

Abekas

MIRA +

The Ultimate Replay System



ROSS[®]
LIVING LIVE!

Instant Replay that Grabs all the Action

Achieve impressive instant replays for all your live events and sports broadcasts with a cost-effective and easy-to-operate—yet extremely powerful and quite flexible—multi-channel replay system.

Driven from a unique, ergonomically-designed control surface and purpose-built replay application, you are able to execute live instant replays with the greatest of ease, quickly clip and tag content, ingest and export media files, and create engaging game-break highlights that will captivate your audiences.

The Mira Control Surface and Mira Replay application provides you an extensive set of capabilities with a fast learning curve to get you on the air quickly—and with no mistakes. The flexibility, speed and performance of Mira+ combines to deliver you outstanding value.

Do More Now

- Provides the most cost-effective and most comprehensive replay system in the industry, with extensive built-in functionality.
- Adapts to a wide variety of live production workflows thanks to a symmetrical, multi-channel server architecture.
- Reduces costs and substantially streamlines workflows with integrated Media File Import and Export tools.

Share the Load

- Provides a unique and comprehensive Dual-User capability at a very attractive price-point.
- Splits or shares server resources—so two operators can either work independently on two separate replay events, or work in collaboration on the same replay event.
- Efficiently divides live production tasks such as clip management and live instant replay between two operators.
- Growing File Export writes multiple growing MXF media files from all live captures to external NAS—seconds after capture begins—so craft edit systems can begin editing faster than ever before. Available in Mira+ servers fitted with AVC-Intra video hardware.

Make it Easy

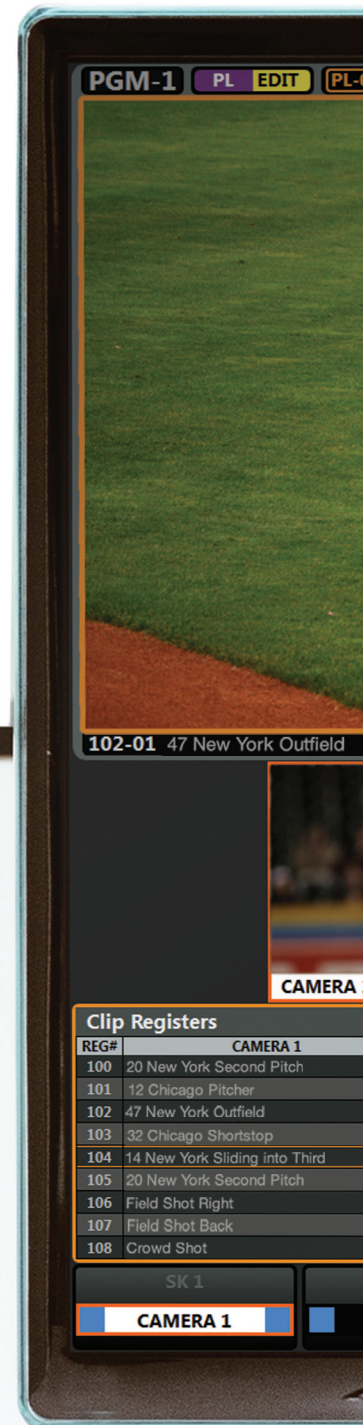
- Delivers remarkably fast learning curves for both novice and experienced replay operators.
- Incorporates a distinctive, ergonomically-designed control surface and highly intuitive single-display “Heads-Up” graphical user interface with incredible ease-of-use.
- Accelerates production workflows, while reducing operator stress and fatigue, by means of an ergonomic replay control surface designed with “one-button” access to a wide range of operational tasks.
- Network multiple Mira+ servers via Gigabit or 10-Gigabit Ethernet, and easily share clips between multiple users.



INSTANT REPLAY

KEY BENEFITS

- **Flexibility of Channels**
Supports a wide range of operational configurations, with every channel instantly changing between recorder and player
- **Support for Dual-Users**
Split or share channel resources and live production tasks between two users in one Mira+ server
- **File Based Operations**
Media file ingest and multi-destination media file export in every Mira+ server. For Mira+ servers fitted with AVC-Intra video hardware, Growing File Export writes an MXF media file for each live input being captured onto external NAS—to support live editing workflows
- **Ease of Use**
Quick to learn and simple to master for both novice and experienced replay operators
- **Content Sharing**
Network clip playback between multiple Mira+ replay servers via Gigabit and 10-Gigabit Ethernet networking
- **Comprehensive Capabilities**
Advanced replay solution that includes multi-camera live ingest; clipping; highlights Playlist creation and Timecode Chase playout functionality
- **Intuitive User Interface**
Easily follow all the action, with a Replay Interface presented on a single display
- **Ergonomic Control Surface**
“Thin and Wide” panel design accommodates QWERTY keyboard at front-and-center, and places T-Bar and Rotary Dial at shoulder’s width—all at the most comfortable operational positions



05 2/5

00,14,48,20

0%

PGM-2 CLIP PLAY

00,15,20,23

0%

IN 00,14,48,20 00,14,50,12 00,14,51,11 OUT 00,00,02,21 to END

104-05 14 New York Sliding into Third IN 00,15,20,23 00,15,27,23 00,15,32,23 OUT 00,00,12,00 to END

CAMERA 1

CAMERA 2

CAMERA 3

CAMERA 4

CAMERA 5

Bank #1

CAMERA 2	CAMERA 3	CAMERA 4	CAMERA 5
20 New York Second Pitch	20 New York Second Pitch	20 New York Second Pitch	20 New York Second Pitch
12 Chicago Pitcher	12 Chicago Pitcher	12 Chicago Pitcher	12 Chicago Pitcher
47 New York Outfield	47 New York Outfield	47 New York Outfield	47 New York Outfield
32 Chicago Shortstop	32 Chicago Shortstop	32 Chicago Shortstop	32 Chicago Shortstop
14 New York Sliding into Third	14 New York Sliding into Third	14 New York Sliding into Third	14 New York Sliding into Third
20 New York Second Pitch	20 New York Second Pitch	20 New York Second Pitch	20 New York Second Pitch
Field Shot Right	Field Shot Right	Field Shot Right	Field Shot Right
Field Shot Back	Field Shot Back	Field Shot Back	Field Shot Back
Crowd Shot	Crowd Shot	Crowd Shot	Crowd Shot

Play List #7 Fifth Inning HiLites 00,00,29,06 2/5

ITEM	CLIP ID	CLIP NAME	SPEED	DURATION	RUN TIME
1	109-02	12 Chicago Pitcher	100%	00,00,11,14	00,00,11,14
2	102-01	47 New York Outfield	100%	00,00,02,21	00,00,02,21
3	103-02	20 New York Second Pitch	100%	00,00,06,05	00,00,06,05
4	105-03	Field Shot Right	100%	00,00,04,15	00,00,04,15
5	108-02	Crowd Shot	100%	00,00,05,01	00,00,05,01
6					

ENTRY

SPEED PRESET

Entry

SK 2 CAMERA 2

SK 3 CAMERA 3

SK 4 CAMERA 4

SK 5 CAMERA 5

SK 7 Mira Clip Library

SK 8 New York

SK 9 Chicago

SK 10 No Good

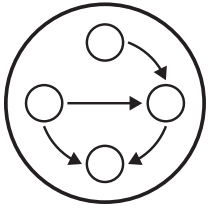
MENU

00/10

1/2

1/2

AUTO



Extensible and Flexible Workflows

The architecture of Mira+ permits server resources to be split or shared, enabling a wide variety of operational scenarios. As just one example: two operators, each with their own Mira Control Surface and with their own program output channels, can split the production tasks—with instant access to shared camera inputs, shared clip registers and shared highlight playlists.

One user can concentrate solely on live instant replay operations from all cameras, while the other creates and tags clips from all camera inputs; imports and exports media files; and builds game-action highlights and promotional playlists. Once finished, these can be immediately aired by the live instant replay operator.

Mira+ servers can be fitted with either 4, 8 or 12 *symmetric* video channels. This means every video channel can instantly switch between record and play operations, providing maximum operational flexibility. As Mira+ performs “cut and mix transitions” internally, switcher operations can be freed up, which streamlines your production workflows.



Multi-Server Content Sharing

The integrated clip networking feature permits operators to quickly and easily share media clips between any number of Mira+ servers interconnected via Gigabit or 10-Gigabit Ethernet. These can be either stand-alone clip assets, or can be content clipped from any actively recording Replay Event. Operators can even access content clipped from a previously recorded Replay Event still present on any of the Mira+ servers. Multiple HD clips can be played simultaneously across the network between each of the Mira+ servers.

File-Based Operations

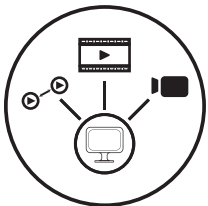
Mira+ replay systems come standard with integrated media file import and export tools, which dramatically streamlines your file-based workflows. A wide variety of the most commonly used professional file formats can be imported via the built-in USB-2, USB-3, USB Type-C, Gigabit, and 10-Gigabit Ethernet ports.



Up to nine Export Destinations can be pre-defined by the operator, with each including: file codec and wrapper, export pathway, file naming parameters, “clip handles” inclusion, and whether playlist content is exported as “one” or as “many” media files.

Once these Export Destinations are defined, the operator may export to these destinations directly from the Mira Control Surface during a live Replay Event. With a single button tap, the operator can export either a single saved clip—or an entire list of clips contained within any playlist. These export tools efficiently send captured live content as media files into your downstream craft editing systems, web streaming devices and archival storage.

For Mira+ servers fitted with AVC-Intra video hardware, Growing File Export is a standard feature—which allows multiple MXF media files to be written onto external NAS (one for each input camera), just seconds after live capture begins. This feature allows editors connected to the NAS to begin editing with these growing files while live capture is still underway—resulting in a very streamlined and time-efficient editing workflow.



Media Format Diversity

Mira+ is truly universal, with support for a wide range of resolutions and formats including Ultra HD 4K, HD and SD. Systems fitted with AVC-Intra video hardware can operate in 1080p—without reducing channel count. These same servers—when fitted with 4-, 8- or 12-channels—can also be operated respectively as: 1-, 2- or 3-channels in UHD-4K.

Mira+ comes standard with both embedded and AES audio I/O. The comprehensive audio routing capability built into Mira+ provides you with the flexibility to associate any audio input/output with any or all video channels, eliminating the need for complex and expensive external routing equipment and cabling.



System Reliability

To ensure maximum reliability, Mira+ comes standard with dual-redundant, hot-swappable power supplies. For further reliability and ease of maintenance, all Mira+ servers also feature hot-swappable chassis fans and media disk drives.

Featuring fault-tolerant RAID-6 parity protection, Mira+ servers can withstand the simultaneous failure of two media disk drives—with no loss of your valuable content. There is absolutely no interruption to your operations—even while the replacement disks are automatically rebuilding in the background.



Fast Playlist and Highlights Creation

Creating clips with Mira+ is incredibly easy. Simply tap the SAVE button on Mira Control Surface to instantly save a complete set of clips for all camera angles; with all clips automatically stored in chronological order. There is no time wasted hunting around for an “open clip slot” while saving your clips! This unique clip-saving concept also makes it quite simple to later choose any camera angle during live replay or during playlist editing—since all camera angles are always saved.

Programmable softkeys on Mira Control Surface permit you to define commonly used terms—such as team names, type of plays, and more. You are then able to quickly and efficiently title all clip angles with consistent, highly descriptive names—all with just a few button taps.

Other replay systems create “guardbands” for saved clips, which restrict you to a few seconds of additional content before and after each clip. Mira+ replay server has no guardband restrictions, and therefore gives you the power to trim IN and OUT points on any clip, at any time, and to any point within the entire record stream. This not only gives you much greater creative flexibility, it also saves an incredible amount of time during most clip trimming operations.



One Mira Control Surface can simultaneously play up to four separate playlists from four separate program output channels. Up to 99 playlists per event can be quickly and easily created with Mira+. You can add a music bed or voice-over to a playlist using the Aux audio playlist, and you can easily import clips containing player headshots, bumpers and interstitials—adding them to the live action replay to quickly generate promos and highlight packages.

Playlist playout flags permit list items to be “paused” on first and/or last frame, or to designate items to be looped. List items can be programmed with either CUT or MIX transitions between them. With advanced playlist editing features—such as: cut, copy and paste; unique “Goto Trim” function; one-button camera angle changes; and “@Start & @End flags” for each playlist item—you will see Mira+ is in a class all its own.

Count-Down Display

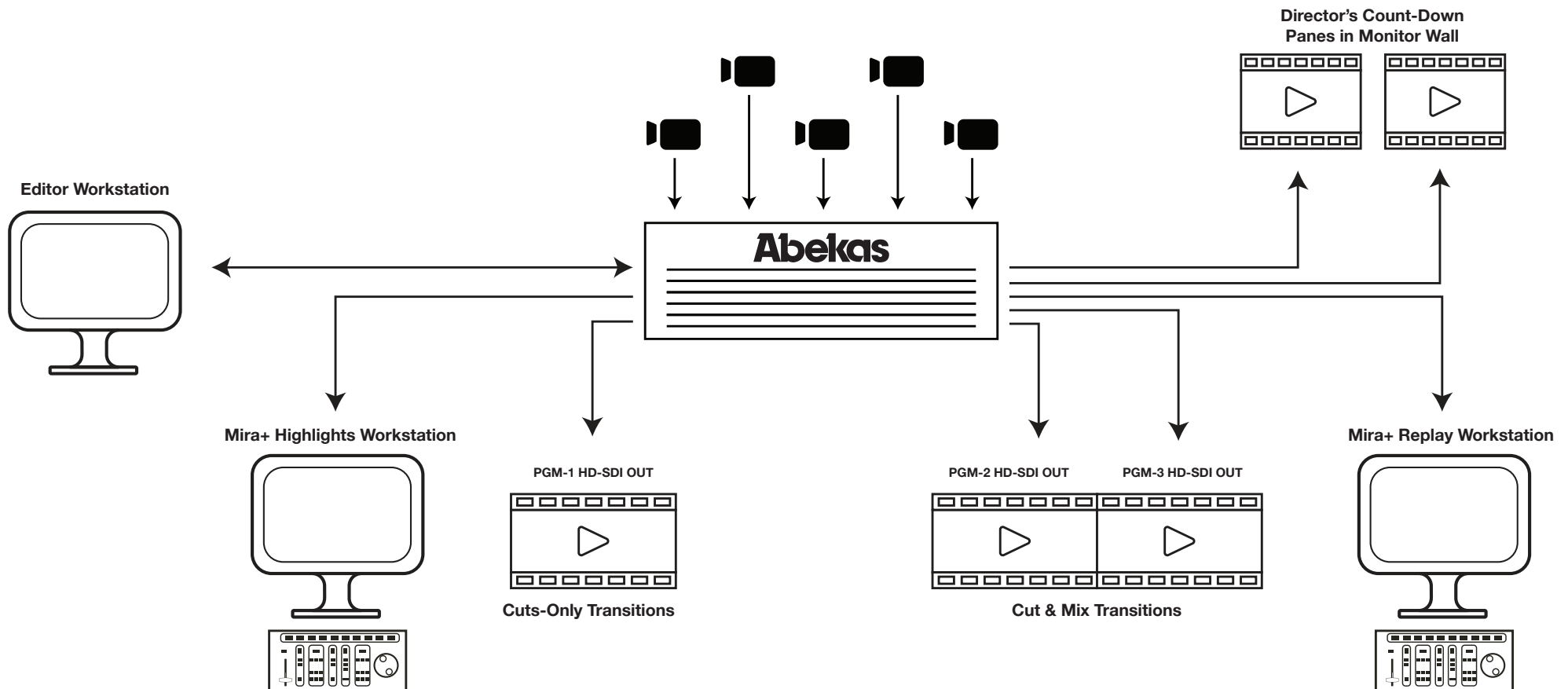
The unique count-down display HD-SDI output from Mira+ simplifies monitoring by reducing cost and space, which is particularly important in outside broadcast vehicle applications. Each count-down display provides intuitive, color-coded “time remaining” indication of individual clip and playlist playout—for both preview and program channels. This count-down display is hugely beneficial for the director, during those times when any playout from Mira+ replay server is “on-air” during your live productions.



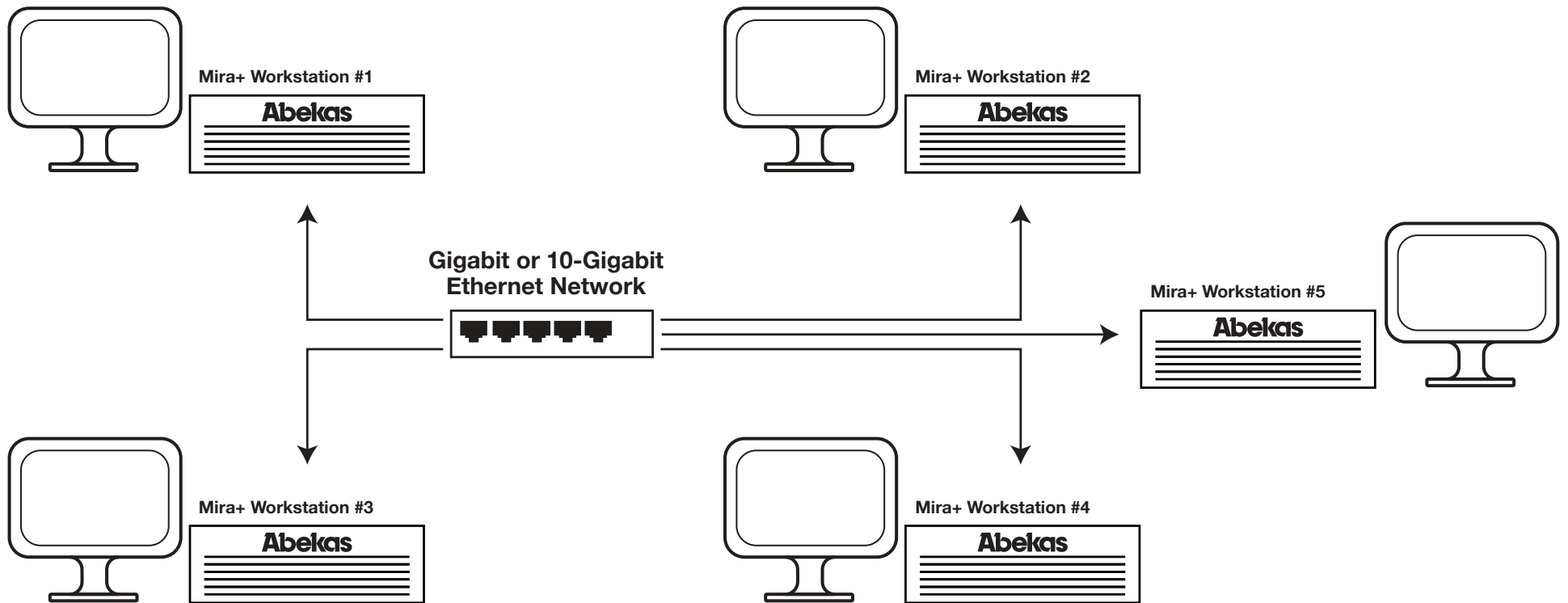
Ross Video openTruck and DashBoard Integration

Mira+ replay systems are an integral component to openTruck™ vehicle designs for live event productions. With the seamless integration between Ross DashBoard™ and Mira+, configurations can be set up, saved, and instantly reloaded with rapid system re-configuration—making your job incredibly easy when you’re moving from one event to another.

Mira+ 8-Channel System: Dual-User 5R+3P



Mira+ Clip Networking



Instant Creativity at Your Fingertips

Fast Learning Curves

All buttons on Mira Control Surface are logically grouped and color-coded according to function, and are laid out with generous spacing around every button—helping to reduce operational errors during your fast-paced live productions. The “wide and slim” ergonomic panel design contributes to greater comfort for your operators, reducing stress and permitting your replay workflows to run much more smoothly.

The ten softkeys located at the top edge of Mira Control Surface are labeled with legends at the bottom of the GUI display. They provide one-button access to all camera views—no matter how many cameras are in use—and provide quick access to other functions, based upon the mode of operation. Having ten softkeys instead of only four means there are far fewer “menu levels” of softkey labels, which translates into much faster learning curves for operators.

The Mira Replay graphical user interface compliments the Control Surface by providing operators with a single “heads-up display” to follow all the action; to manage all clips and playlists; and to easily export media files. Many replay systems force users to frantically glance at up to three separate displays during typical replay operations.

Both novice and experienced replay operators can quickly master the Mira Replay application—in most cases, after just a few hours of training.

More Options for Creative Replay

The two most often-used controls, the T-Bar (for slow-motion speed control) and the Rotary Dial (for searching content) are ergonomically located at “shoulder’s width” on the control surface, for much more comfortable operation.

Unique REVERSE button permits any playback, no matter the speed, to be instantly reversed. Release the button to revert to original play direction. This feature is a huge time-saver when it comes to “swing analysis”, “out of bounds” and “barely in the goal” types of live replays.

Quickly and easily apply two additional user-defined “VAR PLAY” speed ranges to the T-Bar.

A dedicated VAR PLAY button provides instant, on-the-fly speed changes at any time—including during super slow motion operations. Just type the desired speed, then tap VAR PLAY.

Hold down the DISABLE button, and move the T-Bar to the desired position—with absolutely no disturbance in the live “on-air” playout. This eliminates the common curse for all replay operators: finding the T-Bar in the wrong position—and moving it causes a disturbing “motion speed jump” while live on the air.

Superior Clip Creation and Management

A dedicated clip SEARCH button speeds the recall of specific clips while under pressure during live production.

With every clip SAVE operation, all camera angles are clipped simultaneously, and are saved in chronological order—with no danger of overwriting previously stored clips. Trim only one angle or all angles in stored clips by shifting the SAVE button.

Mira+ delivers more clip edit control than any other system, including the unique point of interest (POI) button for quickly identifying key plays.

Clarity in Operations

Intuitive, color-coded program output frames—reflected in the Mira Control Surface transport buttons—greatly assist live replay operations.

Color-coded “mode status” indicators within the video panes of the replay application clearly show the current function of each output channel.

The Mira Replay user interface is packed with time-saving elements such as programmable softkeys that permit assigning common naming terms for fast and consistent clip annotation.

Integrated Video Router Control

Providing expanded production flexibility and integration, Mira+ replay systems interface directly with video routing switchers. This functionality not only saves on the cost of yet another video router control panel—it also permits Mira+ operators to quickly and easily change video inputs directly from the Mira Control Surface “Camera” softkeys while a Replay Event is active.

Ultimate User Functionality

The Mira+ playlist management interface is fast and intuitive. Operators use well understood CUT, COPY, and PASTE functions for fast playlist item re-ordering, and can import bumpers and interstitials into any playlist to create a complete sponsored highlight break.

Unlike other replay systems which rely upon softkeys and convoluted menus to control output channels, Mira+ has dedicated buttons—including GANG control—to greatly simplify live operations. Users can also assign up to four program channels—instead of just two—onto a single Mira Control Surface, for even greater operational flexibility.

The high-mass, precision-balanced and abundantly free-spinning Rotary Dial featured on Mira Control Surface permits operators to smoothly

search recently-recorded content with the greatest of ease—and it imparts a unique quality, with an exacting tactile feel.

Exclusive to Mira, the CRUISE function permits operators to sit back and effortlessly shuttle through the record stream. All other instant replay systems force the operator to constantly spin a lightweight rotary dial, just to review content captured in the record stream.

The Mira Control Surface comes with a full-sized QWERTY keyboard that conveniently fits directly in front of the Mira Control Surface. This makes routine functions like clip naming and searching easy and very comfortable for the operator.



Mira Control Surface

SPECIFICATIONS

KEY FEATURES

- 6, 8 or 12 symmetrical HD/SD video channels; each can be used as either Recorder or Player
- Mira+ with AVC-Intra video hardware:
 - 1080p 3G I/O with no channel count reduction
 - Up to three UHD-4K channels
 - Growing File Export of MXF files from multiple input capture
 - VANC record & file import preserves timecode & closed-captioning
- Slow Motion and optional Super Slow Motion replay
- Support for Dual-User operation in one Mira+ server
- Integrated Media File Import and Export tools
- Clips and Playlist media files can be exported to multiple destinations during and after live production
- Timecode Chase clip lists, with precise playout dictated by incoming LTC
- Real-time clip sharing via Gigabit and 10-Gigabit Ethernet networks
- Built-in Input/Output Audio Router
- Built-in control over external Video Routers
- Built-in MultiViewer computer desktop monitoring
- Built-in HD-SDI Quad-Viewer output(s) with intuitive Count-Down display
- Media disk array with RAID-6 parity protection and hundreds of hours of storage at 100 Mb/s
- DashBoard and open Mira Ethernet API is freely available to program custom control interfaces
- Dual, hot-swap redundant power supplies
- Mira+ replay server is housed within a robust, compact 3RU server chassis

SUPPORTED VIDEO FORMATS

Native Video Codec: Choose model with one native record & play video codec:

- AVC-Intra model: HD@100Mb/s & 200Mb/s | UHD-4K@800Mb/s
- DVCPRO-HD model: SD@50Mb/s | HD@100Mb/s

UHD-4K Video: • 2160p /50 /59.94 (AVC-Intra)

HD Video: • 1080p /50 /59.94 (AVC-Intra)
• 1080i /50 /59.94 (All models)
• 720p /50 /59.94 (All models)

SD Video: • 625i /50 (DVCPRO)
• 525i /59.94 (DVCPRO)

CHASSIS PHYSICAL & ELECTRICAL

- Dimensions: 3RU Height/Depth = 25.6 in (65.1 cm) / Rackmount Slides included
- Maximum Weight: 75 lbs. (34 kg)

MIRA+ AC POWER REQUIREMENTS

- Input AC Voltage Range (Auto-Sensing): 100VAC-240VAC / 50Hz-60Hz
- Input AC Power Consumption: • Input AC Power @ 100-127VAC = 12A-9A
• Input AC Power @ 200-240VAC = 7.2A-6A

MIRA CONTROL SURFACE PHYSICAL & ELECTRICAL

- Dimensions: Height at front 2.0 in (5.08cm); Height at rear 3.75in (9.5cm);
Width 17.5in (44.5cm) (w/o rack ears) 19 in (48.3cm) (w/rack ears);
Depth 5.4 in (13.7cm)
- Maximum Weight: 6lbs. (2.7kg)
- Data & POE Input Voltage.....56VDC @ 0.536A / 30W (1) F RJ45

SAFETY & EMISSIONS

- TUV
- FCC Class
- CE

ANALOG REFERENCE INPUT

Tri-level HD or Composite Analog SD; 75Ω Terminating.....(1) Female BNC*

* For Mira+ servers featuring AVC-Intra video hardware: These are "High-Density BNC's"; with adapter cable to "Standard Female BNC's" provided.

DIGITAL VIDEO INPUTS

UHD-4K & 1080p Video (AVC-Intra only):

- HD-SDI SMPTE 424M Level A (10-bit at 3.0Gb/s).....(6) (8) or (12) Female BNC*

HD Video:

- HD-SDI SMPTE 292M (10-bit at 1.5Gb/s).....(6) (8) or (12) Female BNC*

SD Video:

- SD-SDI SMPTE 259M (10-bit at 270Mb/s).....(6) (8) or (12) Female BNC*

DIGITAL VIDEO OUTPUTS

Ultra HD 4K & 1080p Video (Only with AVC-I):

- HD-SDI SMPTE 424M Level A (10-bit at 3.0Gb/s).....(6) (8) or (12) Female BNC*

HD Video:

- HD-SDI SMPTE 292M (10-bit at 1.5Gb/s).....(6) (8) or (12) Female BNC*

SD Video:

- SD-SDI SMPTE 259M (10-bit at 270Mb/s).....(6) (8) or (12) Female BNC*

DIGITAL AUDIO INPUTS

AES Digital Audio:

- 8- or 16-tracks TASCAM/AES-59.....Mira+ 6CH=(1) | Mira+ 8CH / Mira+ 12CH=(2) F-DB25
(TASCAM breakout cable not included) NOTE: Maximum of 8-tracks of audio can be recorded into any given clip.

Embedded in Ultra HD 4K & 1080p Video (AVC-Intra only):

- Embedded in 3G HD-SDI video inputs: 8-tracks; 48kHz at 24-bits

Embedded in HD Video:

- Embedded in all HD-SDI video inputs: 8-tracks; 48kHz at 24-bits

Embedded in SD Video:

- Embedded in all SD-SDI video inputs: 4-tracks; 48kHz at 20-bits

DIGITAL AUDIO OUTPUTS

AES Digital Audio:

- 8- or 16-tracks TASCAM/AES-59.....Mira+ 6CH=(1) | Mira+ 8CH / Mira+ 12CH=(2) F-DB25
(TASCAM breakout cable not included) NOTE: Maximum of 8-tracks of audio can be recorded into any given clip.

Embedded in Ultra HD 4K & 1080p Video (AVC-Intra only):

- Embedded in 3G HD-SDI video outputs: 8-tracks; 48kHz at 24-bits

Embedded in HD Video:

- Embedded in all HD-SDI video outputs: 8-tracks; 48kHz at 24-bits

Embedded in SD Video:

- Embedded in all SD-SDI video outputs 4-tracks; 48kHz at 20-bits

* For Mira+ servers featuring AVC-Intra video hardware: These are “High-Density BNC’s”; with adapter cable to “Standard Female BNC’s” provided.

QUAD-VIEWER, COUNT-DOWN & MULTI-VIEWER DIGITAL VIDEO OUTPUTS

HD Video (Only):

HD-SDI SMPTE 292M Quad-Viewer & Count-Down output:

.....Mira+ 6CH=(1) | Mira+ 8CH=(2) | Mira+ 12CH=(3) Female BNC

SD & HD Video:

Multi-Viewer on desktop Mira Explorer graphical user interface HDMI and DVI-D (1920×1080 or higher native resolution display required)

ANALOG AUDIO OUTPUT

Analog Audio:

- Unbalanced, line-level at: -10 dBV....Mira+ 6CH=(2) | Mira+ 8CH=(2) | Mira+ 12CH=(3) Female 3.5mm
- 2-Tracks (1 stereo pair) / Selectable to monitor any video channel output stereo pair

ANALOG LTC INPUT

- LTC input (Time of Day), unbalanced.....(1) Female XLR

DATA / CONTROL

- RS-422: Sony; VDCP; & Odetics protocols (M-RJ45 to F-DB9 adapters included).....(4) or (8) M-RJ45
- Mini DisplayPort (1920 x 1080 native resolution display required).....(4) F-mDP
- 10-Gigabit Ethernet (10-T/100-T/1000-T/10K-T) with AMP, VDCP, & MIRA protocols.....(2) F-RJ45
- Ethernet with POE (10-T / 100-T) for Mira Control Surface.....(1) F-RJ45
- USB-2.0 / USB-3.0 / USB-3.1.....F-USB-A
- USB Type-C.....F-Type-C
- QWERTY Keyboard & Mouse set (included with each Mira+ server).....USB-A



Mira+ 8-Channel Server Chassis – Rear Panel

ROSS VIDEO

Production Technology and Services

MOTION GRAPHICS

XPRESSION | Single, Triple, UHD Flex, Prime, Go!, Designer, Developer
XPRESSION CLIPS
XPRESSION TESSERA
XPRESSION MAPS
XPRESSION TELESTRATE
XPRESSION TOUCH FACTORY
XPRESSION TICK IT



CREATIVE SERVICES

ROCKET SURGERY | Graphics Creation



STUDIO IN A BOX

GRAPHITE | All-in-One Live Production Vehicle



NEWS & SOCIAL MEDIA

INCEPTION NEWS | Academic, Express, Standard, Enterprise
INCEPTION LIVE
INCEPTION SOCIAL
INCEPTION.CLOUD
HORIZON



CONTROL SYSTEMS

OVERDRIVE | Express, Prime, Premium
OVERDRIVE + GRAPHITE
DASHBOARD
LIGHTNING CONTROL SYSTEM
ULTRITOUCH CONTROL PANEL



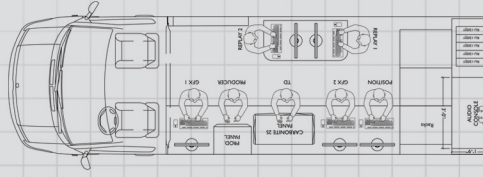
PRODUCTION SWITCHERS

ACUITY | Panel: A1s, A2m, A2x, A3m, A3, A4 Frame: 4RU, 8RU
CARBONITE BLACK | Panel: C1, C1s, C2, C2s, C3s, C3x Frame: 2RU
CARBONITE BLACK PLUS
CARBONITE BLACK PLUS 12G
CARBONITE BLACK SOLO
CARBONITE BLACK SOLO 13
CARBONITE ULTRA
ACUITY & CARBONITE IP SOLUTION



OPENTRUCK

OPENTRUCK | Flight Case through to 40-foot Truck Designs



PRODUCTION SERVICES

ROSS MOBILE PRODUCTIONS



ASSET MANAGEMENT

STREAMLINE GRAPHICS
STREAMLINE PRODUCTION
STREAMLINE.CLOUD



CAMERAS

ACID CAMERA | H200-UCHR, Z50-UCHR
PIVOTCAM | PivotCam SE



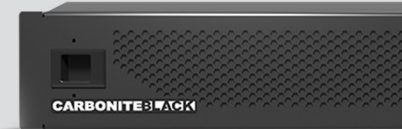
MULTI-SCREEN IMAGE PROCESSING

CARBONITE MOSAIC



CHROMA KEYING

ULTRACHROME HR



* Carbonite Black Chassis with UltraChroma HR Software



Ultrix



INFRASTRUCTURE

ULTRIX 12G & IP ROUTER | 16x - 144x
NK ROUTER | 16x4 - 144x144
OPENGear | Modular Signal Processing, oGx Frame
MASTER CONTROL | MC1 openGear Card, MC1 Panel
NIELSEN | Watermarks Encoder



GATOR | 12G UHD Signal Processor
RAPTOR EDGE | IP Gateway & Processor
NEWT | IP Point of Use Gateway
GEARLITE | Point of Use Signal Processing
ULTRITOUCH | Soft Touch Control Panel
AUDIO MONITORING | MB-651, MB-652
MASTER SYNC & REFERENCE | SRG-2200, SRG-4400, ACO-4400

IP TECHNOLOGY

OEM PRODUCTS | Market Ready Modules & System-on-Chip



VIDEO SERVERS, REPLAY & DELAY

ABEKAS MIRA+ | Replay System
ABEKAS MIRA EXPRESS | Replay Server
ABEKAS TRIA+ | Production Server
ABEKAS TRIA EXPRESS | Video Clip Server

ABEKAS TRIA NEWS | News Playout Server
ABEKAS AIRCLEANER | Live Event Delay



ROBOTICS

FURIO SE LIVE | Live Head, SE Dolly and SE Lift; PanBar and Joystick Controls
FURIO SE STUDIO | VR100, VR600 Heads; SE & S2 Lifts; SE BlackBird; VR0 Manual Fluid Head with Tracking
CAMBOT | 520PT, 600PT, 700PT Heads; 600 BlackBird; 600XY & 700XY Free-Roaming Peds
SMARTSHELL | Robotic Camera Control System



VIRTUAL & AUGMENTED REALITY

TRACKLESS VIRTUAL
UX VIRTUAL TRACKING SYSTEM
UNREAL ENGINE



Abekas



Ross Video has a complete range of technical services available to ensure that your Abekas Mira replay system installation is a success.

Operational Training can be provided at Ross Video, on-site or on the web. Experienced Ross operators will teach your staff to get the most out of your new system, and enhance your productions.

Commissioning is a service to help get your Abekas Mira replay system properly configured, connected and installed. This service is performed by factory trained Ross technical staff.

Technical Training can be provided at Ross Video, on-site or over the web. Technical training will teach your engineering staff the technical details of the system you have purchased. System configuration, interfaces, databases, and routine maintenance procedures are some of the topics covered.

Abekas Mira replay system comes standard with a 1 year comprehensive warranty. **Extended Warranties** on hardware and software maintenance are available for an annual fee.

Technical advice is available on-line, by telephone, or email to Ross Video – **Included for the life of your system.**

Contact Us

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Email: solutions@rossvideo.com

Technical Support

Emergency: +1 613 349-0006

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