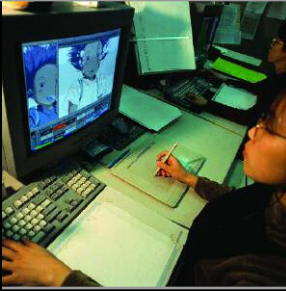


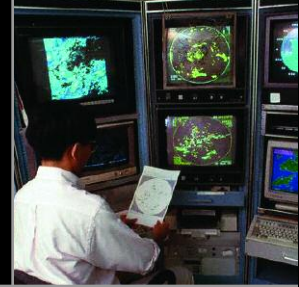
ClipStoreTM MX



VIDEO+AUDIO
STORAGE & PLAYBACK



UNCOMPRESSED
HD VIDEO



UNCOMPRESSED
SD VIDEO



10-BIT DIGITAL VIDEO
24-BIT DIGITAL AUDIO



Abekas[®]

ClipStoreMX Multi-Definition Digital Disk Recorder for

Abekas proudly presents the
ClipStore™MX

Multi-Definition Digital Disk Recorder

ClipStoreMX represents the newest generation of digital disk recorders from Abekas, utilizing state-of-the-art video/audio processing hardware combined with the very latest disk drive technology. Since the processing and storage hardware is completely uncompressed — with awesome 10-bit resolution for video and 24-bit resolution for 8-track digital audio — the quality of recording and playback is at the highest level possible. Regardless of whether HD or SD is being recorded, the associated 8-track digital audio is always recorded without compression.

ClipStoreMX also features user-removable disk storage and provides the most wide-ranging feature set of any professional digital disk recorder on the market today — including an extremely attractive price, thanks to the newest technology from Abekas. Video and audio recording capability is a standard feature, providing capture and storage of pristine digital video+audio content in either HD or SD. The audio features up to eight digital audio tracks and supports both discrete AES/EBU audio input/output, as well as audio embedded in the video.

ClipStoreMX provides real-time playback of captured and rendered material, and is operationally plug-and-play — so there's no steep learning curve, and there's no need to configure boards, load software or partition a drive. Featuring "clip-based" storage and a unique graphical user interface that runs on almost any network web browser, a simple click of the mouse allows users to immediately organize, load and play any stored media. It's that easy and that flexible! Whether you're working in HD, SD or both — the ClipStoreMX is the perfect real-time video+audio storage solution, especially if you work in any of the following environments where the highest quality and lowest cost is of the greatest importance:

- **Television Production**
- **Editing / Post Production**
- **Animation Creation**
- **Graphics / Special Effects Creation**
- **Film Telecine**
- **Media Encoding**
- **Digital Cinema**
- **Scientific Visualization**
- **Video Compression Research**

MULTI FORMAT / MULTIPLE APPLICATIONS

For standard-definition video, ClipStoreMX captures video in both 525 and 625 line standards with flawless 10-bit uncompressed quality. For high-definition, video can be captured in 1920x1080 or 1280x720 resolution, with all popular frame rates supported including both interlaced and progressive frames. Whether creating or presenting animations and special effects for live broadcast, editing for television, or recording and playing movies in post production, ClipStoreMX sets the standard for reliable, high-quality performance. By a wide margin, the ClipStoreMX disk recorder provides the perfect uncompressed recording solution for HD and SD VTR replacement in a variety of applications

VIEWER ON YOUR DESKTOP

The ClipStoreMX user interface features a Viewer window, providing real-time output monitoring of video and audio. This Viewer window appears on the desktop of the ClipStoreMX user interface, and can be positioned onto a second VGA or video picture monitor as part of an extended WindowsXP™ desktop. Placing the Viewer window on this second desktop surface provides a convenient and compact method of monitoring all outputs from ClipStoreMX. When positioned on the primary VGA monitor



ClipStoreMX system includes ShuttlePRO Control Panel, mouse and QWERTY keyboard.

along with the NetPanel user interface, the Viewer window eliminates the need for an extra video picture monitor in many installations — saving space, weight and greatly improving operations workflow.

VTR ↔ DDR TRANSFERS

The ClipStoreMX disk recorder features two RS422 serial control ports supporting Sony BVW-75 protocol. One RS422 port is a "master" port for frame-accurate control over an external VTR. The other port is a "slave" port to allow control over ClipStoreMX from external controllers. The convenient built-in Auto Edit feature allows you to capture media from videotape into the disk recorder for editing tasks, graphics creation, effects work and media encoding — or Auto Edit can be used to transfer finished projects from ClipStoreMX to videotape for archiving or client distribution.

state-of-the-art HD and SD digital video recording



NetPanel User Interface

NETPANEL CONTROL

The ClipStoreMX disk recorder has been designed specifically for today's highly networked production environment, providing access to all users with control through the unique, browser-based NetPanel™ user interface. NetPanel is an OS-independent HTML/Java2 applet that runs from Microsoft® Internet Explorer™, Netscape® or Safari® web browsers on any Windows, Macintosh, Irix or Linux networked computer (current Java-2 plug-in is required). You can mix Windows, Irix, Macintosh and Linux workstations on the same network as the ClipStoreMX disk recorder, with control over the disk recorder from any of these remote workstations. NetPanel provides simple and easy machine control, clip filing and management, along with system setup and configuration. NetPanel can also run on the ClipStoreMX platform itself for stand-alone operation (user-supplied VGA monitor with at least 1280x1024 resolution is required).

Also supplied with every ClipStoreMX is the ShuttlePRO™ control panel from Contour Design®. This controller connects via USB to the main chassis, and provides complete control over all DDR transport functions, such as play, record, stop, jog, etc.

IMPORT / EXPORT

Don't let the attractive low cost of ClipStoreMX fool you — this machine has a feature set that will satisfy even the most demanding applications. Since ClipStoreMX is built upon the Microsoft® Windows® XP operating system, the included Import/Export utility easily interfaces ClipStoreMX with a network of graphics rendering computers without concern for proprietary file formats. The Import utility can monitor up to five user-defined "watch folders" for the arrival of single-frame image files; as soon as the first image file arrives, the Import utility goes to work by automatically creating a clip having the same name as the image file, and inserts the frame into that clip. The remaining frames arriving in the import folder are then

automatically inserted into the same clip. This import process typically runs faster than the rendering operation that's creating the image files, therefore providing a real-time clip that's ready to play shortly after rendering is finished. On the export side of the equation, the Export utility can transfer individual frames from any stored clip to any computer or disk drive mounted on the local computer network. All popular image file formats are supported, such as DPX, SGI, RGB, TGA, TIF and PSD — just to name a few. Both the Import and Export utilities also support audio WAV files.

THIRD-PARTY CONTROL

The ClipStoreMX disk recorder has been tested and confirmed to operate with external third-party controllers via RS422 — including controllers from Lance Design® and DNF Controls®. These external devices provide precise and accurate control over the ClipStoreMX. In addition, third-party edit controllers, such as the Axial/MX, Sony BVE and EditWare edit systems can control ClipStoreMX in the online edit environment.

LARGE STORAGE CAPACITIES

The ClipStoreMX system comes standard with over 2.5 Hours of HD storage capacity, with a 5.5 Hours model also available. This equates to 16 Hours and 32 Hours of SD record time. Since disk drive technology advances rapidly, larger storage capacities may be available — so be sure to visit www.abekas.com for the latest storage capacity information.

EMBEDDED AUDIO & TIMECODE

ClipStoreMX can handle digital audio and timecode that's embedded in the HD SDI digital video stream. This feature dramatically reduces the number of interconnecting cables required to route video, audio and timecode signals into and out of the ClipStoreMX; from 20 cables, down to just two. Of course, if your plant is not yet capable of routing embedded signals, than you can route the discreet audio and timecode signals into and out from ClipStoreMX.



ClipStoreMX Rear Panel

SPECIFICATIONS

STANDARD FEATURES

- Uncompressed High-Definition (HD) and Uncompressed Standard-Definition (SD) Digital Disk Recorder Platform
- SDTV 10-Bit YUV 4:2:2 SDI Video I/O (525/625)
- HDTV 10-Bit YUV 4:2:2 SDI Video I/O (formats shown below)
- JBOD Video Storage (2.5 or 5.5 Hours in HD / 16 or 32 Hours in SD)
- Digital Audio Storage:
 - 8 Individual audio tracks (4 stereo pairs)
 - AES/EBU, 24-Bit resolution with 48kHz sampling
 - Accommodates AC-3 and Dolby-E Bit Streams
 - Embedded and discrete AES/EBU digital audio I/O
 - Analog Monitoring: unbalanced, line-level on 3.5mm audio connector
 - Independent record/edit of each audio track
- LTC Timecode In/Out
- VANC LTC Timecode In/Out in HD Video Formats
- Internal "Native" timecode (TCN) and external LTC support
- Windows XP operating system with NT File System (NTFS)
- QuickTime™ compliant clip-based storage
- NetPanel HTML/Java-2 graphical user interface with integrated viewer
- (2) Sony protocol RS422 ports for VTR control and edit
- (2) 10-T/100-T/1000-T Gigabit Ethernet Ports
- Viewer: monitor video, timecode and calibrated audio metering display
- Import / Export Utility for automatic import of image files and export to popular image files including RGB, TIF, TGA, SGI, YUV, PNG, JPG, PSD, DPX, etc.
- Windows Media Series 9 Encoding with user-defined profiles
- Normal, looping and ping-pong play repeat modes
- Auto Edit for frame-accurate VTR loading and archiving
- Vertical interpolator for smooth slow motion playback
- Variable play mode with field/frame access
- Poster image stored with each clip
- Segment list play
- Analog HD Tri-Level or Composite Analog SD reference (terminating)
- Built-in video test patterns and audio tones
- Windows keyboard and mouse on PS/2
- ShuttlePRO™ hardware controller from Contour Design®

SUPPORTED VIDEO FORMATS

High Definition 4:2:2 YUV

Uncompressed at 1.5Gb/s with 10-Bit Resolution

- 1920x1080: /60i /59.94i /50i
- 1920x1080: /30psF /29.97psF /25psF /24psF /23.98psF
- 1280x720: /60p /59.94p

Standard Definition 4:2:2 YUV

Uncompressed at 270Mb/s with 10-Bit Resolution

- 720x486 (525): /59.94i (ITU-R/BT.601-4)
- 720x576 (625): /50i (ITU-R/BT.601-4)

ANALOG REFERENCE INPUT (1) F BNC

Tri-level HD or Composite Analog SD, Terminating

DIGITAL VIDEO INPUT (1) F BNC

High-Definition:

- SDI SMPTE 292M (10-bit at 1.5 Gb/s)

Standard-Definition:

- SDI SMPTE 259M (10-bit at 270 Mb/s)

DIGITAL VIDEO OUTPUT (1) F BNC

High-Definition:

- SDI SMPTE 292M (10-bit at 1.5 Gb/s)

Standard-Definition:

- SDI SMPTE 259M (10-bit at 270 Mb/s)

DIGITAL AUDIO INPUT (4) F BNC

High-Definition:

- AES/EBU: 8-tracks (4 stereo pairs) / 48kHz at 24-bit resolution
- Embedded in HD SDI video: 8-tracks (4 stereo pair) / 48kHz at 24-bits

Standard-Definition:

- AES/EBU: 8-tracks (4 stereo pairs) / 48kHz at 24-bit resolution
- Embedded in SD SDI video: 4-tracks (2 stereo pair) / 48kHz at 20-bits

DIGITAL AUDIO OUTPUT (4) F BNC

High-Definition:

- AES/EBU: 8-tracks (4 stereo pairs) / 48kHz at 24-bit resolution
- Embedded in HD SDI video: 8-tracks (4 stereo pair) / 48kHz at 24-bits

Standard-Definition:

- AES/EBU: 8-tracks (4 stereo pairs) / 48kHz at 24-bit resolution
- Embedded in SD SDI video: 4-tracks (2 stereo pair) / 48kHz at 20-bits

ANALOG AUDIO MONITORING OUTPUT (1) F 3.5mm

- Unbalanced, line-level at: -10 dBV

- 2-Tracks (1 stereo pair) / Selectable to monitor any output pair

LTC I/O

- LTC Input, balanced (1) F BNC
- LTC Output, balanced (1) F BNC

COMPLIANCE

- TUV (United States and Canada), BSMI, VCCI, GS Mark and CE Mark certifications
- EN-55103-01 and EN-55103-02

DATA / CONTROL

- RS422 Serial Control, Sony BVW-75 Protocol

- Master Port (1) F 9D
- Slave Port (1) F 9D
- VGA Output (minimum 1024x768 resolution required for
 - NetPanel, up to 1920x1200 resolution supported) (1) F 15D
- Secondary Desktop outputs, consisting of any two of the following:
 - DVI Output (1) F DVI
 - S-Video Output (1) F S-Video
 - Composite Analog Video Output (1) F RCA
- 10-T/100-T/1000-T (Gigabit) Ethernet (2) F RJ-45
- USB 2.0 Hi-Speed "Series A" Receptacle (4) F USB-A
- QWERTY Keyboard (1) F PS/2
- Mouse (1) F PS/2

CHASSIS PHYSICAL & ELECTRICAL

- Rack-Mount Configuration Dimensions:

W = 19.0 in / H = 5.25 in / D = 25.0 in

W = 48.3 cm / H = 13.3 cm / D = 63.5 cm

- Maximum Weight: 55 lbs. (25.0 kg.)
- Power: <500 Watts / 100-240 VAC / 50-60Hz (Auto-sensing power input)

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