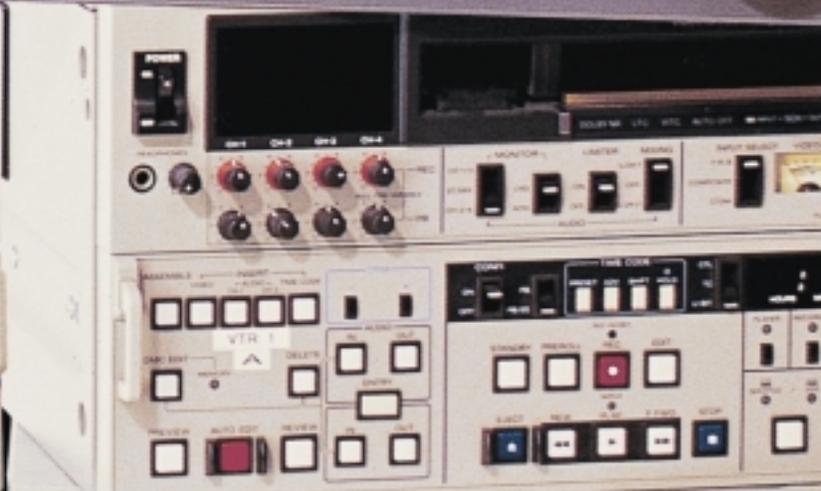


Accom[®]

THE NEW MATH

1⁸

Abekas 60000
Multiflex DTV Server





ABEKAS 6000. THE POWER OF EIGHT. THE BEAUTY AND SIMPLICITY OF ONE.

IMAGINE A SERVER THAT CAN HANDLE THE WORK OF EIGHT DIGITAL VTRS WITH ZERO VTR MAINTENANCE.
ADD HUNDREDS OF HOURS OF SHARED MEDIA STORAGE AND 24/7 RELIABILITY, AND YOU HAVE THE ABEKAS 6000.
NEWS, ON-AIR, POST, MOBILE PRODUCTION – IT SHINES. IT’S STABLE, RELIABLE, AND MOST IMPORTANTLY, IT’S ABEKAS.
SO, GET SMART – THE SMART DIGITAL MEDIA SERVER FROM ABEKAS. THE POWER OF EIGHT, THE BEAUTY OF ONE.

Get Smart

THE ABEKAS 6000 MULTIFLEX™ DTV SERVER IS THE “SMART” VIDEO SERVER, DESIGNED WITH THE AGILITY AND POWER NECESSARY TO EXCEED THE HIGHEST DEMANDS OF BROADCAST VIDEO PROFESSIONALS. WITH A VARIETY OF APPLICATIONS BUILT RIGHT IN, THE ABEKAS 6000 SERVER CAN GET THE JOB DONE WITHOUT THE NEED FOR EXTERNAL SOFTWARE SOLUTIONS.

With up to eight digital video channels and an integrated RAID-5 disk array, the Abekas 6000 digital media server is the perfect VTR replacement. Targeted for professional broadcast production and high quality on-air applications, the Abekas 6000 server is fully DTV ready, accepting and supplying both serial digital video and AES/EBU digital audio signals. Abekas 6000 is ideal for use in diverse applications such as digital video production, digital video post-production, news editing & playout, program cache & playout, advertisement spot cache & playout, and program materials distribution.

Expandable Design

Housed in a compact 8RU chassis, Abekas 6000 supports a minimum of two “symmetrical” digital video channels — meaning each video channel features both input and output.

The Abekas 6000 can be expanded to include four, six or eight independent digital video I/O channels, each featuring analog output monitoring as a standard feature. Each video channel also features four tracks (two stereo pairs) of AES/EBU digital audio, as well as an independent RS422 serial control port.

The Abekas 6000 internal media disk array has RAID-5 parity protection featuring warm-swap media disk drives, and is capable of storing anywhere from a few hours up to several dozen hours of online digital media. By adding optional external disk expansion, the local storage within a single Abekas 6000 server can be expanded to several hundred hours.

And with the Networking option, up to 32 Abekas 6000 servers can be combined into a single enterprise network of servers, with the total online storage capacity exceeding 12,000 hours!



“The control panel makes it feel just like a VTR”

MPEG-2 and DVCPRO™ Compression

The Abekas 6000 is the *first* professional video server to deliver *both* DVCPRO and MPEG-2 compression in the same machine, allowing the user to select both the compression type and bit rate. This feature allows the user to choose the compression algorithm most appropriate to the needs at hand.

The Abekas 6000 media server maintains the highest image quality possible, by providing a choice of either 25Mb/s or 50Mb/s bit rates when using either DVCPRO or MPEG-2 compression. Since “I-Frame Only” group of pictures is supported, it’s possible to edit on any frame of any media clip at any time, without restriction. Video clips may be played in the forward or reverse direction at any play speed, and with fully interpolated slow motion for field-based video material.



Fingertip Control

A VTR-style hardware control panel is provided as a standard feature with each Abekas 6000 server. This panel features a familiar VTR look-and-feel with which any videotape operator will be immediately familiar. In addition to controlling all aspects of the server, the “Auto Edit” feature on the Abekas 6000 control panel can be used to frame-accurately load media material from external videotape onto the Abekas 6000 server, or to load media from the server onto an external videotape.

A single Abekas 6000 control panel can access all eight video channels in the Abekas 6000 server — or up to eight individual control panels can be connected to a single server, for use by eight independent operators.

Enormous Storage Capacity

The Abekas 6000 server chassis contains a massive internal RAID-5 disk array, with media storage capacity of several dozen hours when using current disk drive technology.

By connecting up to two external disk expansion chassis’ to the main Abekas 6000 server, the total local storage capacity can be increased to several hundred hours. Media storage utilizes RAID-5 parity as a standard feature — which provides protection to your stored clips against a failed media disk drive.

Ingest, Manipulate & Distribute

Combining multiple video I/O channels with shared storage and the ultra high bandwidth of the Abekas 6000, the task of ingesting video feeds while manipulating and distributing the contents is fast and easy. For example, you can record four camera feeds on four video channels while at the same time using these same camera recordings on video channels five and six to perform slow motion instant replay. The remaining video channels seven and eight can be used for play list creation or highlight editing functions — all without the need to wait for the “digitizing” of the camera feeds to be completed!

All eight channels in the Abekas 6000 server can be used in ANY combination of record or play, all at the same time, and all with access to the same stored media material — without the need to wait for the recordings to finish.

High-Speed Server Networking

If even greater storage is required, as few as two or as many as 32 Abekas 6000 servers may be interconnected via dedicated high-speed networking. Media clips stored on any server in the network are immediately available for browsing from any other server on the network. Once the desired clip is found, it may be transferred at rates faster than real time to the local server for playback. Also, the **TruClip™** clip-based nature of the Abekas 6000 ensures that duplicate clip IDs are not created anywhere on the network — which means the chance of recalling an incorrect clip ID is practically eliminated.

Abekas Reliability

The Abekas 6000 is engineered with reliability in mind. The Abekas 6000 is built on the **VxWorks™** operating system, which is the most popular embedded real-time O/S designed for mission-critical 24/7 applications. The standard RAID-5 parity feature fully protects the stored media clips in the event of a failed media disk drive — with the ability to “warm-swap” the failed disk drive with a replacement drive without any interruption to normal server operations. Ultra-reliable redundant fan assemblies keep Abekas 6000 operating even in the unlikely event of one or even two fan failures — if a fan fails, the remaining fans maintain the cooling airflow.

For even more security against unexpected failure, the optional “warm-swap” redundant power supply module provides protection against failure in any of the power rails inside the Abekas 6000 server. In the event of failure, the malfunctioning power supply module is switched off and is replaced right from the *front* — eliminating the need to crawl behind the server chassis. Finally, the optional mirrored system disk provides protection against failure of the system disk — keeping safe the clip database, operating system, user setup data, and other critical server information. And these system disks are *solid-state* “disk drives” — with no moving parts and with limited exposure to mechanical failure. Together, all these protection systems make the Abekas 6000 a highly robust and extremely reliable broadcast video server.

Now Hear This!

Every video channel in the Abekas 6000 server is accompanied by four tracks (two stereo pairs) of AES/EBU digital audio. This digital audio features 24-bit resolution with 48kHz sampling, and is recorded without compression — ensuring your audio comes through crystal clear. For complete editing flexibility, the four audio tracks may be recorded either together with or separately from the associated video and key tracks. The digital audio system is Dolby-E and AC-3 ready, giving the server the ability to record 5.1 multi-channel digital audio. The Abekas 6000 also supports 20-bit embedded digital audio I/O on the SDI video stream, allowing the user to choose between the embedded digital audio input or the discrete AES/EBU digital audio input as the audio recording source. Upon playback, the clip audio is always present on both the embedded SDI output stream and the discrete AES/EBU digital audio output.

Control Flexibility

Each video channel in Abekas 6000 features an independent “slave” RS422 serial control port. Each RS422 port features industry standard control protocols including Sony VTR emulation, along with Louth and Odetics automation protocols. Up to six of the video channels may also have assigned a “master” RS422 serial control port, so that channels inside the Abekas 6000 server can take control over external VTRs for frame-accurate loading and unloading of media material. In addition, the Abekas 6000 features an open Ethernet communications protocol — which provides media file transfers to and from the server, along with machine control over virtually every aspect of the Abekas 6000 server. Finally, 16 GPI inputs and 12 GPI output triggers are available, to round out the server control possibilities.

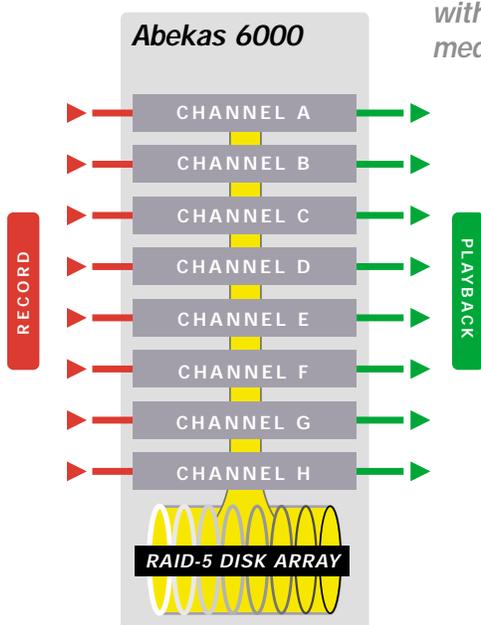
Clip Along Easily

The Abekas 6000 features TruClip — a powerful file system that allows media to be stored on a clip-by-clip basis using a unique one to seven-digit clip ID. Unlike other server systems, the Abekas 6000 maintains this clip ID as a unique number both inside a single server and across a network of servers. TruClip allows a single clip ID to contain not only video and audio, but also a matte key signal. This approach greatly simplifies the recall and playback of media clips that contain video, key and audio. Each clip ID can be given a title, six keywords, author name, time & date stamp, along with many other unique clip attributes.

Flexible Video Channels

A maximum of eight digital video I/O channels can be fitted into the Abekas 6000 server. And with the Abekas 6000, each video channel is “symmetrical” in nature — which means a given video channel can be used for both record and play operations — just like a digital VTR! At any given moment a video channel can be recording a clip, and then the same channel can be used for clip playback as soon as the recording ends. Clip recording and playback on each video channel is independent from all other channels in the server — making it possible, for example, to record clips on two channels while playing back different (or the same) clip media on any of the remaining channels.

Abekas 6000 can include up to eight video channels, each capable of both recording and playback, with shared RAID-5 media storage.



Vertical Blanking Preserved

When operating with MPEG-2 compression, all Closed Caption Data, Sub Titles and Vertical Interval Timecode (VITC) are stored with each media clip, ensuring retention of these critical data during recording and playback of the video material.

List Play

The Abekas 6000 features a built-in List Play feature, which allows the user to construct a list of clips right from the user control panel. Either the entire clip or just a portion of the clip may be defined as an item in the play list. The defined play list is then used to play the clips from any channel in the server, in the order that was defined by the user.

VTR Archive Option

To provide a convenient method for backing up media clips, the Abekas 6000 offers the VTR Archive option. Most any professional VTR is connected to the Abekas 6000 server. The user then constructs a list of clips that need to be archived, using the List Play feature. At the touch of a button, the Abekas 6000 then automatically stores the desired clips onto the external VTR videotape — while the clip database information is stored separately onto a standard 3.5" floppy disk. The clips may be restored from this archive videotape onto the same Abekas 6000 server, or onto another Abekas 6000 server. The advantage with this archive method is that the archive tape may be viewed on any standard VTR, without the need to first restore the tape onto the video server. Simple text-based "load lists" can also be generated externally on any PC and saved to floppy disk — which the Abekas 6000 server can then utilize to auto-load material from videotapes that were recorded from any video source.

"Finally, a server that delivers on the promise of a tapeless future"



Abekas 6000
Multiflex ■ DTV Server

Abekas 6000

Multiflex DTV Server

Corporate Office

1490 O'Brien Drive
Menlo Park,
California 94025 / USA
(650) 328-3818 Voice
(650) 327-2511 Fax

email: info@accom.com
web: www.accom.com

Accom and Abekas are registered trademarks of Accom, Incorporated.
Abekas 6000 is a trademark of Accom, Inc. All other product and company
names are the property of their respective owners.

Accom 4/2001 Printed in the USA