

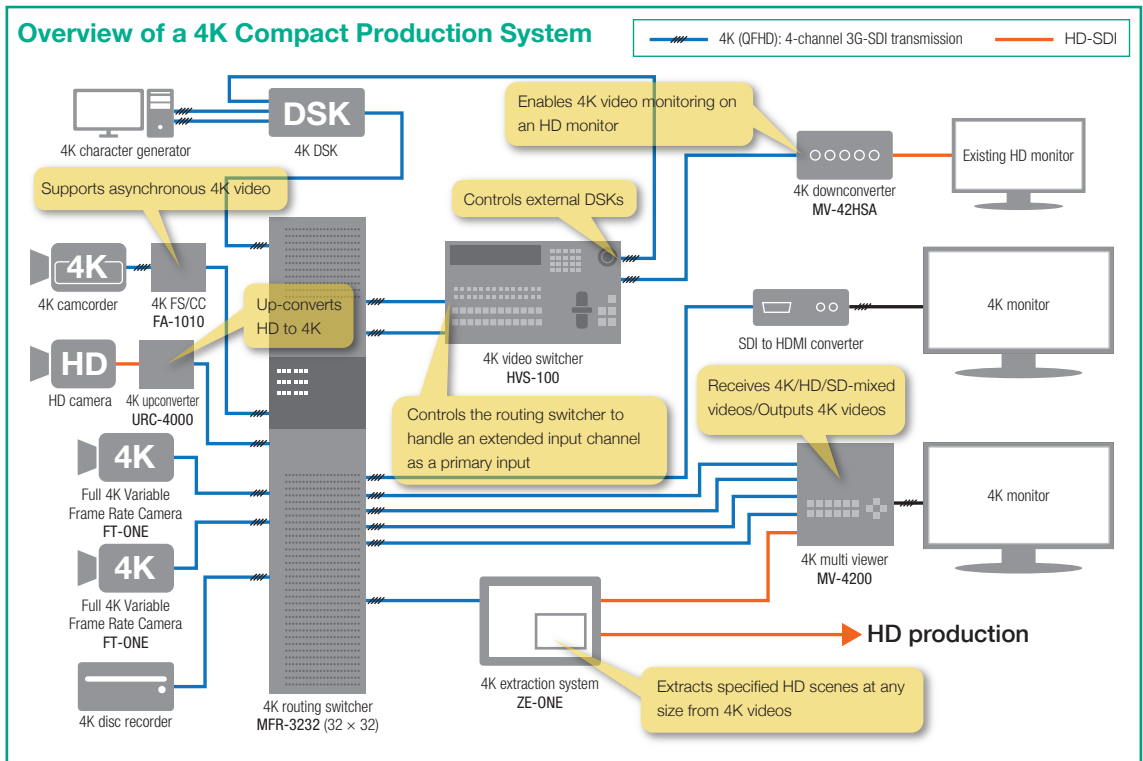
FOR-A PRODUCTS
Guide Book
2014 – 2015

CONTINUOUS INNOVATION

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FOR-A for a 4K Future

FOR-A's versatile 4K solutions are able to meet tomorrow's growing 4K live production needs today.



Lineups for 4K production workflow

Full 4K Variable Frame Rate Camera
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3G/HD/SD Portable Video Switcher

HVS-100/110 “HANABI”

NEW

4K^{ULTRA} HD



The HVS-100 and HVS-110, portable video switchers, boast exceptional cost performance. The two units inherit and improve upon the diverse functions and features of the popular HVS-300HS, including mixed HD/SD input, frame synchronizing, re-sizing engine, 2.5D wipe effects, DVE, keyer with chroma key*¹, and DSK. The HVS-100 and HVS-110 also have a built-in Web server that lets you change settings from a PC or tablet device. A clip memory feature has been newly added to the still store to support elaborate performances such as through the use of CG wipes, while the multi-viewer meets a diverse range of monitoring needs. Two models are available: one with separated main unit and control panel and one with compact, integrated design.



HVS-1000U Control Panel
HVS-100 Main Unit



HVS-110

- 2U compact main unit (HVS-100)
- Compact and integrated all-in-one unit (HVS-110)
- HD/SD-SDI 8 inputs/4 (+1 HDMI) outputs standard, max. 14 inputs/8 (+1 HDMI) outputs (HVS-100)
- HD/SD-SDI 12 inputs/8 (+1 HDMI) outputs (HVS-110)
- Frame synchronizer, re-size engine*², and Proc. Amp. on inputs
- Variety of I/O options such as HD/SD-SDI, HDMI, VGA, and HD/SD analog component and analog composite
- 8 AUX buses with MIX transition
- Built-in multi-viewer, supporting 2/4/5/7/9/10/11/16-split view with tally and title display
- Up-stream keyer (with chroma key*¹) and DSK
- Various 2.5D DVE transitions and over 100 wipe patterns
- 2 channels of still stores with 227 frames of internal video memory
- Event memory, user buttons, and macro function
- Operate with control/remote control panel or GUI software via Ethernet
- Redundant power supply
- Various options
 - 3G-SDI support
 - 4K format support

*¹ Also assignable to DSK

*² Applied for 4 inputs

HD/SD 1 M/E-2 M/E Video Switcher

HVS-390HS “HANABI”



HVS-3920U 2 M/E Control Panel



HVS-3910U
1 M/E
Control Panel



HVS-392WOU
2 M/E
Control Panel



HVS-390HS
Main Unit

The HVS-390HS video switcher will come in sizes from 1 M/E to 2 M/E. Even easier to use, it has evolved to become more powerful, while maintaining all of the highly acclaimed functionality of the HVS-300 series.

- HD/SD-SDI 16-input/8-output and one HDMI output standard, max. 24-input/13-output
- Frame synchronizer and Proc. Amp. on each input
- 4 up-scalers available (expandable with optional input card)
- Variety of I/O options such as SDI, DVI, VGA, analog component and analog composite
- Dual 4/10/16-split multi-viewer
- 4 keys per M/E each with 2.5D DVE and defocus (1 M/E: 4, 2 M/E: 8)
- 2 channels of free-assignable 3D DVE for transitions
- 4 still stores and internal clip drive
- Various 2D and 3D transitions
- Sequence function and event memory
- Video wall capability
- Various options
 - Color correction function
 - Macro function
 - Safety area display
 - Built-in color bar display
 - Equipped with many useful functions, including a built-in matte function

Control Panels

- | |
|---------------------------------------|
| 1 M/E model: – HVS-3910U: 20 buttons |
| 2 M/E model: – HVS-392WOU: 28 buttons |
| – HVS-3920U: 20 buttons |
| – HVS-392ROU: rack-size, 12 buttons |

Do you know “Advanced AUX”?



Now with the HVS-390HS production switcher, FOR-A have taken its Mix Effects (M/E) technology to the next level and upgraded the AUX bus system to perform with powerful M/E functionality.*

On each AUX output, dissolve or wipe transitions can be applied to the background image with independently superimposed keys.

* Use of an optional expansion unit (HVS-30HSDO) allows the AUX system to expand to eight outputs for performance equivalent to eight video mixers.

■ At live events

Sub screens with enhanced images accentuate images on the main screen, bringing concerts to life.

■ At broadcast stations

Sub screens showing instructional, reference and other types of images can be provided for studio audiences.

■ At houses of worship

Sub screens with scrolling tickers showing translations or commentary can be provided separately from the main screen.



3G/HD/SD 2 M/E-3 M/E Digital Video Switcher

HVS-4000HS/4000HSA “HANABI”



HVS-32440U 2.5 or 3 M/E Control Panel



HVS-22430U
2 M/E Control Panel



HVS-4000HS
Main Unit

Control Panels

- | |
|--|
| 2 M/E model: |
| – HVS-21630U: 2 M/E, 16 buttons |
| – HVS-22430U: 2 M/E, 24 buttons |
| – HVS-22440U: 2 M/E, 24 buttons |
| 3 M/E model: |
| – HVS-32440U: 2.5 M/E, 3 M/E, 24 buttons |
| – HVS-33240U: 2.5 M/E, 3 M/E, 32 buttons |

FOR-A's HVS-4000 Series 2 M/E, 2.5 M/E, or 3 M/E multi format video switchers have a wide range of features, including HD/SD mixed input. The units also come equipped with a number of connection interfaces and functions for external devices, making them extremely useful as the core unit in your video production system.

- HD/SD-SDI 16-input/16-output standard, max. 48-input/28-output
- 4 keyers per M/E as standard, max. 6 keyer per M/E, total 18 keyers (3 M/E)
- 6 still stores standard, max. 12 still stores
- Maximum 14 DVEs (2.5D × 6, 3D × 8)
- 4/10/16-split multi-viewer as standard, additional multi-viewer available
- Programmable macros and sequence functions
- Various video editing device support
- External device control: Allows integrated control of various devices, including routing switchers, VTRs, DDRs, multi-viewers and so on
- Control software available
- Various options
 - 3G-SDI support
 - 3D/2.5D DVE card
 - Global still, keyer, and local still
 - Combiner
 - Up/down converter card
 - Color corrector
 - Internal/external clip drive
 - DSK
 - Stereoscopic 3D support

HD/SD 1.5 M/E Video Switcher

HVS-350HS “HANABI”



HVS-350U Control Panel



HVS-35ROU Rack Size
Control Panel



HVS-350HS Main Unit

The HVS-350HS offers a full range of functionality, including mixed HD/SD input, frame synchronizer, 2D and 3D wipe effects, DVE, keyer with chroma key (2 ch), DSK (4 ch), still stores (4 ch), picture in picture (2 ch), and 16-split multi-viewer (2 ch).

- HD/SD-SDI 8-input/8-output standard, max. 24-input/12-output
- Frame synchronizer and Proc. Amp. on each input
- 4 up-scalers available (expandable with optional input card)
- Variety of I/O options such as SDI, DVI, VGA, analog component, and analog composite
- Dual 4/10/16-split multi-viewer
- 6 keyers (2 keyers + 4 DSKs) each with 2.5D DVE and defocus
- 2 P-in-P with 2.5D DVE and defocus
- 2 channels of free-assignable 3D DVE
- 4 still stores and clip store
- Various 2D and 3D transitions
- Sequence function and event memory
- Video Wall capability
- Compact 1.5 M/E, 3U main unit
- Stereoscopic 3D support (option)

3G/HD/SD/ASI/AES/RS-422 Routing Switcher

MFR-8000



MFR-8000 Main Unit

The MFR-8000 builds on the functions and control interfaces of MFR-5000 specifications to offer an expanded matrix of up to 256 inputs/256 outputs in a 16U frame.

- Ready for a range of audio input/output cards
 - MFR-16AESI: Input card for 16 AES/EBU stereo pairs (32 channels)
 - MFR-16AESO: Output card for 16 AES/EBU stereo pairs (32 channels)
 - MFR-16AAI: Input card for 16 analog audio stereo pairs (32 channels)
 - MFR-16API: Input card for 16 AES/EBU stereo pairs (32 channels)
 - MFR-16ADA0: Output card for 2 embedded audio stereo pairs, 8 AES/EBU stereo pairs(16 channels), and 8 channels of analog audio
- Routes control signals between master units (editing stations, etc.) and slave units (video servers, etc.) with an added I/O card for serial control.
 - MFR-16DTIO: 16-port RS-422 I/O card
- Configure a matrix with up to 256 inputs/256 outputs
- Partition the matrix as needed, for fully independent switching, V/K linking, HD/SD simultaneous and stereoscopic 3D switching, or crosspoint-compatible 4K/8K switching
- Outstanding connectivity: Up to 16 inputs/16 outputs for 8K, and 64 inputs/64 outputs for 4K

3G/HD/SD/ASI/AES/RS-422 Routing Switcher

MFR-5000



MFR-5000 Main Unit

The MFR-5000 Series is a group of multi-format routing switchers supporting 3G-SDI, HD-SDI, SD-SDI, ASI and AES. Inside the 8U frame a matrix of up to 128 inputs/128 outputs can be configured. It offers expansive flexibility at the core of your system, such as tally connections with peripheral devices (video switchers and multi viewers) and automatic source name tracking.

- 3G-SDI, HD-SDI, SD-SDI, ASI and AES signal support
- Up to 128-inputs/128-outputs in an 8U main unit
- Partition the matrix as needed, for multiple independent control, V/K linking, HD/SD simultaneous and stereoscopic 3D switching
- Various crosspoint control functionality: Salvo, Take, Link, Level, Chop and more
- Various audio input and output signal formats supported
- 8 types of control units available
- MFR-GPI: 128 GPI/O with 4 serial port interface unit
- Tally linking with FOR-A's HANABI Series video switcher and multi viewer series
- Outstanding redundancy: CPU, power, network and direct control of main unit
- Outstanding maintainability: All boards and power units can be accessed from the front without removing cables.
- Outstanding connectivity: Up to 8 inputs/8 outputs for 8K, and up to 32 inputs/32 outputs for 4K

Audio Routing Switcher

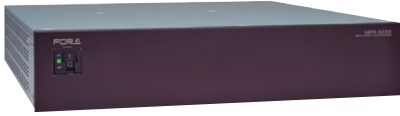
MFR-1616A



AES-compatible 16 stereo-pair (32-channel) audio routing switcher. Enables audio routing linked to MFR series video routing switchers.

3G/HD/SD/ASI Routing Switcher

MFR-3232/3216/1616R/1616



MFR-3232



MFR-1616

Multi-format routing switchers that support 3G-SDI, HD-SDI, SD-SDI and ASI signals. FOR-A features four models, each with a different number of inputs and outputs. Despite their compact cabinet size, these models inherit the various functions provided by the MFR-5000 Series.

- 3G-SDI, HD-SDI, SD-SDI, ASI signals supported
- Various crosspoint control: Salvo, Take, Link, Level, Chop and more
- Tally linking with FOR-A's video switcher HANABI Series and multi viewer series
- 8 types of control units available
- MFR-GPI: 128 GPI/O and 4 serial ports interface unit also available
- The Ethernet connection makes it possible to link and interface the routing switcher with the MFR-5000 series (to be supported in the future).

4 models to choose from in accordance with the number of inputs and outputs

	MFR-1616	MFR-1616R	MFR-3216	MFR-3232
Input	16	16	32	32
Output	16	16	16	32
Size	1U	2U	2U	2U
Redundant AC	Option ^{*1}	Option	Option	Option
Redundant CPU	-	Option	Option	Option

*1: One AC power supply inlet is provided (internal wiring).

Remote Control Panels for MFR Series

MFR-16RUW/32RUW/64RUW NEW MFR-16RUD/16RUD/40RU/18RU/39RU



MFR-16RUW Control Panel with 16 buttons



MFR-32RUW Control Panel with 32 buttons



MFR-64RUW Control Panel with 64 buttons



MFR-16RU Control Panel with 16 buttons



MFR-16RUD Control Panel with 16 buttons and menu display



MFR-40RU Control Panel with 40 buttons

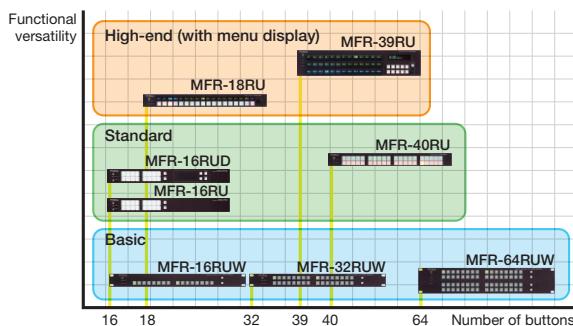


MFR-18RU Control Panel with 18 buttons



MFR-39RU Control Panel with 39 buttons

Product lineup



3G/HD/SD/Analog/HDMI/DVI/RGBHV Mixed High Resolution Multi Viewer (Up to 68 Inputs, 8-monitor Outputs)

MV-4200

NEW
4K ULTRA HD

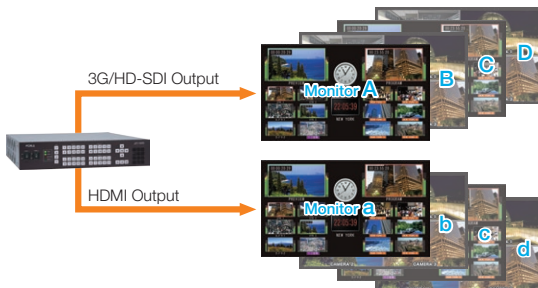
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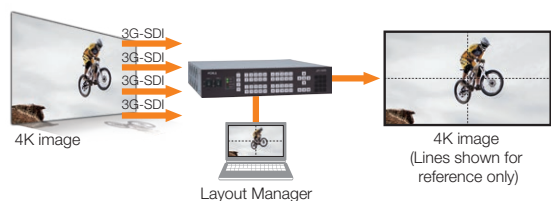
The MV-4200 is a 2U multi-viewer that accepts up to 68 channels of mixed 3G/HD/SD-SDI, analog composite, HDMI, DVI, or RGBHV signals for monitoring on 8 screens. Full-featured, this unit offers a customizable window layout, audio level meters, and AFD-compatible cropping.

- Up to 68 inputs support mixed input of 3G-SDI, HD-SDI, SD-SDI, analog composite, HDMI, DVI, or RGBHV signals, and asynchronous signal inputs
- Single 4K image editing from four 3G-SDI inputs
- HD-SDI and HDMI output (mirroring display)
- Full-layout control
- Up to 48 created layout patterns in the main unit
- Audio level display supported for 16 embedded audio channels
- Prominent error display
- Active Format Description (AFD) support for auto-cropping
- Tally, time code and title display
- Displays up to 4 clocks, up/down/remaining timer, and/or information
- Background display capability
- Audio monitoring output
- Video alarm and audio alarm detection function
- Various options
 - MV-4200PS: Redundant power supply
 - MV-4200IF: Interface card (GENLOCK/AES/Analog audio/RS-232C/422/485/GPIO)
 - MV-4200SDI: SDI input card (3G/HD/SD × 20)
 - MV-4200HDMI: DVI/HDMI input card (DVI-I × 8)
 - MV-4200DO: Software for 4 channels of output
 - MV-4200SNMP: SNMP-compatible software

View up to 8 monitors in different layouts*



Edit a single 4K image from four 3G-SDI inputs



*When using optional software (MV-4200DO). Standard configuration: 4-screen layout. (Same layout on monitors A-a, B-b, C-c, and D-d.)

3G/HD/SD/Analog Mixed High Resolution Multi Viewer (Up to 16 Inputs, Dual-monitor Outputs)

MV-1620HSA

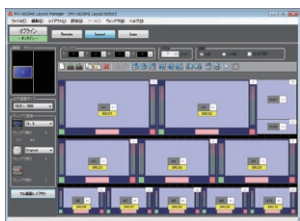
NEW

4K^{ULTRA}HD



The MV-1620HSA is a compact 1U multi-viewer that accepts up to 16 channels of mixed 3G/HD/SD-SDI or analog composite signals for monitoring on one or two screens. It can be cascaded with other units to display up to 64 sources at once. Full-featured, the unit offers a customizable window layout. View audio levels and use AFD-compatible cropping or information display as needed.

- Up to 16 inputs support mixed input of 3G-SDI, HD-SDI, SD-SDI, analog composite signals, and asynchronous signal inputs
- Single 4K image editing from four 3G-SDI inputs
- HD-SDI and HDMI output (mirroring display)
- Full layout control
- Up to 16 created layout patterns in the main unit
- Horizontal or vertical audio level display supported for 16 embedded audio channels
- Prominent error display
- Active Format Description (AFD) support for auto-cropping
- Time code and title display
- Displays up to 4 clocks, up/down/remaining timer, and/or information
- Background display capability
- Audio monitoring output
- Video alarm, audio alarm, and closed caption loss detection function
- Various options
 - MV-1620DO: Additional HD-SDI and HDMI output, REF input, analog audio/AES input, and analog audio monitoring outputs, background video input/output
 - MV-1620IF: RS-232C/422/485 and GPIO



Layout Manager screen



Adding logos and backgrounds



Screen for recording streams (Alarm Preview)

HD/SD/Analog Mixed High Resolution Multi Viewer (Up to 16 Inputs, Dual-monitor Outputs)

MV-1620HS



The MV-1620HS is a compact 1U multi-viewer that accepts up to 16 channels of mixed HD/SD-SDI or analog composite signals for monitoring on one or two (option) screens. Full-featured yet economical, the unit offers a customizable window layout and displays audio levels, titles, and timers, etc.

- Up to 16 inputs support mixed input of HD-SDI, SD-SDI, analog composite signals, and asynchronous signal inputs
- HD-SDI and HDMI output (mirroring display)
- Full layout control
- Up to 16 created layout patterns in the main unit
- Audio level display supported for 16 embedded audio channels
- Time code and title display
- Displays up to 2 clocks and/or up/down/remaining timer
- Background display capability
- Audio monitoring output
- Video alarm and audio alarm detection function
- Various options
 - MV-1620DO: Additional HD-SDI and HDMI output, REF input, analog audio/AES input, and analog audio monitoring outputs, background video input/output
 - MV-1620IF: RS-232C/422/485 and GPIO

3G/HD/SD/Analog/PC Mixed High Resolution Multi Viewer (Up to 32 Inputs, 4-monitor Outputs)

MV-3200



The MV-3200 multi-viewer offers a multi-monitor display environment, suited to your system, just by selecting and installing the required input and output boards onto a 2U frame. Up to 4 input boards and 2 output boards can be installed onto the frame, offering a multi-viewer with a maximum of 32 inputs and 4 outputs. Supports mixed input of 3G-SDI (Level-A), HD-SDI, SD-SDI, analog composite and DVI (analog and digital) signals.

- Supports mixed input of different frame rate signals
- Up to WUXGA (1920 × 1200 pixels) DVI-I High-resolution output
- Up to 32 inputs and 4 outputs
- Up to 4 clocks and/or up/down timers per output card
- Full layout control
- Audio level display supported for 16 embedded audio, AES/EBU, and analog audio channels
- Tally display and dynamic UMD title interface
- Stereo audio output
- Video over IP output
- Video alarm and audio alarm detection function

Frame

MV-3200MF	2U size frame allowing installation of up to 4 input cards and 2 output cards
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Output cards
Up to 2 cards can be installed

Input cards
Up to 4 cards can be installed

Input card

MV-32HSDI	3G-SDI(Level-A), HD-SDI or SD-SDI: 8 inputs
MV-32AI	Analog composite: 8 inputs
MV-32AIL	Analog composite: 4 inputs *Allows loopthrough for each input.
MV-32PCI	DVI-I: 3 inputs *Digital or analog can be selected
MV-32AAI	Enables analog audio 16 channel input. D-sub 25-pin (female) × 2 8 stereo channels, balanced and unbalanced
MV-32DAI	Enables AES audio 16 channel input. BNC × 8, 8 stereo channels, unbalanced

Output card

MV-32PCDO	DVI-I outputs 2 channels Can display maximum of 32 video windows and 4 clock windows with 2 channels together for DVI-I outputs.
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Various Options

MV-32PS	Redundant Power supply unit
MV-32FP	Front control panel
MV-32RT	90 degree rotated output
MV-32HDO	3G-SDI (LEVEL-A), HD-SDI output (SD-SDI is not supported)
MV-32SNMP	SNMP support

HD/SD/Analog/PC Mixed High Resolution Multi Viewer (Up to 16 Inputs, Dual-monitor Outputs)

MV-1600HS Series



The MV-1600HS Series of multi-viewers support the mixed input of HD-SDI, SD-SDI, analog composite and DVI (digital and analog RGB) signals. The units offer high-resolution output with a DVI terminal or HD/SD-SDI video output.

MV-1610HS Series Lineup

	Signal	MV-1610HS03	MV-1610HS04	MV-1610HS13	MV-1610HS20	MV-1610HS21	MV-1610HS22	MV-1610HS30	MV-1610HS31	MV-1610HS40
Input	HD-SDI	None	None	4	8	8	8	12	12	16
	SD-SDI									
	Analog Composite									
	DVI-I (Digital/Analog)	6	8	6	None	2	4	None	2	None
Output	DVI-I (Digital/Analog)	1	1	1	1	1	1	1	1	1
Output 2	DVI-I (Digital/Analog)	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

MV-1611HS Series Lineup

	Signal	MV-1611HS03	MV-1611HS04	MV-1611HS13	MV-1611HS20	MV-1611HS21	MV-1611HS22	MV-1611HS30	MV-1611HS31	MV-1611HS40
Input	HD-SDI	None	None	4	8	8	8	12	12	16
	SD-SDI									
	Analog Composite									
	DVI-I (Digital/Analog)	6	8	6	None	2	4	None	2	None
Output	HD/SD-SDI	2*	2*	2*	2*	2*	2*	2*	2*	2*
Output 2	DVI-I (Digital/Analog)	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

* 2 outputs of same screen image

4K (QFHD) Monitoring Downconverter

MV-42HSA **NEW** **4K^{ULTRA}HD**

HD/SD/Analog Mixed High Resolution Multi Viewer (Quad-Split)

MV-42HS



Display Image (Quad View)

The MV-42HS is a quad viewer that resizes and displays up to 4 inputs of HD-SDI and SD-SDI signals on a single screen. Audio level metering of SDI embedded audio signals is provided allowing audio signal presence to be monitored. The MV-42HS is most suitable for monitoring systems with mixed HD-SDI and SD-SDI input signals. The MV-42HSA builds on MV-42HS performance with support for 3G-SDI (Level-A/B) input. An optimal downconverter for viewing 4K (QFHD) material on HD displays or computer monitors.

- Support for mixed input of 3G-SDI (Level-A/B)*, HD-SDI, and SD-SDI signals (Mixed and asynchronous input supported)
- Four quadrants of 4K material (3G-SDI x 4) can be combined into a single screen*
- Support for mixed input of analog composite (option)
- Audio level metering for HD/SD-SDI embedded audio signals (Up to 8 ch display)
- HD-SDI and DVI-D (1920 × 1080 or 1280 × 720) outputs
- Full screen, 2-split (right and left), and quad screen output selectable

- Video loss detection
- Display of ancillary time code (ATC) embedded on HD/SD-SDI input signals
- Title display of up to 16 characters for each input (alphanumeric and symbol)
- With the interface option, genlock input, color selectable (red and green) tally indicator display, remote control via Ethernet, and date/time display can also be supported.

* only for MV-42HSA

PC/Video Mixed High Resolution Multi Viewer (Quad-Split)

MV-410RGB



- Supports mixed input of analog composite and DVI (digital and analog) signals
- 8 total channels of input: 4 digital/analog RGB signal channels with the DVI-I connector, and 4 analog composite channels
- *Number of channels capable of simultaneous display: 4
- WUXGA (1920 × 1200 pixels) DVI-I High-resolution output

High Resolution Multi Viewer (Quad-Split)

MV-400



- 2 or Quad split-screen modes
- Analog composite output and SXGA high resolution output

HD/SD/Analog Mixed High Resolution Multi Viewer (Quad-Split)

MV-410HS



- Supports mixed input of HD-SDI, SD-SDI, and analog composite signals
- WUXGA (1920 × 1200 pixels) DVI-I High-resolution output
- Includes layout editor
- Network video streaming/monitoring function over IP
- 8-channel audio level display, Tally display, Title display and Time display

Multi Viewer (Quad-Split, P-in-P)

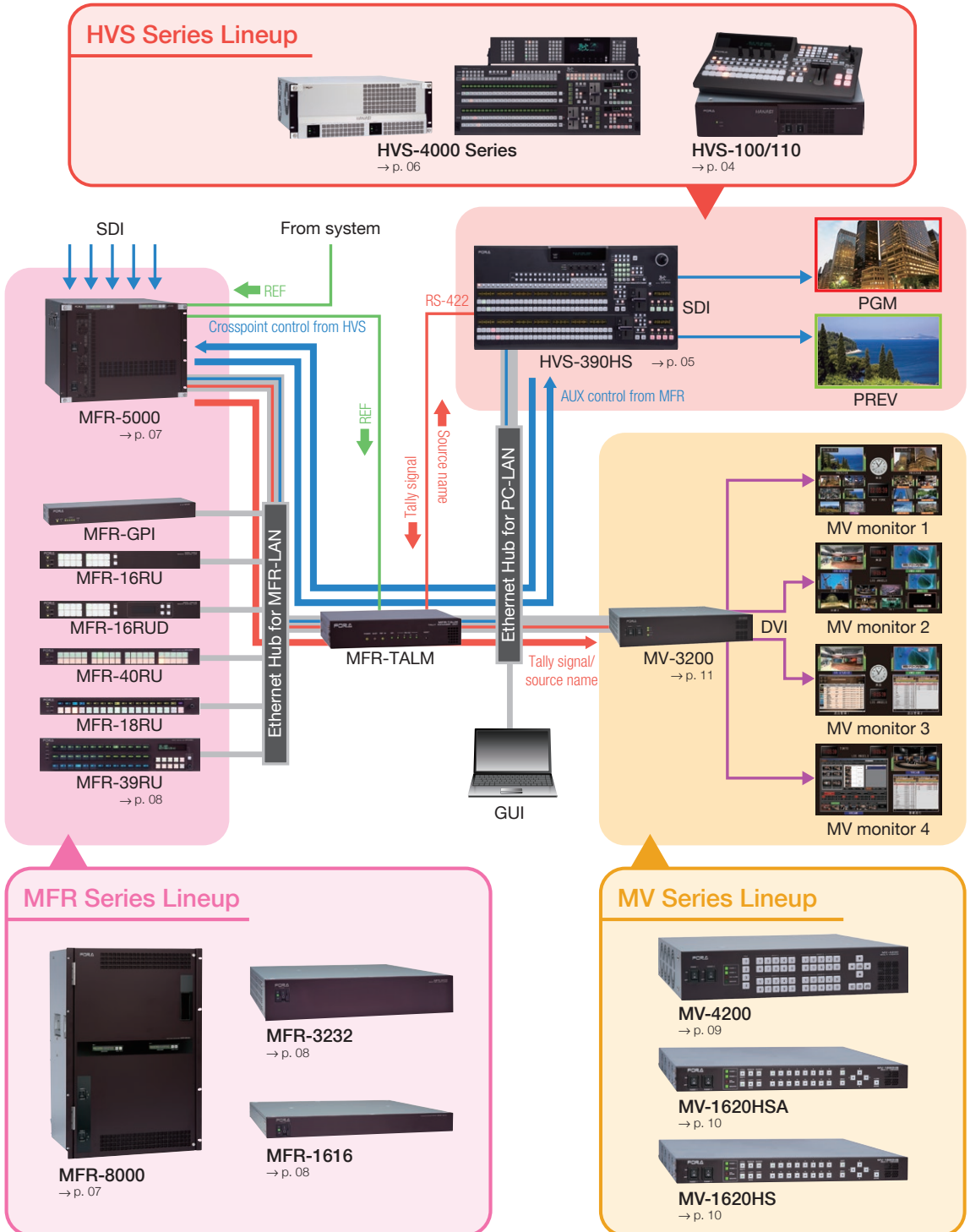
MV-40F



- Quad split-screen for analog composite inputs
- 2, 3, and Quad split and Picture-in-Picture screen mode

FOR-A System Integration

The figure below shows an example of a broadcast system configured with FOR-A products. In this configuration, if a certain cross point is determined and source videos are switched, the switched source video name will be displayed automatically on the HVS control panel and the monitoring screen associated with the switching operation (MFR link function).



Super Resolution 4K Upconverter

URC-4000

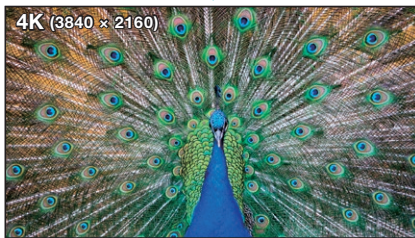
NEW

4K^{ULTRA}HD

Provisional



Spatiotemporal frame interpolation
X
Multi-scale nonlinear enhancement



Simulated images. Not actual 4K or HD images.

The URC-4000 provides powerful up-conversion and turns HD video into 4K in real time. Original I/P and resolution conversion developed by FOR-A unleashes a new era in 4K conversion. Spatiotemporal frame interpolation is performed in which spatial and temporal changes in images are detected in high precision, on a pixel-by-pixel basis. Aliasing from conversion are reduced, and the resolution of still image areas is restored. Resolution is further improved through multi-scale nonlinear enhancement.

- Redundant power supply
- 3G-SDI Level A and B output
- Web-based control
- Supports SNMP (Simple Network Management Protocol) (optional)

File-base Video Format Converter

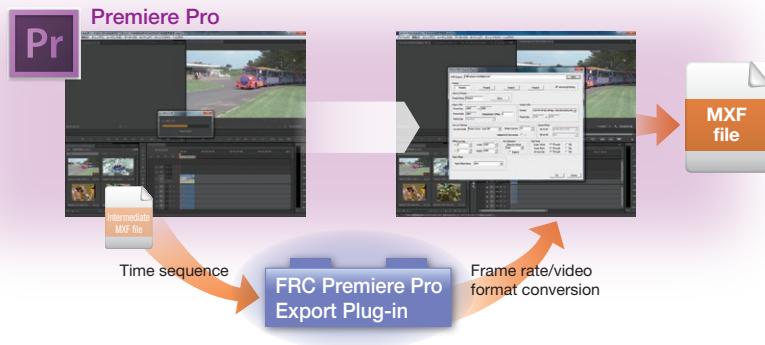
FRC Premiere Pro Export Plug-in

NEW



High-quality video format converter/MXF exporter plug-in software for Adobe Premiere Pro CC/CS6 Windows.

- Frame rate converter
- Includes an upconversion, downconversion, and crossconversion (1080i↔720p)
- Two conversion modes: Vector motion compensation and linear conversion
- Includes industry leading scene cut detection
- Upconversion uses motion-adaptive interlace-to-progressive conversion



HD/SD Frame Rate Converter

FRC-8000

TVBUROPE ★ Editors' Awards
Best of IBC2009

Received the TVB Europe "Best of IBC 2009" award



FRC-8000 + FRC-80FP Front Control Panel

The FRC-8000 is a multi-format frame rate converter for both HD and SD.

- Cost-Effective, Premium Quality HD/SD Frame Rate Conversion
- HD/SD frame rate conversion with vector motion compensation
- Provides frame rate conversion between: 1080/60i, 1080/59.94i, 1080/50i, 720/60p, 720/59.94p, 720/50p, 525/60 and 625/50
- Optional formats supported: 1080/30p, 1080/30PsF, 1080/29.97p, 1080/29.97PsF, 1080/25p, 1080/25PsF, 1080/24p, 1080/24PsF, 1080/23.98p, and 1080/23.98PsF
- Optional timecode supported: ATC (Ancillary Time Code) reader and generator for timecode conversion
- Up, down, and cross conversions
- Automatic scene cut detection
- 2:3 sequence detection
- Smooth conversion of crawling and scrolling titles
- Various options
 - FRC-80DA/80DA16: AES/EBU digital audio I/O
 - Up to 2 each of Dolby E* Encoder/Decoder cards can be installed
 - FRC-80SO: HD and SD simultaneous output
 - FRC-80FP: Front control panel with touch screen
 - FRC-80WEB: Web-based control

* Dolby is a registered trademark of Dolby Laboratories.

HD/SD Frame Rate Converter

FRC-30/UFM-30FRC



FRC-30



Modular-type UFM-30FRC Frame Rate Converter

The FRC-30 is a 1U high, half-U wide frame rate converter based on the UFM-30FRC. Capable of both motion compensation and linear conversion, the FRC-30 achieves outstanding levels of conversion regardless of video content. Last but not least, the FRC-30 further offers up/down/cross conversions as standard features.

- Motion compensation mode: Detects the motion vector amount of a moving object and generates the object's motion in frames
- Linear conversion mode: Base frame conversion on previous and next frames
- Supports 1080/59.94i, 1080/50i, 1080/23.98PsF, 720/59.94p, 720/50p, 525/60, 625/50 inputs, and frame rate conversions
- From SD up to HD, from HD down to SD, and from 1080i to 720p

Multi-Channel Signal Processor

FA-1010 "THE Processor"



FA-10RU

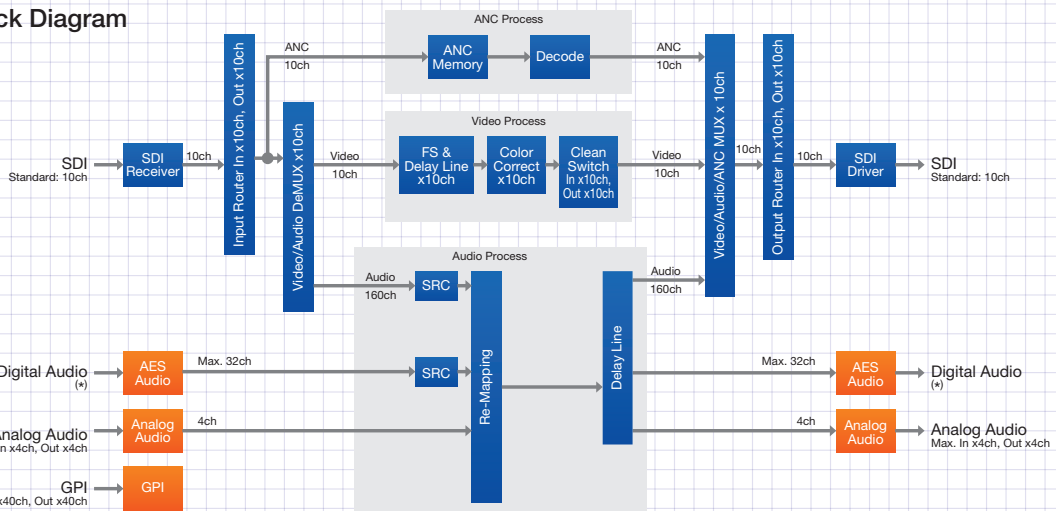


FA-AUX30

The FA-1010 is a frame synchronizer equipped with the various functions you need for video production and that enables multi-channel routing (10 video inputs and 10 video outputs). The unit supports 3G-SDI and HD/SD-SDI input/output as standard and naturally includes all the typical features of a frame synchronizer and a color corrector (standard), enabling video signal conversion. The unit is also highly versatile as an audio signal processor with delay adjustment and remapping functions plus a sampling rate converter. By combining these varied options, a single unit can provide the optimal functionality for all video production scenes, including transmission, outside broadcasting, news reporting, production, editing and distribution.

- 10 3G/HD/SD-SDI inputs/outputs
- Compact, powerful, lightweight, and cost effective
- Supports 3G-SDI, HD-SDI, and SD-SDI
- Supports max. 16 channels of embedded audio signals on each channel
- Powerful frame synchronizer performance
- Color corrector on each channel
- Time code
- Clean switch
- 3G Level-A/B conversion
- Video and audio delay circuit on each channel
- GUI monitoring and control
- Web based monitoring
- Various options
 - Balanced digital audio I/O
 - Unbalanced digital audio I/O
 - Analog audio I/O
 - GPI I/O
 - Redundant power supply
 - Remote control units

Block Diagram



* Balanced: Max. In x32ch, Out x32ch/Unbalanced: Max. In/Out x32ch

Optional expansion card

3G/HD/SD Dual Channel Multi Purpose Signal Processor

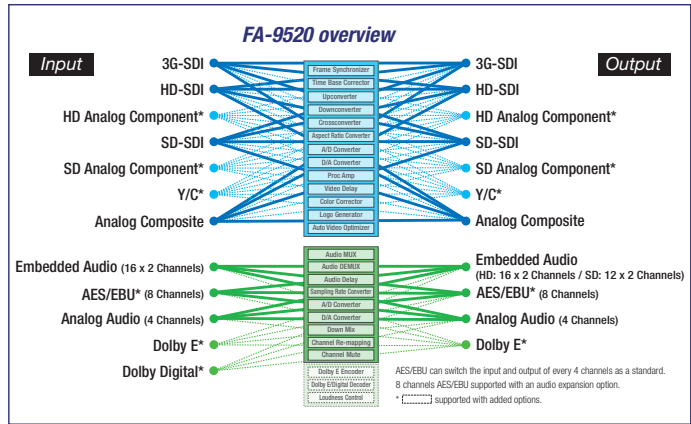
FA-9520 "THE Processor"



The FA-9520 dual channel multipurpose signal processor, developed as a dual channel version of our industry leading FA-9500 processor, is loaded perfectly for a variety of applications including: master control, mobile production, post production services, live production and more.

The FA-9250 supports 3G-SDI, HD/SD-SDI, and analog composite I/O. In addition to its functionality as a frame synchronizer, the unit also provides: up/down/cross/aspect conversion, full color correction and automatic video optimization (AVO) as standard features. Numerous optional features include: analog component I/O, Dolby E encoder and Dolby E decoder. The wealth of features in the FA-9520 allow it to replace many single-purpose units, making it a complete toolbox for almost any video need, all with FOR-A's legendary signal quality and reliability.

- "Dual Channel Mode" and "FA-9500 Compatible Mode"
- Compact, powerful, lightweight and cost effective
- Supports 3G-SDI/HD-SDI/SD-SDI/analog composite signals
- Supports 16 x 2 channels of embedded audio, 8 AES/EBU and 4 analog audio signals
- Up/Down/Cross/Aspect conversion
- High-quality A/D and D/A conversion
- Powerful frame synchronizer performance
- Color correction
- Automatic Video Optimizer (AVO) function
- Video and audio delay circuit
- Web based monitoring and control
- Logo generator
- 3G Level-A signal support
- Various options
 - Dolby E encoder/decoder
 - Analog component I/O
 - Redundant power supply
 - Remote control unit
 - Loudness controller



3G/HD/SD Multi Purpose Signal Processor

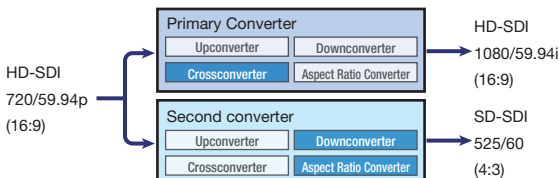
FA-9500 "THE Processor"



Single channel version of the FA-9520 Signal Processor

- Second converter application for 3G/HD/SD simultaneous output

Second converter application



HD/SD Advanced Color Corrector

DCC-7000



DCC-70RU Portable remote control unit



DCC-70DRU Tabletop control unit



High-performance HD/SD color corrector, for precise color correction in real time using 12 color parameters.

In addition to offering black level adjustment and versatile processing, the unit incorporates a frame synchronizer.

- 12-axis color correction in real time
- Includes conventional RGB correction mode
- Built-in vectorscope for detailed color adjustment
- Split before/after display for comparison
- Clip Level functions for keeping color information within the optimal range
- Two HD/SD-SDI inputs and one analog composite input
- Event memory for storing color-correction settings (instant recall of 100 events)

HD/SD Video Stabilizer

IVS-710HS



The IVS-710HS provides real-time correction focused on unwanted camera motion while maintaining camera pan and tilt movement. Supports HD/SD-SDI input and output.

- HD-SDI and SD-SDI formats: 1080i, 720p, 525/60, and 625/50
- Auto detection of camera pan/tilt: Corrects only unwanted motion
- Correction for both live and recorded video
- Sub-pixel precision
- Straightforward design: Simply supply video signals, no special connection required

Video Stabilizer & Automatic Video Optimizer

IVS-200



While existing video stabilizers are able to correct vertical and horizontal shaking, the IVS-200 also corrects rotation. It also comes with an auto video optimizer (AVO), which automatically corrects video to appropriate levels.

- Compact, simple and DC operation
- Analog composite I/O
- Process unsteady images in real time
- Correct shaking in two dimensions, including vertical, horizontal, diagonal and rotational
- Correct any video source: VTR tapes, DVD discs, live feeds, etc.
- Correction area masking function
- Automatic video optimizer function
- Time display and title display
- Simple "Plug-and-Play" design

UFM Modular Series

UFM Series

UFM Frame (6 modules)
UF-106B



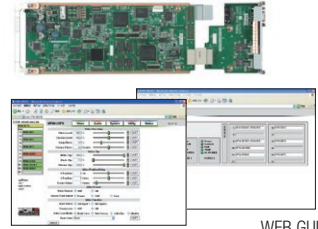
The frame can hold up to 6 modules.

UFM Frame (12 modules)
UF-112



The frame can hold up to 12 modules.

Network Control Module
UFM-30CTL



WEB GUI

SDI Changeover Switcher (2 inputs)
UFM-80SDICS



3G/HD/SD Up/Down/Cross Converter
UFM-30UDC



HD Video Routing Switcher
UFM-42HDRSA



TS Changeover Switcher (2 inputs)
UFM-80TSCS



HD/SD Color Corrector
UFM-30DCC



Frame Synchronizer/TBC
UFM-147DFS



HD/SD Audio Multiplexer
UFM-30MUX



HD/SD Digital Video Distribution Amp. (1 × 5)
UFM-30DDA



Frame Synchronizer/TBC
UFM-145DFS



HD/SD Audio Demultiplexer
UFM-30DEMUX



Analog Video Distribution Amp. (1 × 5)
UFM-15VEA



Frame Synchronizer/TBC
UFM-128FS



HD/SD Frame Rate Converter
UFM-30FRC



Analog Video Distribution Amp. (1 × 5/1 × 8)
UFM-15VDA/18VDA



Frame Synchronizer/TBC
UFM-125TBC



HD/SD/Analog composite Noise Reducer
UFM-30NR



Digital Audio Distribution Amp. (1 × 4/1 × 8)
UFM-14DADA/18DADA



Remote Control Unit
UF-NETRU



HD/SD Frame Synchronizer
UFM-30FS/FS-R/FS-DA



Analog Audio Distribution Amp. (1 × 4/1 × 8)
UFM-14ADA/18ADA



Remote Control Unit (for UFM-30DCC)
DCC-NETOU





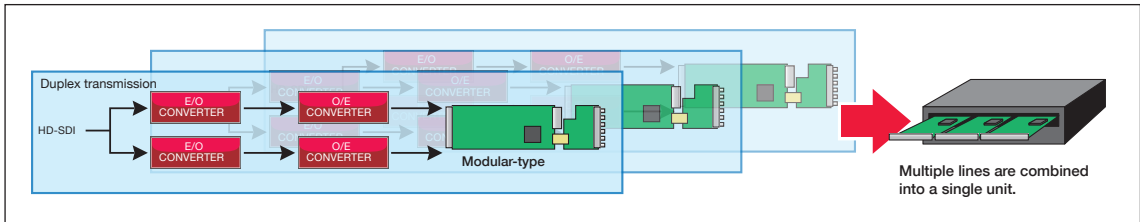
SDI Changeover Switcher (2 inputs)

UFM-80SDICS



A modular-type SDI changeover switcher that can be mounted in a UFM frame. Seamless automatic switching of 3G/HD/SD-SDI signals increases duplex transmission reliability. Mounting multiple switchers into a single unit greatly reduces the installation space.

- Video/Audio error monitoring function
- Video delay adjustment (Up to 20 frames)
- Incorporated Frame synchronizer (FS)
- Supports 8 ch audio
- Supports SNMP (Simple Network Management Protocol)
- SDI signal pass-through function
- Supports 3G-SDI (Level-A/ Level-B), SD-SDI and HD-SDI signals
- Operates with GUI software control



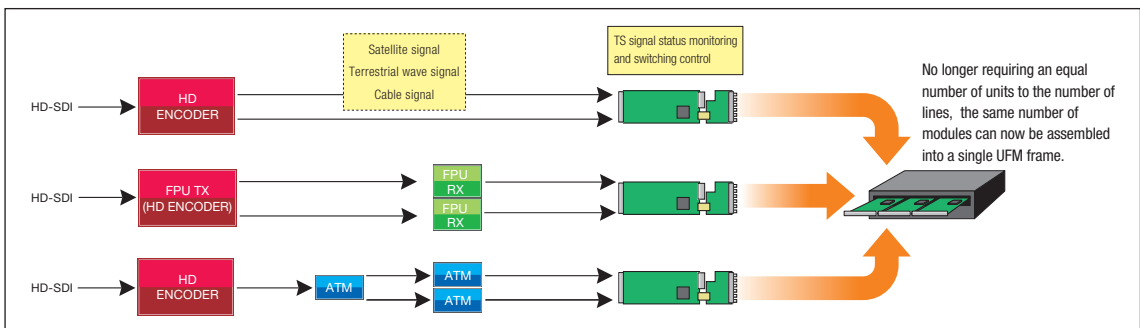
TS Changeover Switcher (2 inputs)

UFM-80TSCS



A modular-type TS changeover switcher that can be mounted in a UFM frame. Constantly monitors TS signals on a redundant circuit, and switches the output swiftly to the other line when an error occurs without disrupting output to achieve automatic seamless switching. Mounting multiple switchers into a single unit greatly reduces the installation space.

- Seamless switching between the outputs of the same encoder
- Manual switching and auto/manual assignment of each line
- Delay adjustment (Up to ± 500 ms)
- Supports SNMP (Simple Network Management Protocol)
- Error detection
- Bypass-through function
- Error monitoring and control functions using GPI remote interface
- Operates with GUI software control





TS Changeover Switcher (2 inputs)

TSS-6200



Constantly monitors TS signals on a redundant circuit, and automatically switches output swiftly to the normal line when an error occurs without disrupting output for seamless switching.

- Delay adjustment function
- Bypass function
- Error detection
- External control functions
- Redundant power supply

VANC modem

EVM-2600



- HD/SD-SDI ancillary data transmitter
- Transmission of maximum 4 lines of RS-232C Serial Data
- TX/RX switching
- Packet auto-detection
- Packet path functional verification
- 4 lines maximum of Input/Output serial port support
- Supports High-speed baud rates by packetizing single circuits into multiple blocks
- SDI input bypass

Time Lag Checker

EDD-5200/6200P



EDD-5200

This equipment can measure video and audio delay times, the difference between audio channels, and between video and audio using test time code signals.

- 3G-SDI, HD-SDI and SD-SDI Support
- Built-in High Precision Clock (synchronized by GPS)
- Long distance delay measurements
- The EDD-6200P (portable) operates on a battery as well and is suitable for use in outside broadcasting.



EDD-6200P

Sensor-less Virtual Studio/RCG System

VRCAM3

NEW

4K^{ULTRA}HD

Provisional

Powered by
BRAINSTORM



For an easy, economical virtual studio/RCG solution that links computer graphics to camera motion, simply connect the VRCAM3 system to a 4K camera. There's no need for a motion sensor. Using extracted 4K image areas, the Brainstorm rendering engine produces HD output in real time. High resolution is maintained when digitally zooming 4K source material, and chromakeying is extremely precise. When the system's virtual camera functions are used, the graphics are kept in sync with extracted material in real time.



Real Time CG System

SmartDirect RCG

NEW

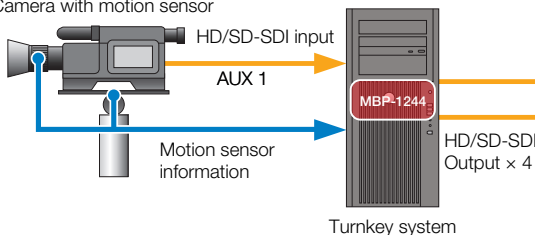
Powered by
BRAINSTORM



FOR-A's SmartDirect RCG system is offered as a turnkey system integrating all elements including a video I/O board (MBP-1244), CG rendering engine, and control software. This means that customers can complete the required hardware introduction simply by mounting a PTZ (Pan, Tilt, Zoom) sensor onto a camera. An option is also available for using Qconcept's QUU marker-less sensor, which does not require a hardware sensor, in place of the PTZ sensor. The intuitive and simple user interface requires no special operational training and thereby minimizes the lead time from introduction to operation.

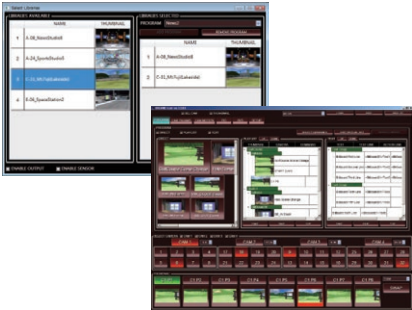
Conceptual drawing of SmartDirect RCG standalone operation

Camera with motion sensor



Sensor-less Virtual Studio System

VRCAM2

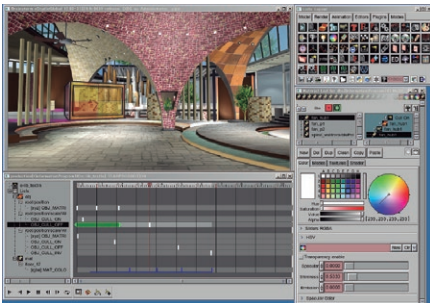
Powered by
BRAINSTORM

“VRCAM2” is FOR-A’s sensor-less virtual studio system enabling a virtual studio using a one-man-operated, no-cameraman environment. The VRCAM2 system includes expanded camera positions, sensed cameras, and a host of other useful additional functions for program production.

- Maximum of four virtual cameras: Up to 32 positions can be set per camera
- Keyframe setting: Keyframe processes between virtual cameras allow non-linear movement as well as linear camera work
- Defocus control: Enables background defocus processes for effective presentation of subject close-ups
- Animated effects: A wide variety of animations (special effects) can be added for the subject
- One-touch operation: Camera switching, subtitles and captions, scene transitions, among other scheduled actions, can be saved sequentially onto a playlist, and scene takes alone during a live program enable programmed timeline effects
- Usage with a playlist enables the program timeline to be maintained while allowing composition changes and presentations that give a sense of actually being in the audience during live broadcasts
- Animated text can be displayed by simply selecting a template and entering the text

HD/SD Virtual Studio/RCG System

digiStorm

Powered by
BRAINSTORM

Brainstorm eStudio GUI

“digiStorm” is a state-of-the-art on-air graphics solution created by the joint development efforts of FOR-A and Brainstorm Multimedia. When the technological resources of hardware manufacturer and virtual studio integrator FOR-A and Brainstorm’s well-established virtual studio software program eStudio are fused together, the resulting synergistic effect opens up a world of “broadcast graphics.” Through this exciting on-air graphics solution, immediate form is instantly given to the powers of creative imagination.

Virtual Studio/RCG Software

Brainstorm eStudio

- New effects: Shader, Trail, Bloom, etc.
- New user-friendly GUI
- High rendering performance with FOR-A’s MBP-1244 video platform

Virtual Studio Software

Brainstorm Easyset 3D

- Superior user interface
- Video wall support
- 2D/3D text display
- Upgradable to higher model Brainstorm eStudio

Virtual CG-Set Library

eLibrary: Virtual Set Pack



10 practical virtual CG sets in 1 package. CG resource collection for Brainstorm eStudio.

- Plenty of CG sets ready to use as soon as the virtual system is installed
- Save time and costs in CG sets creation when producing programming
- Purchase your choice of 10 CG set packages from a wide selection of more than 150 sets
- A wide range of available content includes studio CG sets (news and information programs, weather, etc.), stadium and facility content (baseball fields, stadiums, golf courses, etc.), seasonal scenery, cities of the world, cities of the future and space scenes
- Users who already work with Brainstorm-eStudio can modify their own sets

Virtual CG-Set Library

eLibrary: RCG Contents Pack

An RCG resource collection for Brainstorm eStudio that includes more than 60 CG objects such as item panels and video walls in a package.



HD/SD Chroma Keyer

MBP-100CK



The MBP-100CK is a High performance chroma keyer with FOR-A's unique algorithm.

- 4:4:4:4 Internal Processing
- HD/SD-SDI 3 inputs, 8 outputs
- High performance chroma keyer with FOR-A's unique algorithm
- Easy setup by Auto Chroma Key function
- Edge color replacement
- Filtering to eliminate flickering
- Adjustable camera delay (7 frames)
- 2 independent layering downstream keyers
- Still Store Function
- GUI Control Software
- MBP-RUA: Remote control unit (option)

HD/SD Video Typewriter

VTW-350HS

NEW



With its lightweight, compact design, the VTW-350HS is an extremely portable HD/SD character generator, perfect for live applications. The software provides a rich array of text/graphic functions, more than 260 transitions, template control, general-purpose file interface and more.

The VTW-350HS provides all the tools required for advanced production needs, at an affordable price.

- 1U size compact design, excellent for live applications. The vibration-resistant case makes it perfect for mobile and flight pack applications
- More than 260 transition functions come standard, including roll, crawl, fade in, fade out, slide and wipe
- Video input has both key and fill for capture of video with or without a key signal
- Video output provides both program and preview output, each with its own key and fill

HD/SD Video Writer

FVW-500HS



The FVW-500HS is a video writer system that enables freehand drawing and positioning of objects and image files over video.

- Full-featured finger-based Telestrator
- Supports HD/SD-SDI Video
- Draw and point in Realtime over input video
- Straight line, free-hand, and pre-programmed graphic shape mode available
- Various types of lines, thicknesses, edge widths and colors
- Image file mapping and spotlight effect
- Movie file (sequentially-numbered files or AVI file) mapping and playback
- Move, Delete and Change Property functions for drawn objects
- Internal DSK ON/OFF function
- Dynamic and Intuitive operation by touch panel option
- Freely assignable custom buttons for various tools

HD/SD Logo/Title Generator

LTG-50HS



The LTG-50HS is an HD/SD title generator capable of superimposing camera titles, date and time, logos, and graphics on input video signals.

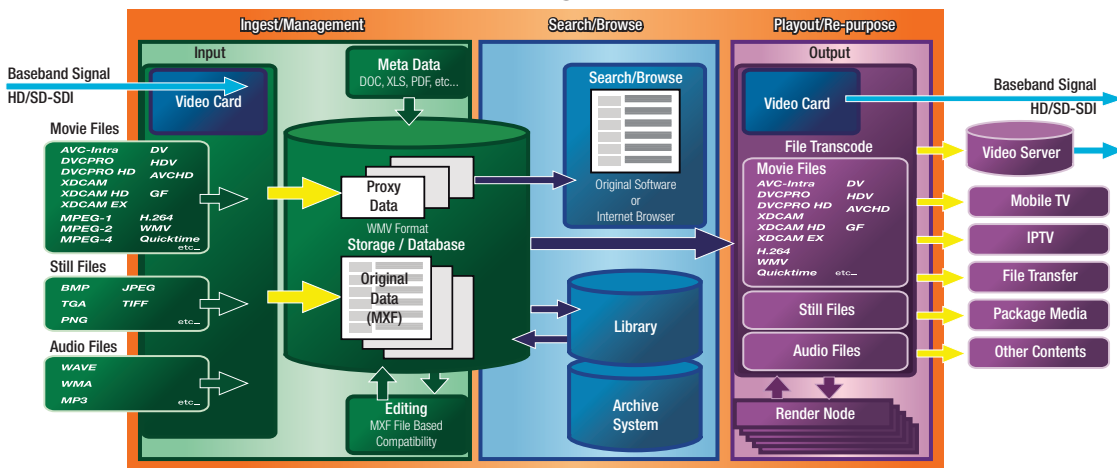
- Text: Up to 40 characters × 10 lines per page, up to 256 pages
 - Bitmap character display function that enables logos and graphics to be displayed at any selected location
 - Standard configuration features an Ethernet interface as well as RS-232C for allowing easy display setting and display character registration from a PC
 - Includes software for easy typing and setting on PC as well as weekly scheduling of page control
 - Crawl display: Can be set for any selected line (max. 256 characters/line*)
- * Can be set to a max. 2 lines (256 characters for 1st line, 128 characters for 2nd line)

Filebased Total Solution

MediaConcierge™

MediaConcierge™ is the collective name for FOR-A's Filebased Total Solution that have been developed for content management in the video industry. In addition to common MPEG-1/2/4 and H.264 compression standards, MediaConcierge™ also supports tapeless media files such as DVCPRO and XDCAM, and computer media files such as Windows Media Video and Quick Time, thus allowing for compatibility with a wide range of manufacturers and formats as the most significant feature of the FOR-A system. Of course, our system also supports regular HD/SD-SDI video signals.

MediaConcierge™ Overview



- AVC-Intra and DVCPRO are trademarks of Panasonic Corporation.
 - GF is a trademark of Toshiba Corporation.
 - MediaConcierge is a trademark of FOR-A Company Limited.

- QuickTime is a trademark of Apple Inc.
 - XDCAM is a trademark of Sony Corporation.
 - HDV is a trademark of Sony Corporation and Victor Company of Japan, Limited.
 - AVCHD is a trademark of Panasonic Corporation and Sony Corporation.

MXF Clip Server/Baseband Converter

MBP-120SX/125SX



The MBP-120SX/125SX are compact 1U video clip servers equipped with HD/SD-SDI I/O and an SSD for recording. Record and play MXF files compatible with Sony XDCAM/XDCAM HD/XDCAM HD422 equipment. Clips can be transferred or saved over Gigabit Ethernet. Highly versatile and reliable, the servers can be used in a variety of applications including ingest, playback, and even program playout using a playout system.*

- 1U compact main unit employs a vibration-resistant frame
 - MBP-120SX: Sony XDCAM/XDCAM HD/XDCAM HD422 compatible
 - MBP-125SX: Sony XDCAM/XDCAM HD/XDCAM HD422 compatible model with 8 channels of AES I/O
 - Mutual conversion between MXF files and HD/SD-SDI signals in real time
 - Supports media file ingest from the XDCAM drive or network drive
 - Obtains HD/SD-SDI baseband signals
 - Supports direct playout from an external XDCAM drive via USB 3.0
 - Supports high-speed data transfer via Ethernet or USB
 - Genlock capability (BB or Tri-level sync)
 - Supports basic VTR commands using RS-422 remote interface
 - 8 channels of embedded audio support
 - Includes control software
 - SSD included
 - The standard capacity of the SSD is 240 GB
- * Encoding and decoding cannot be performed at the same time

LTO Server

LTS-60**NEW**

The LTS-60 is an LTF5-based media archiving server that supports LTO-5/6 tapes. Reading and writing of files on LTO tape is possible via FTP from Windows or OS X computers. An ideal small-scale archiving and backup solution.

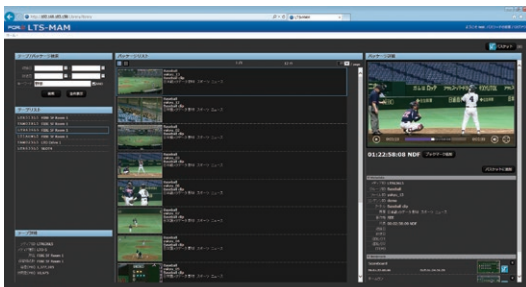
- FTP server installed with an LTO-5/6 (Linear Tape Open) drive
- Installed LTF5 file system enables reading and writing of MXF and other media files from PC
- Data compatible with LTR-100HS/120HS
- Partial retrieval feature: Extracts only the specified range of MXF files recorded on the LTO tape
- Can be controlled from the LTS-MAM and LTR Browser (software sold separately)
- LTO dubbing feature: Supports creation of duplicate copies from original copy (optional) through the installation of an external LTO-5/6 drive
- Proxy video generation feature: Automatically generates low-resolution proxy files and thumbnails when archiving MXF files (optional)

LTO Server Media Asset Management Software

LTS-MAM**NEW**

Combining the LTS-MAM media asset management software with the LTS-50/60 LTO server creates an archive system.

- LTS-MAM enables contents search and Proxy Video preview whether the tape is currently mounted or not
- A list of archived material files can be viewed with thumbnails and metadata by accessing LTS-MAM using a web browser via a network device
- Material files can be archived and retrieved between shared storage on a LAN and an LTO tape inserted into the LTS-50/60
- LTO tapes that have been recorded using the LTR-100HS/120HS are automatically registered to the LTS-MAM database simply by inserting them into the LTS-50/60
- Partial Retrieve and Batch Retrieve functions (optional software is required)
- LTS-MAM software supports linkage functions with TS3100 and TS3200 LTO auto-loaders made by IBM. (optional software is required)



LTO Video Archiving Recorder

LTR-100HS6 [MPEG-2 support] **NEW**

LTR-120HS6 [AVC-Intra/DVCPRO support] **NEW**

LTR-200HS6 [DNxHD support] **Provisional**



The LTR series is a standalone video archiving recorder fitted with an LTO-5/6 (Linear Tape Open) drive. Capable of recording up to 2.5 TB of LTFS file data, LTR series recorders can be used as platforms for material of program exchange.



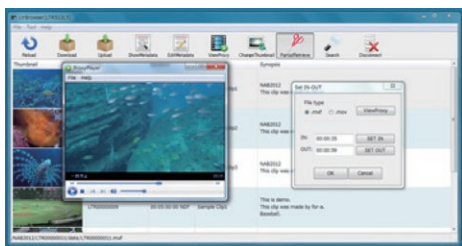
LTR-100HS received the Broadcast Engineering "Pick Hit Award" at NAB in April 2010.

- Ability to perform entire archiving workflow, from ingest, distribution, archiving and re-purposing, using only one unit
- Open-standards-based, highly versatile, excellent storage stability
 LTR-100HS6 supports: MPEG2, MXF OP-1a, LTO, LTFS
 LTR-120HS6 supports: AVC-Intra, DVCPRO, MXF OP-1a, LTO, LTFS
 LTR-200HS6 supports: DNxHD, MXF OP-1a, LTO, LTFS
- Operates like a VTR: Ingest is possible simply by pressing REC and PLAY
- Simultaneous generation of proxy files during ingest

- Jog/Shuttle controls the cache size
- LTFS file system enables reading and writing of files from PC as a material exchange media
- Partial retrieval feature extracts only the specified range of MXF files recorded onto LTO tape
- Reads and writes files on the LTO as an FTP server
- RS-422: External VTR control
- Gigabit Ethernet: File input/output
- Compact 3U height: Half-rack width chassis

LTO Remote Software

LTR Browser



Remote control software used to access the LTO tape mounted in LTR and LTS series recorders from PC. (Windows or OS X computers available.)

- Showing a list of files and their metadata stored on the LTO tape
- File archiving/retrieving with metadata
- Playing proxy video files on the LTO tape
- Modification of metadata
- Sending partial retrieval command while viewing proxy video

High-sensitivity HD Camera

FZ-B1

Lens and accessories are optional.

FLOVEL®

- 2/3" HbCMOS ultra high sensitive HD digital camera
- Power efficient non-cooling type camera
- HD-SDI output 1080i (59.94Hz or 50.00Hz)/720p (59.94Hz or 50Hz)
- Genlock connector (BB/Tri-level sync)
- IR cut or through glass switching for multi wave length applications and color /monochrome selection
- Self contained, small and compact one piece design for easy system installation
- Minimum illuminations 0.005 Lx for color motion shooting

High-sensitivity HD Camera

FZ-B3 **NEW****FLOVEL®**

- Ultra High sensitive 3 HbCMOS prism type HDTV camera
- Supreme color fidelity and enhanced sensitivity
- Rotation filter mechanism installed (ND filter built-in)
- Power efficient non-cooling type camera
- 2/3" bayonet mount
- Genlock connector (BB/Tri-level sync)
- HD-SDI output 1080i (59.94Hz or 50.00Hz)/720p (59.94Hz or 50Hz)
- Minimum illuminations 0.003 Lx for color motion shooting

Application Examples

- Helicopter or Spacecraft visual systems
- Celestial imaging, Aurora or Underwater observation
- Coast guard, border control, oil rig observations
- Nuclear plant, power plant observation
- Police activity

Full 4K Variable Frame Rate Camera

FT-ONE/ONE-OPT

NEW

4K^{ULTRA}HD



Award winning: Government Video magazine "2013 Government Video Salute Award"/ Motion Picture and Television Engineering Society of Japan "MPTE Award 2013"/ BIRTV 2013 China "BIRTV 2013 Award"/"Technology Development Award 2012"/ TV Technology Europe "STAR Award 2012"/TVB Europe "Best of IBC 2012"

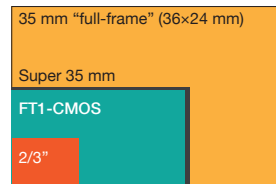


Lens and accessories are optional.

The world's first* high-speed camera designed for super-slow-motion acquisition at 4K resolution up to 900 frames per second (fps). The FT-ONE incorporates the groundbreaking FT1-CMOS, a global shutter CMOS color sensor. The FT-ONE CMOS was developed by FOR-A to provide superior resolution and sensitivity. RAW material is recorded at high speed to the internal RAM memory, which holds nearly 10 seconds of 4K content shot at 900 fps. For convenience, material can then be transferred to optional internal SSD cartridges. Unleash your creativity with this unprecedented innovation in super-slow-motion video at 4K resolution.

- Advanced FT1-CMOS sensor
- Super-slow motion in 4K at 900 fps
- 11-stop dynamic range
- The high-speed global shutter system counteracts rolling shutter artifacts that might otherwise occur with fast motion. Capture instantaneous subject movement in crisp detail at 4K resolution
- Simultaneous 4K recording/playback
- Two downconverted HD-SDI outputs allow you to monitor the signal on a preview monitor and a viewfinder with an on-screen information display
- RAW material is recorded at high speed to internal RAM. Shoot in 4K resolution for up to 9.4 seconds at 900 fps
- RAW material can be transferred to optional SSD cartridges, each of which can hold 84 seconds of material. The camera accommodates two cartridges. Switch the hot-swappable cartridges as needed in production
- Storage partitioning: Internal memory can be used as a single space or partitioned into 2 to 16 spaces for simultaneous recording or playback
- 12-axis color correction: When using video output, color correction along 12 axes surpasses ordinary trichromatic correction
- Genlock input
- Camera control unit (optional)

* According to internal research as of May 2012.



Sensor comparison (actual size)



FT-1RU Remote control unit



FT-1RCP Camera control unit (optional)

4K Extraction System

ZE-ONE

NEW

4K ULTRA HD



Received the TVB Europe "Best of IBC 2013" award



Frame and extract specified HD scenes at any size from 4K sources using an intuitive touch-screen interface.* To simulate zooming, dynamic zooming effects at key points and in various sizes can be specified in slow-motion instant replays from the FT-ONE high-speed 4K camera.

Enjoy unprecedented creative freedom in replays of live sports coverage and other applications.

* Control software for Windows 7 or Windows 8 computers is provided to enable touch and mouse operation.

HD Variable Frame Rate Camera

VFC-7000 "Flash EYE"

TVB EUROPE Editors' Awards
Best of IBC 2011



Government Video SALUTE
2010

Award winning: TVB Europe "Best of IBC 2011"/TV Technology "STAR Award 2011" at NAB/Government Video magazine "2010 Government Video Salute Award" at GV Expo



VFC-7000 Camera Unit (Lens is optional)



VFC-7000 Operation Unit

Compact, lightweight and configured as an all-in-one self-contained unit, the VFC-7000 is an easy to operate variable frame rate camera that is capable of high-speed HD recordings.

- Variable frame rate camera capable of high-speed HD recording
- High-speed 700 fps full frame (1280 × 720 pixels) recording
- 50 to 700 fps (1280 × 720 pixels) variable frame rate
- High-sensitivity CMOS color sensor
- Lens mount: F mount (PL mount option will be available)
- Electronic high-speed shutter: Up to 1/200,000 sec for recording fast subjects without blur
- Recording time: 9.8 sec standard (700 fps)
- Internal recording memory expandable to four times (optional)
- Recording method: Endless recording with built-in memory, saved video can be linked to an external trigger (start, center or end trigger style can be selected)
- Video output: Equipped with 2 channels of HD-SDI output
- Simultaneous output of live and recorded video
- Genlock capability (BB or Tri-level sync)
- Camera head, main body and recording component all in one integrated structure
- Also supports DC drive, making it optimal for recording outdoors and in other environments with no power source



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