchange Format) file format. This allows material to be handled with great flexibility in an IT-based environment - easily available for copying, transferring, sharing and archiving. These operations are accomplished without the need for "digitising". File-based data copying allows for degradation-free dubbing of AV content, which can be performed easily on a PC. The file-based recording system also allows material to be viewed directly on a PC, simply by linking it to the XDCAM unit via an i.LINK or Hi-Speed USB (USB 2.0) connection*. This works in the same way as a PC reading files on an external drive.

XDCAM HD camcorders and decks are equipped with IT-friendly, PC-based interfaces. These include an i.LINK interface supporting DV OUT and File Access Mode as standard, and a Gigabit Ethernet interface available on the PDW-F75 and PDW-F30 decks as an option. Connecting the XDCAM HD system to an Ethernet network offers users a new style of network-based operation that can dramatically improve the efficiency of their workflow. The PDW-U1** drive uses the common USB interface for easy connectivity and wide compatibility with most PCs.

*Supported interfaces vary by products.
**The initial version of the PDW-U1 is read-only, and cannot write files onto Professional Disc media. This capability will be available with a software upgrade targeted for release in Spring 2008.

No Overwriting of Footage

Instant recording with no overwriting of existing footage makes each new recording on an empty area of the disc. This prevents accidental recording over good takes and eliminates the need for searching for the correct position to start the next recording. In short, it means the camcorder is always ready for the next shot.

Scene Selection Function

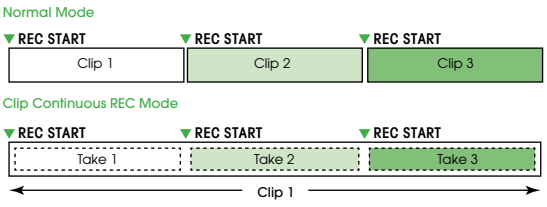
The Scene Selection function allows simple cuts-only editing* to be performed within the camcorder or deck. The result of the edit can be saved as an XDCAM EDL (known as a "Clip List"), which can be written back to the original disc to stay with the material. The disc can then be replayed according to the Clip List so that only selected portions are played out in the required order. The Scene Selection function presents dramatic improvements over conventional workflows, especially when transferring material to a non-linear editor or server, or when searching for material or edit points in linear editing systems. When GUI-based operation is preferred, the Scene Selection operation can also be performed on a PC running the PDZ-1 Proxy Browsing Software. This is supplied with all XDCAM products, providing a visually familiar working environment.

*The video and audio of a clip cannot be edited independently.

Selectable Modes of File Recording

XDCAM HD camcorders and the PDW-F75 deck provide two modes for file recording. In standard operation, one clip file is created each time recording is started and stopped*. The other mode, called Clip Continuous REC mode, which is a feature of the PDW-F335, PDW-F355, and PDW-F75**, allows one clip file to be created containing a number of takes*. Although it is a single clip, Thumbnail searching and the Expand function are available as if individual clips had been created. Users can choose the most suitable mode depending on the type of application.

*Each take needs to be longer than two seconds.
**Available when recording is remotely controlled via an RS-442A or RS-232C interface, or during Trigger REC mode via an HD-SDI interface.



Thumbnail Pictures for Instant Access to Files

With all XDCAM HD products, video and audio are recorded as a clip file each time a recording is started and stopped. During playback, cue-up to the next or previous clips is possible simply by pressing the 'Next' or 'Previous' button, as you would do on a CD or DVD player. Furthermore, thumbnails are automatically generated for each clip as a visual reference, allowing operators to cue-up to a desired scene simply by guiding the cursor to it. The 'Expand' function allows one selected clip in the Thumbnail display to be divided into 12 even-time intervals, each with their own thumbnail identifier. This is useful when searching for a specific scene within a lengthy clip.

Expand Function

Proxy Data for Streamlined Workflow

At the same time as recording high-resolution video and audio data, XDCAM HD also records a low-resolution version of this AV data on the disc. Called "Proxy Data", this is much smaller in size than the high-resolution data (1.5 Mb/s for video and 0.5 Mb/s for audio), and its format is identical to that used in the standard definition XDCAM line-up.
Because of its lower resolution, Proxy Data can be transferred to a standard computer at a much higher speed, and can be browsed and edited using the PDZ-1 Proxy Browsing Software (or other compatible editing software offered by many industry-leading manufacturers). The PDZ-1 software can also convert the Proxy Data to ASF format for replay via Windows Media Player for widespread viewing on the desktop. Proxy Data can also be viewed directly on a PC without data transfer using an i.LINK (File Access Mode) connection, and can be transferred via a standard Ethernet network. The flexibility of Proxy Data means that it can be used for a variety of applications, such as immediate logging on location, off-line editing, client approvals and more.

Easy Integration into Editing Systems

XDCAM HD products are equipped with both conventional AV and IT-based interfaces for integration into a wide array of editing environments. These interfaces* include HD-SDI, HD analogue component video, analogue/digital audio and RS-422A 9-pin remote control - for connection to a wide variety of VTRs, linear and non-linear editors and audio mixers. SD interfaces**, including SD-SDI and SD analogue composite, are also provided for down-converted SD outputs, allowing the XDCAM HD system to be integrated into conventional SD-based editing environments as well.
XDCAM HD devices** also provide an i.LINK interface that supports DV OUT and File Access Mode. Recordings made in both MPEG HD and DVCAM formats can be output as DV files via the i.LINK port and for use in DV-based non-linear editing systems. The i.LINK (File Access Mode) allows not only SD (DVCAM) files but also HD (MPEG HD) files to be written (recorded) onto and read from Professional Disc media.
This allows the user to implement an extremely compact and affordable HD non-linear editing system, using an XDCAM HD camcorder or deck and an i.LINK-compatible laptop PC.
Another new, powerful, yet cost-effective option for desktop editing is the PDW-U1 drive unit. This can serve as an external drive of a PC via its USB interface, and performs high-speed transfer of material from Professional Disc media to a non-linear editing system***.

*The supported interfaces vary by product.
**Except on the PDW-U1.
***The initial version of the PDW-U1 is read-only, and cannot write files onto Professional Disc media. However, this capability will be available with a software upgrade targeted for release in Spring 2008.

Metadata

All XDCAM HD camcorders and decks can record metadata, as well as the video and audio essence. Information such as production dates, creator names and camera setup parameters can be stored together with the AV material on the disc using the supplied PDZ-1 software. This makes it possible to organize and search through all recordings effectively. One particular metadata, called EssenceMark™ (Shot Mark), is a convenient reference that can be added to selected frames for instant access during editing.

EssenceMark (Shot Mark 1) Display

Easy Maintenance and High Reliability

Unlike tape-based systems, there is no mechanical contact between the equipment and recording media. This ensures a high level of durability, long media life and high resistance to shock and vibrations.

XDCAM **HD** Camcorders

PDW-F355/PDW-F335 Camcorder

The PDW-F355 and PDW-F335 are highly versatile and cost-effective high definition camcorders. They are equipped with three 1/2-inch HD CCDs and record 1080/50i, 59.94i, 23.98P, 25P and 29.97P pictures. Both models can also record in DVCAM mode. The PDW-F355 and PDW-F335 are packed with features for creative shooting such as interval recording, slow-shutter operation and a selection of gamma curves for precise image control. In addition, the PDW-F355 provides a "Slow & Quick Motion" function, for film-like "over-cranking" and "under-cranking".

Disc recording provides a number of benefits that are especially useful during shooting. For example, because new footage is always recorded onto an empty area of the disc, there is no need to cue-up to the next recording position before shooting. This means that operators can start recording without the worry of accidentally recording over existing footage.

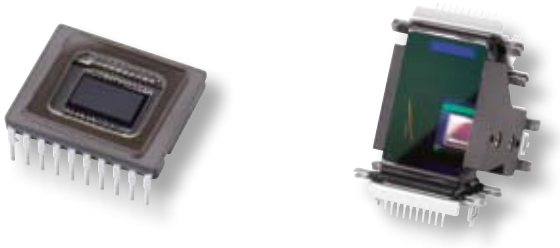
In short, XDCAM HD camcorders are ideal for a broad range of applications, including news gathering, field production, event shooting, TV entertainment and documentaries.

PDW-F335

PDW-F355

Three 1/2-inch Power HAD HD CCDs

The PDW-335 and PDW-355 are equipped with three 1/2-inch HD Power HAD™ CCDs, each with a high density of approximately 1.56 megapixels (1440 x 1080). These extremely high-performance CCDs provide a sensitivity of F9 (at 2000 lx, 3200K), a signal-to-noise ratio of 54 dB, and a low vertical smear level of -120 dB.



12-bit A/D Conversion

XDCAM HD camcorders incorporate high-integrity 12-bit A/D converters which allow images captured by the Power HAD CCDs to be processed with great precision. This high-resolution A/D conversion allows the contrast to be reproduced faithfully in both mid-to-dark tone and bright areas of the picture.

Advanced Digital Signal Processing (ADSP)

A key to quality in Digital Signal Processing is how many bits are used in non-linear processes, such as gamma correction. The ADSP used in XDCAM HD uses more than 30 bits, minimising rounding errors to maintain a high quality image. The ADSP also provides highly sophisticated image controls, such as skin tone detail control and Dynamic Contrast Control.

Multi-format Recording in HD/SD and Interlace/Progressive

Users can record in either HD (MPEG HD) or SD (DVCAM) and in interlace (50i or 59.94i) or progressive (23.98P, 25P, 29.97P) mode.

Creative Versatility for Movie Making

The PDW-335 and PDW-355 , camcorders are part of Sony's CineAlta family, and provide many creative features for movie production. Slow & Quick Motion (PDW-F355 only) provides stunningly impressive slow and fast motion images and Interval Recording can be used for "Time-Lapse" operation.

Slow & Quick Motion (PDW-F355)

The PDW-F355 offers a powerful Slow & Quick Motion function. This enables users to create elegant fast- and slow-motion footage - commonly refered to as over- and under-cranking in the film world. The PDW-F355 can capture images at frame rates selectable from four fps (frame per second) to 60 fps in increments of 1 fps. For example,when viewed at 23.98P, images captured at four fps will appear six times faster than normal. Conversely, images captured at 60 fps will appear 2.5 times slower than normal. The quality of the slow- and fast-motion images created using the Sony PDW-F355 camcorder is extremely high. Users can see the results directly in the camcorder's LCD screen. This ensures maximum creativity during the shooting process.

Format	Capturing
23.98P/29.97P	4P-60P in 1P increments
25P	4P-50P in 1P increments

*When capturing at 31-60 fps (in 23.98P/29.97P mode)/26-50 fps (in 25P mode), the camcorders provide lower vertical resolution than in normal capturing mode.
*This function is available when the recording mode is set to "MPEG HD".

Multi-camera operation in 23.98P Mode

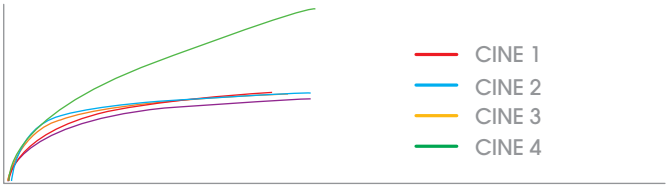
The PDW-F355 camcorder has a Genlock video input that can accept a 23.98PsF signal input. This allows multi-camera operations in 23.98P mode. The camcorder can also output 23.98PsF pictures as well as 2-3 pull-down converted images from the HD-SDI connector.

Interval Recording Function

XDCAM HD camcorders feature Interval Recording, which records pictures at pre-determined intervals. This is ideal for shooting over long periods of time and also when creating pictures with special effects such as fast motion "Time-Lapse".

Selectable Gamma Curves

Operators can choose from five gamma curves (Standard, CINE 1, 2, 3 and 4). The CINE 1-4 gamma curves provide natural tonal reproductions for scenes with wide dynamic range. The CINE 1 and 2 curves are inherited from HyperGamma, which is available in the top-of-the-range HDCAM CineAlta camcorders.



A Wide Choice of Lenses

A variety of 1/2-inch HD lenses are available from major manufacturers for use with XDCAM HD camcorders.
A 2/3-inch lens* can also be used with an optional LO-32BMT lens adaptor. This allows users to choose from a broad range of lenses, including cinema-style lenses, according to their shooting requirements.

*In this configuration, the resulting focal length will be 1.37 times the actual focal length of the lens.

Low-Light Shooting With 'Slow Shutter' and 'Turbo Gain'

XDCAM HD camcorders offer Slow Shutter and Turbo Gain for shooting in low-light conditions. These can be used separately or together depending on the shooting conditions or the operator's preference.
The Slow Shutter function allows shutter speeds longer than the frame rate to be used to intentionally blur images of moving objects. The Turbo Gain function allows the camera gain to be increased by up to +48 dB.

Noise Reduction

XDCAM HD camcorders incorporate noise reduction to reproduce low-light scenes more clearly.

Picture Cache Recording

Picture Cache Recording provides up to 12 seconds of loop recording using solid state memory. When the camcorder is in Standby mode and the REC button is pressed, everything that happened up to 12 seconds before that moment can be recorded to disc. Valuable shots, which would otherwise have been missed, can be captured.

Precise Image Control

Advanced image control features such as Skin Tone Detail and Dynamic Contrast Control allow operators to create stunning images.

High Quality Audio

Four channels of uncompressed digital audio can be recorded at 16 bit resolution and 48kHz sampling.

Compact and Lightweight

A compact, lightweight and ergonomically well balanced design provides a high level of mobility and comfort in various shooting situations. The camcorders weigh only 5.5 kg (12 lb 2 oz) including viewfinder, microphone, disc, and BP-GL95 battery.

Rugged, Reliable Operation

A number of unique design features are used to minimise errors caused by shock or by dust entering the disc drive. The disc drive entrance is concealed by two lids, helping to prevent dirt or moisture from entering the drive. In addition, four rubber dampers are used to hold the disc drive block in place and to absorb mechanical shocks.

3.5-inch* Colour LCD Screen

A large, easy-to-view, colour LCD screen on the camcorder's side panel enables operators to instantly review recorded footage, as well as access the camera's set-up menus and view status information such as the audio meters and the remaining disc and battery time. It also enables advanced operations such as Thumbnail Search and Scene Selection.

*Viewable area measured diagonally.

Wide Variety of Interfaces

XDCAM HD camcorders are equipped with a wide range of interfaces as standard. These are listed in the table below:

	PDW-F355	PDW-F335
Input	Front stereo microphone, audio (2-ch), timecode, genlock	Front stereo microphone, audio (2-ch), timecode*, genlock
Output	HD-SDI/SD-SDI, SD analogue composite, timecode, audio (XLR 5-pin)	HD analogue component**/SD analogue component (select-able), SD analogue composite, timecode*, audio (Pin jack)
Others	i.LINK	i.LINK

*The timecode input and output of the PDW-F335 share the same connector.
**1080/23.98P recordings are output as 1080/59.94i signals via 2-3 pull-down.

2-inch Monochrome Viewfinder

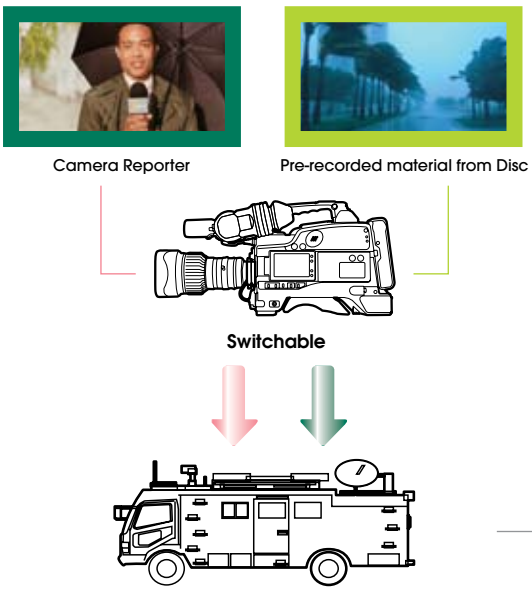
The PDW-F355 and the PDW-F335 are equipped with a DXF-20W 2.0-inch* monochrome viewfinder as standard. This enables precise manual focusing when shooting in HD in 16:9.

*Viewable area measured diagonally

"Live & Play" Function

The PDW-F355 camcorder has a"Live & Play"function that can simultaneously output both playback signals (images already recorded) and incoming camera signals (images seen through the viewfinder). Both signals are fed to their respective output and viewfinder connectors independently and can be viewed at the same time. This allows users to frame the next shot, adjust the exposure and focus the lens while the camcorder is playing back recordings from the disc.

Example of Use for News Gathering



Other Camcorder Features

- Built-in ND filter wheel: Clear, 1/4ND, 1/16ND, 1/64ND
- Down-converted output: MPEG HD playback can be converted to SD and output via the SD composite, component*, or i.LINK (DV OUT) connector
- Freeze Mix: superimposes a pre-recorded image in the view finder. This allows the operator to quickly and easily frame or reposition a subject when a shot must be taken from the same position as a previous take
- Thumbnail Search operation
- Expand function
- Scene Selection function for in-camera cuts-only editing**
- Ability to write an EDL (the result of Scene Selection) back onto disc
- Proxy Data recording
- Four assignable buttons: two on the camera handle and two on the inside panel,which enable operators to assign frequently used functions
- Auto Tracing White Balance for automatic adjustments of camera colour temperature according to lighting changes
- Memory Stick™ and Memory Stick Pro™ media (up to 2 GB): for storage of camcorder setup files
- Metadata recording: UMID, Extended UMID, EssenceMark (Shot Mark)
- A Sony WRR-855 Series Wireless Microphone Receiver can be attached to the camcorder via the CA-WR855 adaptor
- Remote control operation via the Sony RM-B150 and RM-B750 remote control units
- Intelligent light system synchronises strobe on/off to the REC button
- Four types of software supplied***: PDZ-1 Proxy Browsing Software, PDZ-VX10 XDCAM Viewer Software, Proxy Viewer Software and PDZK-P1 XDCAM Transfer Software (for use with Apple Final Cut Pro™)

*SD component output is only available on the PDW-F335.
**The video and audio cannot be edited independently.
***The latest versions of software can be downloaded from the Sony Website. Please contact your nearest Sony office for details.

Side

Rear

Connector Panel (PDW-F355)

Connector Panel (PDW-F335)

Side

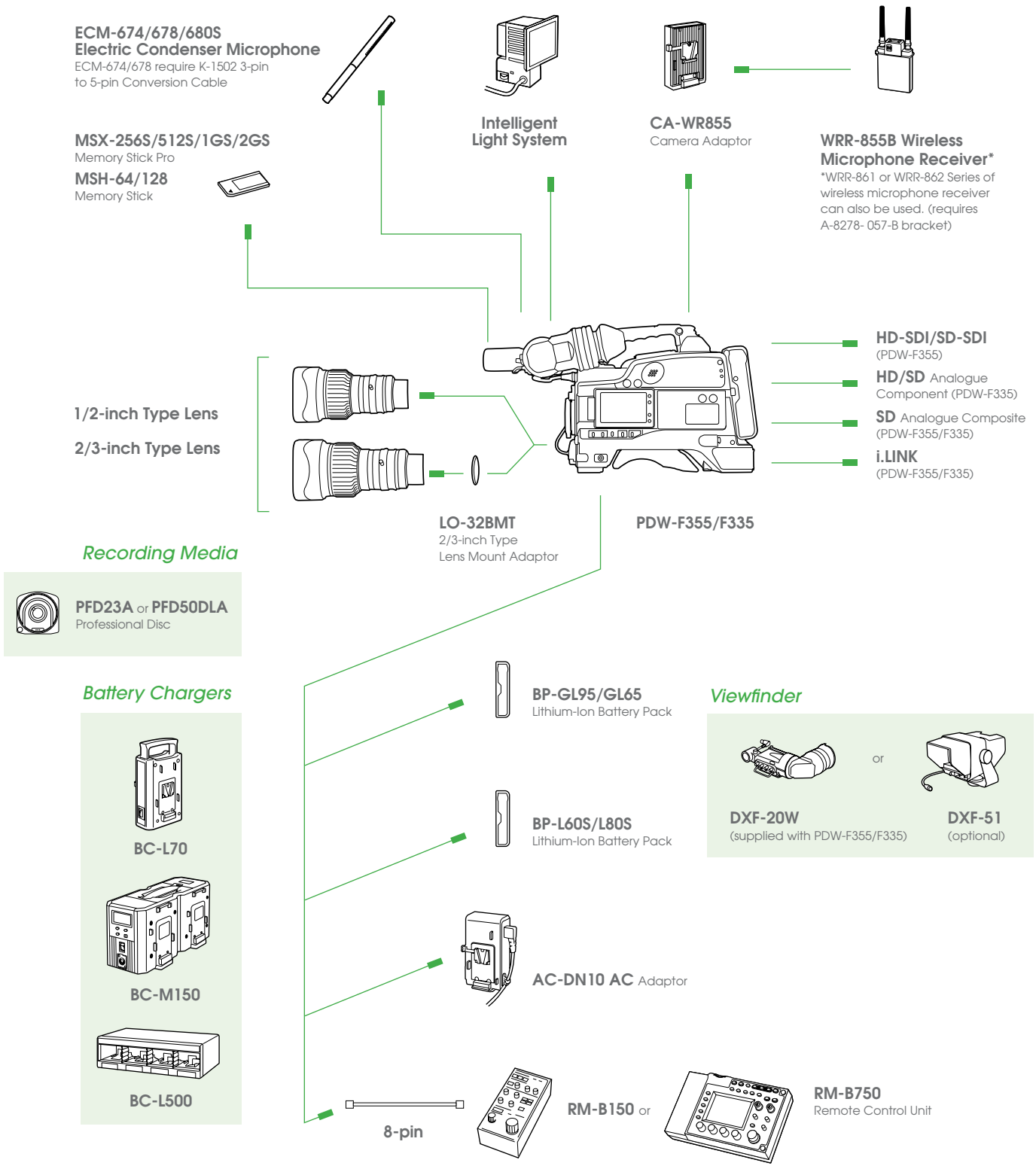
Rear

Side

Rear

Camcorder System Diagrams

Unless specified as "supplied", all the components below are optional.



XDCAM **HD** Decks / Drive

PDW-F75 Recording Deck / PDW-F30 Viewing Deck / PDW-U1 Drive Unit

XDCAM HD decks are highly versatile and are ideal for many different applications including HD video recording, editing, playout, archiving and presentations at large exhibition or conference venues.

The PDW-F75 is a fully-featured recording deck that can record in both high definition (MPEG HD) and standard definition (DVCAM) modes*. It can record onto both PFD50DLA Dual Layer and PFD23A Single Layer Professional Disc and provides up to 4.5 hours of HD recording onto one PFD50DLA. The PDW-F75 is equipped with a comprehensive range of interfaces for integration into both AV and IT-based systems. HD-SDI input and output, HD analogue component and composite outputs and more are provided.

The PDW-F30 is a viewer and NLE feeder, which can also record MXF files (in both MPEG HD and DVCAM) via its i.LINK (File Access Mode) or Ethernet** interfaces. It works with PFD23A Single Layer Professional Discs.

Both models can also input and output a 25 Mb/s HDV stream (MPEG-2 TS) for interfacing with HDV™ products or HDV-based non-linear editors via their i.LINK port***.

The PDW-F75 and PDW-F30 have been designed to offer maximum speed of operation. They are equipped with a VTR-like jog dial, providing familiar and fast control of playback. In addition to the random-access capability, "Thumbnail Search", "Expand" and "Scene Selection" functions significantly increase operational efficiency.

*Possible from inputs via the SD-SDI or SD analogue composite interfaces, which require the optional PDBK-104 board.
**Requires the optional PDBK-101 board.
***Requires the optional PDBK-102 board.

PDW-F30

PDW-F75

PDW-F75

PDW-F30

		PDW-F75	PDW-F30
Input	HD-SDI	•	-
	HD analogue component	• w/PDBK-103	-
	RGB	• w/PDBK-103	-
	SD-SDI	• w/PDBK-104	-
	SD analogue composite	• w/PDBK-104	-
	Digital audio	•	-
	Analogue audio	•	-
	Timecode	•	-
	Reference	•	-
Output	HD-SDI	•	-
	HD analogue component	•*	•*
	RGB	•*	•*
	SD-SDI	•	-
	SD analogue composite	•	•
	Digital audio	•	-
	Analogue audio	•	•
	Audio monitor	•	•
	Timecode	•	-
Others	i.LINK (DV OUT)	•	•
	i.LINK (File Access Mode)	•	•
	i.LINK (HDV)	I w/PDBK-102	• w/PDBK-102
	Ethernet	I w/PDBK-101	• w/PDBK-101
	Remote	RS-422, RS-232C	RS-422, RS-232C

Common Features of the PDW-F75 and PDW-F30

> Playback of MPEG HD and DVCAM material
> Down-converted output: replayed HD pictures can be converted to SD signals and output via the SD-SDI*, SD composite, and i.LINK (DV OUT) connectors.
> Up-converted output: replayed DVCAM can be converted to 1080i HD and output via the HD connectors.
> Thumbnail Search operation
> Expand function
> Scene Selection function for in-deck cuts-only editing**
> Equipped with a Jog/Shuttle dial, providing
Jog: +/1 times normal speed
Variable: -1 to +2 times normal speed
Shuttle: +/-20 times normal speed
> 16:9, 3.5-inch*** colour LCD screen for displaying replayed pictures, audio monitors, timecode and setup menus
> Repeat playback
> A simple Remote Commander™ unit is supplied.
> Gigabit Ethernet capability for network-based file transfer (requires the optional PDBK-101 board)
> Input and output of a 25 Mb/s HDV stream (MPEG-2 TS) for interfacing with HDV products or HDV-based non-linear editors via an i.LINK port (requires the optional PDBK-102 board)
> Compact and lightweight design; can be placed either horizontally or vertically
> Four types of software supplied****: PDZ-1 Proxy Browsing Software, PDZ-VX10 XDCAM Viewer Software, Proxy Viewer Software and PDZK-P1 XDCAM Transfer Software (for Apple Final Cut Pro)

* SD-SDI interface is available only on the PDW-F75 deck.
** The video and audio cannot be edited independently.
*** Viewable area measured diagonally.
**** The latest versions of software can be downloaded from the Sony Website. Please contact your nearest Sony office for details.

Interface Options

Four optional boards are available:
> PDBK-101: Provides a Gigabit Ethernet interface with the PDW-F75 and PDW-F30
> PDBK-102: Allows a 25 Mb/s HDV stream (MPEG-2 TS) to be input and output between the PDW-F75/F30 decks and an HDV device
> PDBK-103: Adds HD analogue component and RGB inputs to the PDW-F75 (these inputs share the same BNC connectors)
> PDBK-104: Adds the SD-SDI and SD composite inputs to the PDW-F75

* Only one of the PDBK-102, PDBK-103 or PDBK-104 boards can be installed at any one time.

XDCAM **HD** Product Features

PDW-U1

The PDW-U1* is a powerful addition to the XDCAM HD line-up, which brings XDCAM HD operation to the desktop.
The PDW-U1 allows material recorded on Professional Disc media to be viewed directly on a PC via its USB interface.
It can also be used as a source feeder for non-linear editing systems. The PDW-U1 can handle both XDCAM HD and SD discs, providing a high level of versatility.
Its compact and lightweight design makes it equally ideal for field and in-house operation.

- Handles files in all XDCAM HD and SD formats
- Handles both the new Dual Layer Disc (PFD50DLA) and Single Layer Disc (PFD23A)
- Supports the Hi-Speed USB (USB 2.0) interface - compatible with most PCs
- Direct access to files on Professional Disc media from a USB-connected PC
- High-speed file transfer
- Material browsing using the supplied PDZ-VX10 XDCAM Viewer software** and PDZ-1 Proxy Browsing software**
- Compact and lightweight
- Dimensions (W x H x D): 59 x 164 x 226 mm (2 3/8 x 6 1/2 x 9 inches)
- Mass: 1.4 kg (3 lb 1 oz)
- Can be operated either horizontally or vertically

* The initial version of the PDW-U1 is read-only, and cannot write files onto Professional Disc media. This capability is scheduled to be available with a software upgrade targeted for release in Spring 2008.
** The latest versions of software can be downloaded from the Sony Website. Please contact your nearest Sony office for details.

PDW-U1 Drive Unit

		PDW-U1
Power requirements		DC 12 V
Power consumption		10 W
Operating temperature		5 to 40 °C (+41 to +104 °F)
Strage temperature		-20 to +60 °C (-4 to +140 °F)
Humidity		20 to 90% (relative humidity)
Mass		1.4 kg (3 lb 1 oz)
Dimensions		59 x 164 x 226 mm (2 3/8 x 6 1/2 x 9 inches)
Recording playback format (availaible Spring 2008)	Video	MPEG HD (35/25/18 Mb/s) MPEG IMX (50/40/30 Mb/s) DVCAM (25 Mb/s)
	Proxy Video	MPEG-4
	Audio	MPEG HD: 4/2 ch/16 bits/48 kHz MPEG IMX: 8 ch/16 bit/48 kHz, or 4 ch/24 bit/48 kHz DVCAM: 4 ch/16 bit/48 kHz
	Proxy Audio	A-law (8/4/2 ch/8 bit/8 kHz)
Interfaces		Hi-Speed USB (USB 2.0) x1
Supplied accessories		Operation manual (x1) PDZ-1 Proxy Browsing Software (x1) PDZ-VX10 XDCAM Viewer Software (x1) Proxy Viewer Software (x1) PDZK-P1 XDCAM Transfer Software (x1) Setup utility software (x1)

Optional Accessories

For PDW-F355/F335 Camcorders

PFD23A
Professional Disc

PFD50DLA
Professional Disc

LO-32BMT
2/3-inch Lens Mount Adaptor

DXF-51
5-inch type B/W Viewfinder
**Requires optional accessory shoe kit (A-8274-968-B)*

BP-GL95/GL65
Lithium-ion Battery Pack

BP-L60S/L80S
Lithium-ion Battery Pack

BC-L70
Battery Charger

BC-M150
Battery Charger

BC-L500
Battery Charger

AC-DN10
AC Adaptor

RM-B150
Remote Control Unit

RM-B750
Remote Control Unit

CA-WR855
Camera Adaptor for
WRR-855A/855B

WRR-855A/855B
Wireless Microphone Receiver

WRT-8B
Wireless Transmitter

WRR-862B
Wireless Microphone Receiver
**Requires optional mounting bracket (A-8278-057-A)*

ECM-674/678
Shotgun-type Electret
Condenser Microphone
**Requires K-1502 3-pin to 5-pin Conversion Cable*

ECM-680S
Shotgun-type Electret
Condenser Microphone

LC-H300
Carrying Case (Hard)

LC-DS300SFT
Carrying Case (Soft)

LCR-1
Rain Cover

MSX-256S/512S/1GS/2GS
Memory Stick Pro
MSH-64/128
Memory Stick

VMC-IL4615B/IL4635B
i.LINK Cable
(4-pin to 6-pin, 1.5 m/3.5 m)

VMC-IL6615B/IL6635B
i.LINK Cable
(6-pin to 6-pin, 1.5 m/3.5 m)

WRT-847B
Wireless Microphone
Transmitter

Optional Accessories

1/2-inch Type HD Lenses* and accessories for PDW-F75/F30 Decks

Canon
KH21ex5.7 IRSE

Canon
KH16ex5.7 IRSE

Canon
KH10ex3.6 IRSE

Canon
KH20x6.4 KRS

Canon
KH13x4.5 KRS

Fujinon
XS17x5.5BRM/BRD

Fujinon
XS13x3.3BRM/BRD

Fujinon
HS18x5.5BERM/BERD

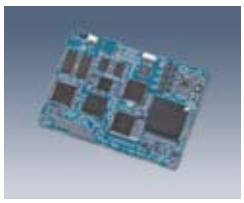
Fujinon
HS16x4.6BERM/BERD

For PDW-F75/F30 Decks

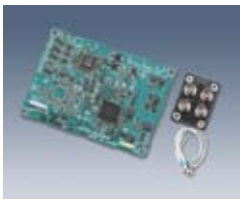
PFD23A
Professional Disc

PFD50DLA**
Professional Disc

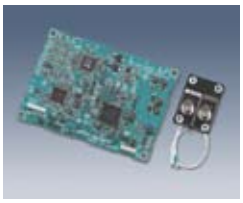
PDBK-101
Network Board



PDBK-102
MPEG-2 TS In/Out Board*



PDBK-103
HD Analogue Input Board*



PDBK-104
SD Input Upconverter Board***

RM-280
Editing Controller

RCC-5G
Remote Control Cable (5 m)

VMC-IL4615B/IL4635B
i.LINK Cable
(4-pin to 6-pin, 1.5 m/3.5 m)

VMC-IL6615B/IL6635B
i.LINK Cable
(6-pin to 6-pin, 1.5 m/3.5 m)

* For details, please contact each manufacturer.
** The PFD50DLA disc cannot be used in the PDW-F30 deck.
*** Only one of the PDBK-102, PDBK-103 or PDBK-104 boards can be installed at any one time.

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Sony Training Services

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XDCAM **HD** Application Software

All XDCAM HD products come with a variety of free software applications that maximise the benefit of the XDCAM system.

PDZ-1

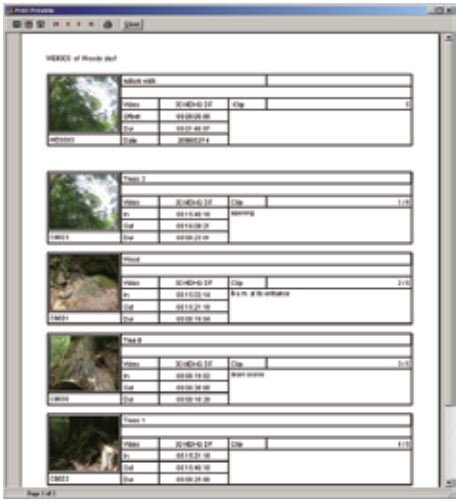
PDZ-1 software is an easy-to-use PC application that allows users to browse and storyboard video clips recorded by an XDCAM system. It runs on Windows-based PCs and supports three types of interface: i.LINK (File Access Mode), Ethernet, and USB (only for connection with the PDW-U1).
Once Proxy Data recorded on a Professional Disc media is transferred to a PC with the PDZ-1 software installed, users can view and storyboard recorded footage directly on the PC. The PDZ-1 software also provides a variety of tools for disc operations including entire or partial disc copy (dubbing), and transfer between two XDCAM devices.
Storyboarding on a PC not only allows users to preview their edited sequences instantly, it also provides other powerful benefits such as the creation of ASF files (playable on Windows MediaPlayer), the creation and export of EDL data in various formats, and the transfer of high-resolution clips selected in the edited sequence.

PDZ-1 Main GUI

PDZ-1 Features

- Supported interfaces: i.LINK (File Access Mode), Ethernet, and USB (only for connection with the PDW-U1)
- High-speed ingest of Proxy Data from an XDCAM device
- Browsing of Proxy Data recorded by the XDCAM systems (including those recorded in SD operation)
- Simple and quick cuts-only editing (storyboarding)* with the following fuctions;
  - Preview a result of the storyboard on the PC
  - Save the results as a Clip List (XDCAM EDL)
  - Convert the Proxy Data on the storyboard to an ASF file for replay on Windows Media Player
- Export the Clip List in AAF, BE-9100, NewsBase™ XML, and ALE (Avid Log Exchange) formats
- Transfer high-resolution clips according to the Clip List
- Disc copy – entire disc (all clips) or only selected clips
- Transfer selected clips with margins at the head and tail of the clips
- Registration of metadata such as "title", "creator", or "comments" for a disc or clip
- Registration of "EssenceMark" metadata for instant cue-up to desired scenes. Names for the EssenceMark can also be easily assigned
- Automatic renaming of clips by predetermined rule (use-predetermined prefix plus sequential numbers)
- Clip search function using the registered metadata as a keyword
- Print function allows metadata such as thumbnails, creation date, and comments to be printed out in an easy-to-see storyboard view

* The video and audio of a clip cannot be edited independently.



Print Function

System requirements

OS: Windows XP (SP2 or later) (for PDW-F355/F335/F75/F30/U1)
Windows Vista Business 32 bit/Ultimate 32 bit (for PDW-U1)
CPU: Pentium M Processor or higher
NOTE: When using Live Logging Mode, recommended CPU is Pentium 4 2GHz or higher
RAM: 512 MB or more
Others: Internet Explorer 6.0 (SP1 or later), DirectX 8.1b or later

PDZ-VX10 Sony XDCAM Viewer

The PDZ-VX10 software allows users to view high-resolution and Proxy MXF files recorded by XDCAM systems on their PC. With this software installed, thumbnails for all clips can be displayed in Windows Explorer, enabling the contents of the disc to be scanned through easily and quickly.

System requirements
OS: Windows XP (SP2 or later) (for PDW-F355/F335/F75/F30/U1)
Windows Vista Business 32 bit/Ultimate 32 bit (for PDW-U1)
CPU: Intel® Core™ Duo processor 1.83GHz or higher
or Intel Pentium 4 3GHz or higher
RAM: 1 GB or more
Others: Internet Explorer 6.0 (SP1 or later), DirectX 9.0c or later

The video playback performance will vary depending on the video format, file size, and the performance of the computer used. For more details on system requirements, please contact your nearest Sony office.

Proxy Viewer

The Proxy Viewer is a simple application to playback Proxy Data on a PC.

System requirements
OS: Windows XP (SP2 or later) (for PDW-F355/F335/F75/F30/U1)
Windows Vista Business 32 bit/Ultimate 32 bit (for PDW-U1)
CPU: Pentium M Processor or higher
RAM: 512 MB or more
Others: Internet Explorer 6.0 (SP1 or later), DirectX 8.1b or later

PDZK-P1 XDCAM Transfer to Apple Final Cut Pro™ non-linear editing systems

PDZK-P1 is a plug-in for Apple Final Cut Pro that provides native support for MXF files input from a XDCAM device. With this software installed, XDCAM devices can be mounted on Mac Finder via a FireWire/i.LINK connection and users can seamlessly import, edit and export recorded material.

System requirements
OS: Mac OS X version 10.4.10 or later
CPU: PowerPC G5 2GHz, Intel Core2Duo 2GHz, Intel Xeon 2GHz or higher
Others: QuickTime version 7.2 or later
Final Cut Pro version 6.0.1 or later

The latest versions of PDZK-P1 software can be downloaded from the Sony Website. Please contact your nearest Sony office for details.

XDCAM **HD** Camcorders Specifications

General			PDW-F355L	PDW-F335L
Mass			Approx. 3.9 kg (body, 8 lb 10 oz)	Approx. 3.8 kg (body, 8 lb 6 oz)
Power requirements			DC 12 V +5.0 V/-1.0 V	
Power consumption			Approx. 34 W (while recording, with viewfinder, colour LCD ON, manual lens)	Approx. 30 W (while recording, with viewfinder, colour LCD ON, manual lens)
Operating temperature			-5 to 40 °C (+32 to +104 °F)	
Storage temperature			-20 to +60 °C (-4 to +140 °F)	
Humidity			0 to 90% (relative humidity)	
Continuous operating time			Approx. 150 min. w/BP-GL95 battery	Approx. 160 min. w/BP-GL95 battery
Recording format	Video		DVCAM (25 Mb/s) MPEG HD (MPEG-2 MP@HL) HQ mode (VBR,maximum bit rate : 35 Mb/s) SP mode (CBR 25 Mb/s) LP mode (VBR,maximum bit rate : 18 Mb/s)	
	Proxy Video		MPEG-4	
	Audio		MPEG HD: 4 ch or 2 ch, 16 bits/48 kHz DVCAM: 4 ch, 16 bit/48 kHz	
	Proxy Audio		A-law (4 ch/2 ch, 8 bit, 8 kHz)	
Recording/Playback time			PFD50DLA(50 GB) and PFD23A(23.3 GB)	
	DVCAM		185 minutes	85 minutes
	MPEG HD	HQ, 35Mb/s VBR	145 minutes(4-ch audio) and 65 minutes(4-ch audio) 150 minutes(2-ch audio) and 68 minutes(2-ch audio)	
		SP, 25Mb/s CBR	190 minutes(4-ch audio) and 85 minutes(4-ch audio) 200 minutes(2-ch audio) and 90 minutes(2-ch audio)	
		LP, 18Mb/s VBR	248 minutes(4-ch audio) and 112 minutes(4-ch audio) 265 minutes(2-ch audio) and122 minutes(2-ch audio)	
Signal Inputs				
Genlock video			BNC x1, 1.0 Vp-p, 75 Ω	
Audio input			XLR-3pin (Female) x2, line / mic / mic +48 V selectable	
Mic input			BNC x1* XLR-5-pin (Female, stereo) x1	
Signal Outputs				
SDI output			BNC x1* HD-SDI: SMPTE 292M (w/embedded audio)	—
			BNC x1* SD-SDI: SMPTE 259M (w/embedded audio)	—
Component (HD/SD analogue) video output			—	BNC x3, Y/Pb/Pr, 1.0 Vp-p, 75 Ω
Composite video output			BNC x1, 1.0 Vp-p, 75 Ω	
Headphone			Mini-jack x1 (stereo)	
Audio output (CH-1/CH-2)			XLR-5-pin (Male, stereo) x1	Pin-jacks x2, -10 dBu, 47 Ω
Other Inputs/ Outputs				
Timecode input			BNC x1, 0.5 to 18 Vp-p, 10 Ω	BNC x1 (input or output, selectable), (input: 0.5 to 18 Vp-p, 10 kΩ, output: 1.0 Vp-p, 75 Ω)
Timecode output			BNC x1, 1.0 Vp-p, 75 Ω	
Lens			12-pin or 14-pin type hot-shoe	
Remote			8-pin	
Light			2-pin, DC 12 V, max. 50 W	
DC input			XLR-4-pin (Male) x1	
DC output			4-pin (for wireless microphone receiver), DC 12 V (MAX 0.2 A)	
i.LINK			IEEE 1394, 6-pin x1, AV/C (DV stream output) or File Access Mode	
Audio performance				
Frequency response Pickup device Effective picture			20 Hz to 20 kHz, +0.5 dB/-1.0 dB	
Dynamic range			More than 85 dB	
Distortion			Less than 0.08% (at 1 kHz, reference level)	
Crosstalk			Less than -70 dB (at 1 kHz, reference level)	
Wow & flutter			Below measurable limit	
Headroom			20/18/16/12 dB (selectable)	
Camera section				
Pick-up device			3-chip 1/2-inch type HD Power HAD CCD	
Effective picture elements			Approx. 1.56 Mega Pixels (1,440 x 1,080)	
Optical system			F1.4 prism	
Built-in optical filters			1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND	
Shutter speed	59.94i		1/100, 1/125, 1/250, 1/500 ,1/1000, 1/2000, ECS, SLS	
	29.97p		1/40, 1/60, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/2000, ECS, SLS	
	23.98p		1/32, 1/48, 1/96, 1/125, 1/250, 1/500, 1/1000, 1/2000, ECS	
	50i		1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000, ECS,	
	25p		1/33, 1/50, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000, ECS, SLS	
Slow Shutter (SLS)			1 to 8, 16, 32, and 64 frame accumulation	
Slow & Quick Motion function (*MPEG HD mode only)	23.98p/29.97p		Selectable from 4 to 60 frame/sec as recording frame rate	—
	25p		Selectable from 4 to 50 frame/sec as recording frame rate	
Lens mount			SONY 1/2-inch type bayonet mount	
Sensitivity (2000 lx, 89.9% reflectance)			F9 (typical)	
Minimum illumination			Approx. 0.004 lx (F1.4 lens, +48 dB turbo gain, with 64 frame accumulation)	
Gain selection			-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB	
Smear level			-120 dB (typical)	
S/N ratio			54 dB (typical, HD output)	
Modulation depth at 21 MHz			45% (typical)	
Geometric distortion			Below measurable level (w/o lens)	
Viewfinder				
CRT			2.0-inch type monochrome	
Indicators			REC (x2), TALLY, BATT, SHUTTER, GAIN UP	
Built-in LCD monitor				
DXF-20W Viewfinder (x1)				
Supplied accessories				
Electret condenser stereo microphone (x1), L ns mount cap (x1), Shoulder belt (x1), VCT-U14 Tripod Adaptor (x1), Frange focal length adjustment test chart (x1), Operation manual (x1), PDZ-1 Proxy Browsing Software (x1), Proxy Viewer Software (x1), Professional Disc PFD23A (x1)				

* HD-SDI output and SD-SDI output share the same connector.

XDCAM **HD** Decks Specifications

General			PDW-F75 Recorder	PDW-F30 Viewer
Power requirements			100 V to 240 V AC, 50/60 Hz	
Power consumption			70 W	
Operating temperature			+5 to +40 °C (+41 to +104 °F)	
Storage temperature			-20 to +60 °C (-4 to +140 °F)	
Humidity			20 to 90% (relative humidity)	
Mass			7.2 kg (15 lb 6 oz)	
Dimensions (W x H x D)			307 x 100 x 411 mm (12 1/8 x 4 x 16 1/2 inches)	
Recording format	Video		MPEG HD (MPEG-2 MP@HL) HQ mode (VBR,maximum bit rate : 35 Mb/s), SP mode (CBR, 25 Mb/s), LP mode (VBR,maximum bit rate : 18 Mb/s) DVCAM (CBR,25 Mb/s) (Option: PDBK-104)	—
	Proxy Video		MPEG-4	
	Audio		MPEG HD: 4 ch or 2 ch, 16 bits/48 kHz DVCAM: 4 ch, 16 bit/48 kHz	—
	Proxy Audio		A-law (4 ch/2 ch, 8 bit, 8 kHz)	
Playback format	Video		MPEG HD (MPEG-2 MP@HL): HQ mode (VBR,maximum bit rate : 35 Mb/s), SP mode (CBR,25 Mb/s),LP mode (VBR,maximum bit rate : 18 Mb/s),DVCAM (CBR,25 Mb/s)	
	Proxy Video		MPEG-4	
	Audio		MPEG HD: 4 ch or 2 ch, 16 bits/48 kHz DVCAM: 4 ch, 16 bit/48 kHz	
	Proxy Audio		A-law (4 ch/2 ch, 8 bit, 8 kHz)	
Recording/Playback time			PFD50DLA (50GB)** and PFD23A (23.3GB)	
	DVCAM		185 minutes (Dual Layer)	85 minutes
	MPEG HD	HQ, 35Mb/s VBR	145 minutes(4-ch audio) (Dual Layer) 150 minutes(2-ch audio) (Dual Layer)	65 minutes(4-ch audio) (Single Layer only) 68 minutes(2-ch audio) (Single Layer only)
		SP, 25 Mb/s VBR	190 minutes(4-ch audio) (Dual Layer) 200 minutes(2-ch audio) (Dual Layer)	85 minutes(4-ch audio) (Single Layer only) 90 minutes(2-ch audio) (Single Layer only)
		LP, 18Mb/s VBR	248 minutes(4-ch audio) (Dual Layer) 265 minutes(2-ch audio) (Dual Layer)	112 minutes(4-ch audio) (Single Layer only) 122 minutes(2-ch audio) (Single Layer only)
Signal Inputs				
Search speed (in colour)	Jog mode		±1 time normal speed	
	Variable Speed		-1 to +2 times normal speed	
	mode		±20 times normal speed	
Analogue reference input	Shuttle mode		BNC x2(including loop through), HD Tri-level sync or SD composite sync (0.3 Vp-p/75 Ω/sync negative)	—
Analogue composite input (option: PDBK-104)			BNC x1, RS-170M	—
Analogue HD component input (option: PDBK-103)			BNC x4, Y/Pb/Pr/(Sync) or G/B/R/(Sync)	—
HD-SDI input			BNC x1, SMPTE 292M	—
SD-SDI input (option: PDBK-104)			BNC x1, SMPTE 259M	—
Analogue audio input			XLR x2 (channel selectable), +4/0/-3/-6 dBu (selectable),10 kΩ, balanced	—
Digital audio input			AES/EBU, BNC x2, 4 channels	—
Timecode input			BNC x1, SMPTE Time code	—
Signal Outputs				
Analogue composite video output			BNC x1, (1.0 Vp-p/75 Ω/sync negative) , RCA-pin x1,(1.0 Vp-p/75 Ω/sync negative)	
Monitor output			D-sub 15-pin (G/B/R or Y/Pb/Pr)	
Built-in display			3.5-inch type colour LCD monitor	
HD-SDI output			BNC x2, SMPTE 292M	—
Audio output (CH-1/CH-2)			BNC x1, SMPTE 259M	—
Analogue audio output			XLR x2 (channel selectable), +4/0/-3/-6 dBu (selectable), 600 Ω load, balanced	
Audio monitor output			RCA x2 (L, R, Mix), -6dBu, 47 kΩ, unbalanced	
Headphone output			Stereo phone jack, -14dBu, 8 Ω, unbalanced	
Digital audio output			AES/EBU, BNC x2, 4 channels	—
Timecode output			BNC x1, SMPTE Timecode	—
Other Inputs/ Outputs				
i.LINK			IEEE1394, 6-pin x1, AV/C (DV stream output) or File Access Mode	
i.LINK(HDV 1080i) (option: PDBK-102)			IEEE1394, 6-pin x1, HDV 1080i IN/OUT	
Ethernet (option: PDBK-101)			1000Base-T (RJ-45)	
RS-422A			D-sub 9-pin x 1	
RS-232C			D-sub 9-pin x 1	
CONTROL			D-sub 9-pin x 1	—
Video performance				
Sampling frequency			Y: 74.25 MHz, R-Y/B-Y: 37.125 MHz	
Quantisation			8 bits/sample	
Analogue composite output(DV)			Frequency response : 0 to 4.2 MHz +1.0/-3.0 dB (525), 0 to 4.8 MHz +1.0/-3.0 dB (625) S/N(Y) : 53 dB or more, Y/C delay : ±25 ns or less, K-factor(K2T) : 2% or less	
Processor adjustment range				
Video level			±3 dB	
Chroma level			±3 dB	
Set up/black level			±30 IRE	
Chroma phase			±30 deg	
System sync phase			±3 µs	—
System sync phase (fine)			±200 ns	—
Audio performance				
Sampling frequency			48 kHz	
Quantisation			16 bits/2 channels or 16 bits/4 channels	
Frequency response			20 Hz to 20 kHz +0.5/-1.0 dB(0 dB at 1 kHz)	
Dynamic range			90 dB or more	
Distortion			0.05% or less (at 1 kHz)	
Headroom			20/18/16/12 dB (selectable)	
Supplied accessories				
Operation manual (x1),Vertical installation stand (x1), Infrared remote commander (x1), PDZ-1 Proxy Browsing Software (x1), Proxy Viewer Software (x1)				

* Only one of the PDBK-102, PDBK-103 or PBDK-104 boards can be installed at any one time.
** The PFD50DLA disc cannot be used in the PDW-F30 deck.

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