FOR.A®
INNOVATIONS IN VIDEO and AUDIO TECHNOLOGY

PRODUCT GUIDE BOOK

2016 – 2017

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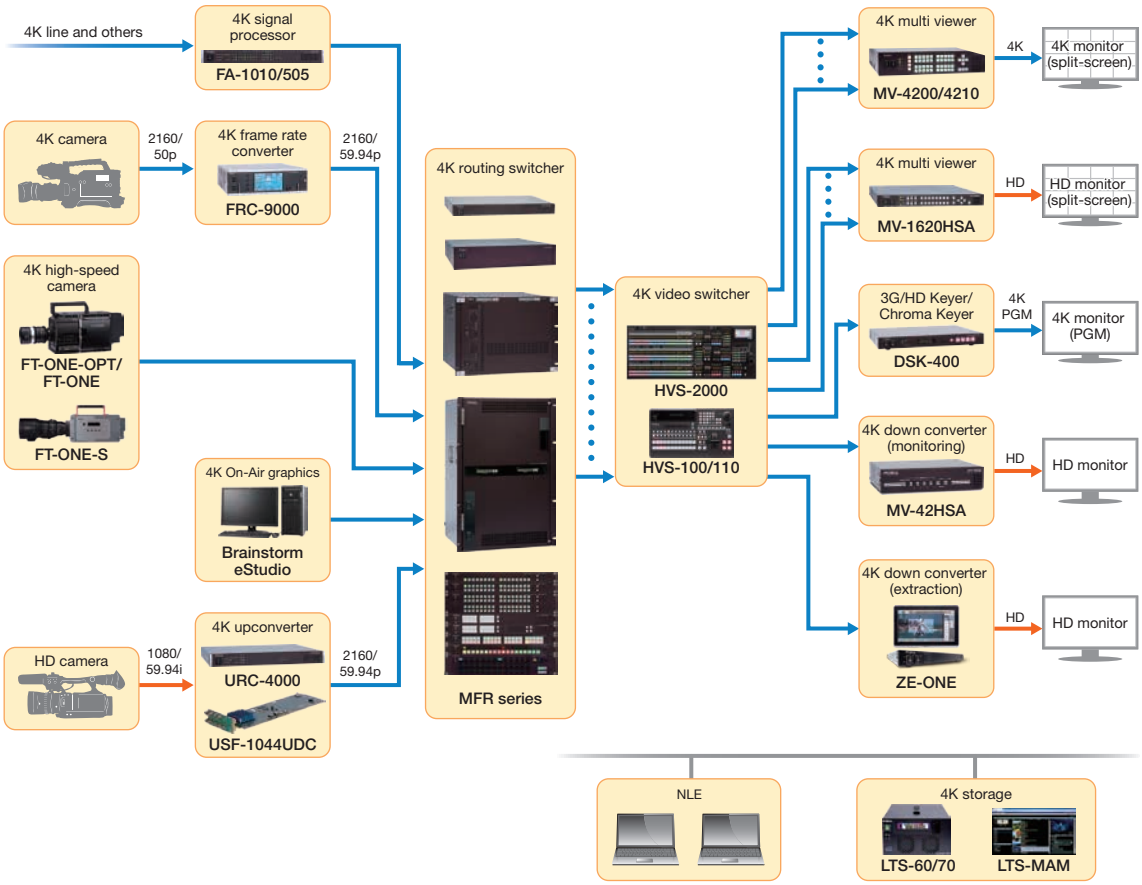
FOR-A's versatile 4K (UHD) solutions meet 4K broadcast and production needs today.



Lineup for 4K production workflows

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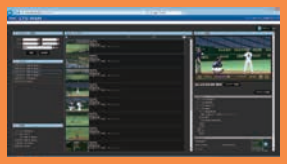
Station

Archive



LTS-MAM

IP/remote production

MXR-200IP

IP transfer

IP/remote production

MXR-200IP

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FA-1010

FA-505

Replay

MBP-200SX

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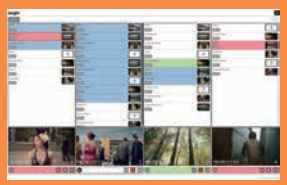
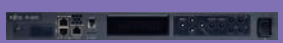


Odyssey Insight Server

CG

VTW-350HS

IP/remote production



Fujitsu IP-9610*

IP transfer

4K routing switcher

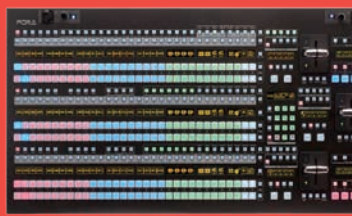
— MFR series —

MFR-3232RPS

MFR-3000

MFR-5000

4K video switcher



HVS-2000

Remote Site

IP/remote production

Fujitsu IP-9610*

Bring stadiums and concert halls *to life*

At venues where tens of thousands gather, combine several screens into a massive display with maximum impact. Bring crowds to their feet by streaming thrilling moments to the giant screen with these systems.

Core products

Multi viewers
— MV series —

MV-4200/4210

MV-1200/1210

MV-1620HSA

split-screen
split-screen
split-screen
split-screen

split-screen
split-screen
split-screen
split-screen

* Fujitsu IP-9610 products are available only in limited areas. Contact your FOR-A representative for further details.

4K Variable Frame Rate Camera

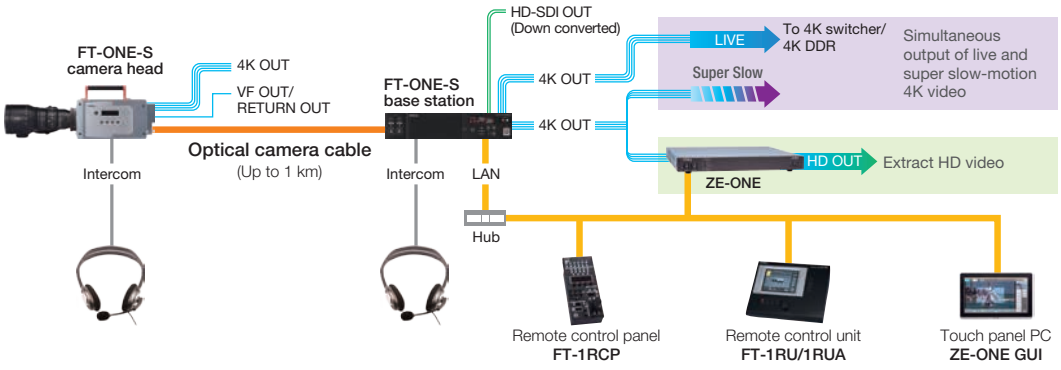
FT-ONE-S 4K

Camera lenses are sold separately.

FT-ONE-S base station

Adding compact size and portability to the revolutionary FT-ONE 4K (UHD) high speed camera, the FT-ONE-S separates the camera head from the body, offering exceptional mobility, and enables unprecedented shooting positions or angles for live sports or other events. Shoots up to 360 frames per second (fps) in 4K. Expand your creative horizons by combining super slow-motion 4K shooting—a highlight of FT-ONE cameras—with the superior mobility of this model.

System configuration



Full 4K Variable Frame Rate Camera

FT-ONE/FT-ONE-OPT 4K

FT-ONE: Lens and accessories are optional.

FT-ONE-OPT (back)

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”

The world’s first* high-speed camera designed for super-slow-motion acquisition at 4K resolution and up to 900 frames per second (fps). The FT-ONE incorporates the groundbreaking FT1-CMOS global shutter CMOS color sensor, providing 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.

- 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 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.
- 12-axis color correction: When using video output, color correction along 12-axis surpassing trichromatic correction.

* According to internal research as of May 2012

Remote Control Unit
FT-1RU/1RUA

FT-1RUA

Remote Control Panel
FT-1RCP

SSD Cartridge
FT-ONE2T/1TL

FT-ONE2T

Cartridge Docking Station
FT-1CDS

DPX Converter
FT-1READ 4K

Converts 12-bit RAW data on the FT-ONE SSD cartridge to a common file format (DPX, BMP, Open EXR, DNG and FT-ONE CINEMA) for editing or color grading purposes.

4K Extraction System
ZE-ONE 4K

Frame and extract specified HD scenes of any size and/or position from 4K (UHD) sources (3G-SDI (Level-A/B) input x 4) using an intuitive touch-screen interface.* To simulate zoom, dynamic zooming effects at key points and in various sizes can be specified. Simulated zoom, crop and camera motion with slow-motion instant replays are possible using the FT-ONE high-speed 4K camera. Enjoy unprecedented creative freedom in replays of live sports coverage and other applications.

* Control software for Windows® 7/8/8.1/10 computers is provided to enable touch and mouse operation.

Received the TVB Europe "Best of IBC 2013" award

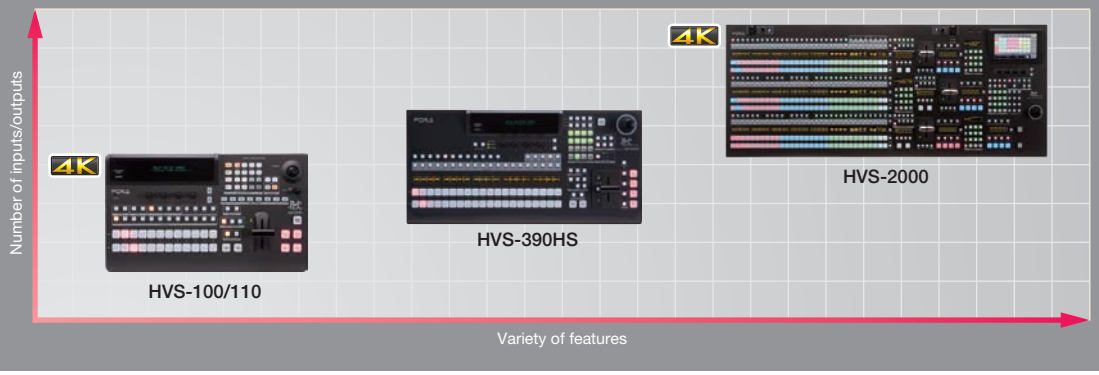
Flicker Corrector
FC-ONE NEW

Suppresses flicker from high speed cameras and certain types of lighting conditions. No complex set-up required, just plug and play.

- Corrects distracting video flicker, common with sports stadiums and arena lighting sources.
- Maintains image brightness and detail, unlike traditional global shutter solutions.
- Perfect for live or recorded material
- Correction process does not affect timing or vertical blanking interval.
- Compact 1U enclosure
- Can be controlled over a network, using a software GUI.
- Supports 3G/HD-SDI input and output. (1080p, 1080i)
- Other standard features
  - Process amplifier
  - Color corrector

Video Switcher Lineup

4K : 4K support



Comparison table

		HVS-100	HVS-110	HVS-390HS	HVS-2000
Number of M/E		1M/E	1M/E	1 or 2M/E	2 or 3 (optional) M/E
Number of MELite		—	—	—	6
Video inputs	Number of inputs (max.)	8 (14)	12	16 (24)	24 (48)
	3G-SDI (4K (UHD) support)	Optional	Optional	No	Optional
	HD-SDI	Yes	Yes	Yes	Yes
	SD-SDI	Yes	Yes	Yes	Yes
	Analog	Optional	No	Optional	Optional
	HDMI	Optional	No	No	Optional
	DVI	No	No	Optional	No
	VGA	Optional	No	Optional	Optional
Video outputs	Number of outputs (max.)	4 + 1 HDMI (12 + 1/HDMI)*1	8 + 1 HDMI	8 + 1 HDMI (12 + 1 HDMI)*2	16 + 2 HDMI (20 + 2 HDMI)*1
	3G-SDI (4K support)	Optional	Optional	No	Optional
	HD-SDI	Yes	Yes	Yes	Yes
	SD-SDI	Yes	Yes	Yes	Yes
	Analog	Optional	No	Optional	Optional
	HDMI	Yes (1 output, optional expansion card available)	Yes (1 output, optional expansion card not available)	Yes (1 output, optional expansion card not available)	Yes (2 outputs, optional expansion card available)
	DVI	No	No	Optional	No
	VGA	Optional	No	Optional	Optional
Reference input	Black burst or Tri-level Sync	Yes	Yes	Yes	Yes
Reference output	Black burst or Tri-level Sync	Yes	Yes	Yes	Yes
Features	Frame synchronizer	Yes	8	Yes	Yes
	Resizing (max.)	4 (8)	4	4 (12)	0 (12)
	Process amplifier	Yes	Yes	Yes	Yes
	Color corrector	No	No	Yes	Yes
	Keyer	2	2	4 for 1M/E model 8 for 2M/E model	8
	DSK	2	2	2 for 1M/E model 4 for 2M/E model (using keyer)	4
	Keyer, exclusive DVE for DSK	Yes	Yes	Yes	Yes
	P-in-P	Yes*3	Yes*3	Yes*3	Yes*3
	Flying key	4	4	8	12
	Transition DVE (max.)	1	1	2	8
	Still store (max.)	2 (16 using input still)	2 (10 using input still)	4 (20 using input still)	4 (52 using input still)
	Clip store (max.)	2	2	4	4 (6)
	Multi viewer (max.)	1	1	2	2 (4)
	AUX assignable keyer	Yes	Yes	Yes	Yes
	AUX transition	Yes	Yes	Yes	Yes
	Event memory	Yes	Yes	Yes	Yes
	Sequence	No	No	Yes	Yes
	Macro	Yes	Yes	Yes	Yes
	GUI control	Yes	Yes	Yes	Yes
	Safety area maker	Yes	Yes	Yes	Yes
	Built-in color bar	Yes	Yes	Yes	Yes
	Built-in matte	Yes	Yes	Yes	Yes
	Chroma keyer	Yes	Yes	Yes	Yes
Interfaces	ARCNET	Optional	Optional	Yes	Yes
	Ethernet	Yes	Yes	Yes	Yes
	GPI	Yes	Yes	Yes	Yes
	SERIAL	2	2	6	6
Other features	Redundant power supply	Optional	Optional	Optional	Optional

*1 Additional 4 ch outputs with down converter available.
*2 Additional 2 ch outputs with down converter available.
*3 With all keyers and DSKs employed for P-in-P

3G/HD/SD Video Switcher

HVS-2000 “HANABI” 4K

HVS-3320OU Control Panel NEW

The HVS-2000 is a game changer in today’s video production switcher market. Offering 3 traditional M/Es and 4 MELite™ M/Es, this mid-sized switcher is more powerful than switchers many times its cost. With its unique architecture and control capabilities, it offers 7 M/E capability and is perfect for an array of applications.

- Up/Down stream transition effects
- Add the pure power of 6 real M/E’s standard capability for multiple independent on-stage monitor display control…each with mixes, wipes, keys and DVE including preview control.
- 6 or 7 M/E capability: 2 or 3 M/E (optional) + UNIQUE 4 MELite™ with FLEXaKEY™ architecture
- 24 in/18 out standard (including 2 HDMI). Up to 48 in/18 out or 40 in/22 out (optional)
- 6 I/O expansion slots: HVS-100 series optional cards can be installed.
- 3G/4K ready (S/W optional)
- 8 x 2.5D DVE plus 4 x 3D DVE (optional)
- 4 multi viewers (standard: 2, up to 64 windows)
- Supports 4K processing in SQD and 2SI (optional)
- 3D DVEs that can be used in 4K (optional)

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

HVS-390HS “HANABI”

The HVS-390HS video switcher comes in either 1 M/E or 2 M/E configurations. With the easy to use HVS-390HS, FOR-A has 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 and DVE.

* Use of an optional expansion unit (HVS-30HSDO) allows the AUX system to expand to 8 outputs for performance equivalent to 8 video mixers.

3G/HD/SD Portable Video Switcher

HVS-100/110 “HANABI” 4K

The HVS-100 and HVS-110, portable video switchers, boast exceptional cost performance including mixed HD/SD input, frame synchronizing, re-sizing engine*1, 2.5D wipe effects, DVE, keyer with chroma key*2, 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.

*1 Applied for 4 inputs
*2 Also assignable to DSK

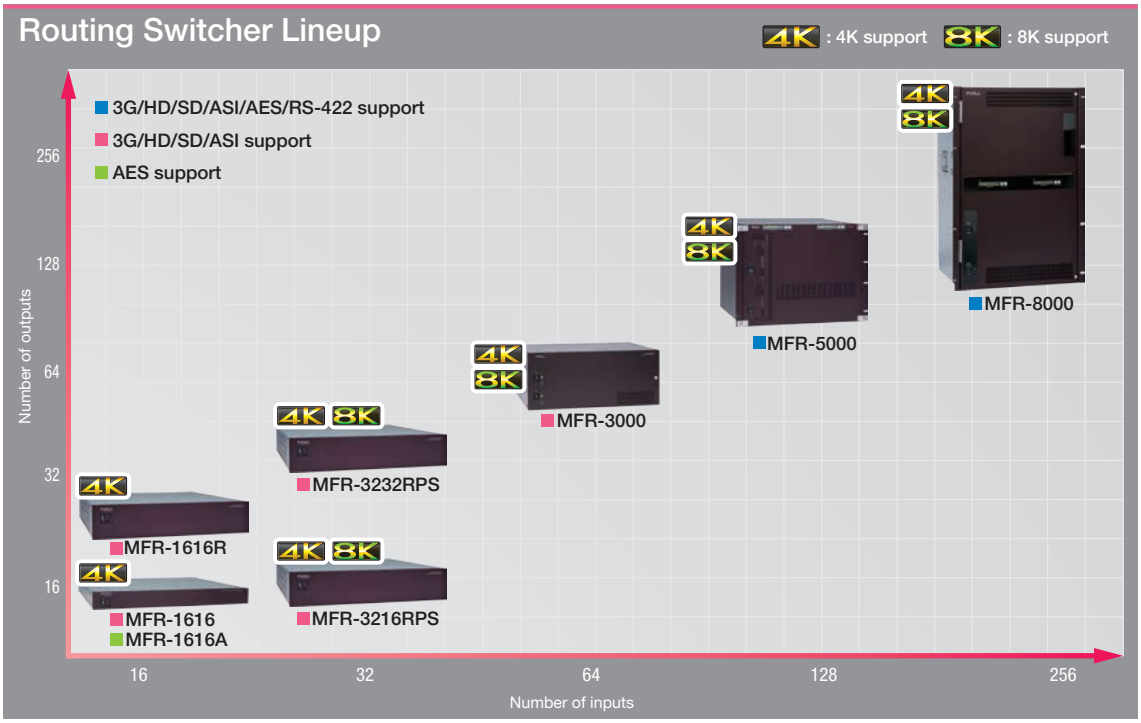
Thunderbolt™ 2 Expansion Card

HVS-100TB2 NEW

THUNDERBOLT™

Thunderbolt™ 2 I/O expansion card for HVS-100/HVS-2000 switchers, enabling single-cable transfer of four channels of HD video to a computer.

Routing Switcher Lineup



Comparison table

		MFR-1616A	MFR-1616	MFR-1616R	MFR-3216RPS	MFR-3232RPS	MFR-3000	MFR-5000	MFR-8000
Inputs x outputs		16 x 16 (stereo-pair)	16 x 16	16 x 16	32 x 16	32 x 32	From 8 x 8 up to 64 x 64 (expandable by 8 channels)	From 16 x 16 up to 128 x 128 (expandable by 16 channels)	From 16 x 16 up to 256 x 256 (expandable by 16 channels)
Video inputs	3G/HD/SD-SDI	No	Yes	Yes	Yes	Yes	Optional	Optional	Optional
	DVB-ASI	No	Yes	Yes	Yes	Yes	Optional	Optional	Optional
Cable equalization	3G-SDI	—	70 m	70 m	70 m	70 m	100 m	100 m	100 m
	HD-SDI	—	100 m	100 m	100 m	100 m	100 m	100 m	100 m
	SD-SDI	—	200 m	200 m	200 m	200 m	200 m	200 m	200 m
Video outputs	3G/HD/SD-SDI	No	Yes	Yes	Yes	Yes	Optional	Optional	Optional
	DVB-ASI	No	Yes	Yes	Yes	Yes	Optional	Optional	Optional
Audio inputs	AES/EBU	Yes	No	No	No	No	Optional*1	Optional	Optional
	Analog audio	No	No	No	No	No	Optional*1	Optional	Optional
Audio outputs	AES/EBU	Yes*1	No	No	No	No	Optional*1	Optional	Optional
	Analog audio	No	No	No	No	No	Optional*1	Optional	Optional
Serial control signal		No	No	No	No	No	No	Optional	Optional
Reference input	Black burst or Tri-level Sync	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces	MFR-LAN (max.)	1	1	1 (2*2)	1 (2*2)	1 (2*2)	1 (2*2)	1 (2*2)	1 (2*2)
	PC-LAN (max.)	1	1	1	1	1	1	1 (2*2)	1 (2*2)
	Serial	1	1	1	1	1	1	1	1
	Alarm	1	1	1	1	1	1	1	1
Features	Salvo	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Take	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Link	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Level	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Chop	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Monitor output	No	No	No	No	No	No	Yes	Yes
	Accidental operation-proof	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Matrix partition	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other features	Front control panel	No	No	No	No	No	Optional	No	No
	GUI control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SNMP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Redundant power supply	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	Redundant CPU	No	No	Optional	Optional	Optional	Optional	Optional	Optional
Dimensions		430 (W) x 44 (H) x 300 (D) mm EIA 1 RU	430 (W) x 44 (H) x 300 (D) mm EIA 1 RU	430 (W) x 88 (H) x 300 (D) mm EIA 2 RU	430 (W) x 88 (H) x 300 (D) mm EIA 2 RU	430 (W) x 88 (H) x 300 (D) mm EIA 2 RU	482 (W) x 177 (H) x 350 (D) mm EIA 4 RU	480 (W) x 354 (H) x 402 (D) mm EIA 8 RU	482 (W) x 710 (H) x 403 (D) mm EIA 16 RU
Weight		5 kg	5 kg	5 kg	6 kg	6 kg	18 kg (with all options installed)	50 kg (with all options installed)	68 kg (with all options installed)

*1 Planned for future support
*2 With redundant CPU installed

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

MFR-8000 4K 8K

A multi-format routing switcher that supports 3G/HD/SD-SDI signals, as well as ASI, AES and RS-422. Switching capacity can be expanded to a maximum of 256 inputs/256 outputs, and allows 16 inputs/16 outputs for 8K signals or 64 inputs/64 outputs for 4K (UHD) signals in a 16U frame. Featuring extensive flexibility and high-level redundancy, this routing switcher is perfectly suited for large systems.

3G/HD/SD/ASI Routing Switcher

MFR-3000 4K 8K

A multi-format routing switcher that supports 3G/HD/SD-SDI signals. The unit can be configured up to a maximum of 64 inputs/64 outputs, with up to 4 inputs/4 outputs used for 8K signals or 16 inputs/16 outputs for 4K (UHD) signals. MFR-16MV split-screen option allows input/output source verification, even with no additional MV unit. In addition to broadcast studios, this routing switcher can provide optimal solutions for hospital operating rooms, corporate meeting rooms, and research facilities.

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/AES/RS-422 Routing Switcher

MFR-5000 4K 8K

A multi-format routing switcher that supports 3G/HD/SD-SDI signals, as well as ASI, AES and RS-422. Switching capacity can be expanded to a maximum of 128 inputs/128 outputs in an 8U frame. Featuring extensive flexibility and high-level redundancy, this routing switcher ensures reliable operation and can be used in medium or larger-sized systems.

3G/HD/SD/ASI Routing Switcher

MFR-3232RPS 4K 8K
MFR-3216RPS 4K 8K
MFR-1616/1616R 4K

Multi-format routing switchers that support 3G/HD/SD-SDI and ASI signals. Each model offers a different number of inputs/outputs in a compact cabinet size. These routing switchers provide extensive flexibility at the core of systems, such as in applications involving tally connections with video switchers and multi viewers, or automatic source name tracking (see p.14), and are ideal for small or medium-sized systems.

12G Routing Switcher

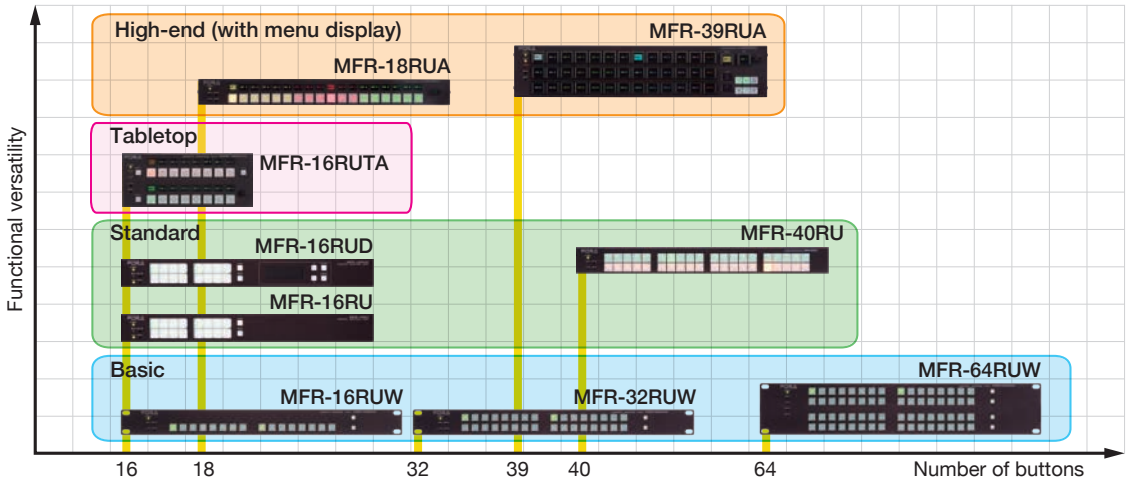
12G-SDI support model 4K 8K 12G-SDI

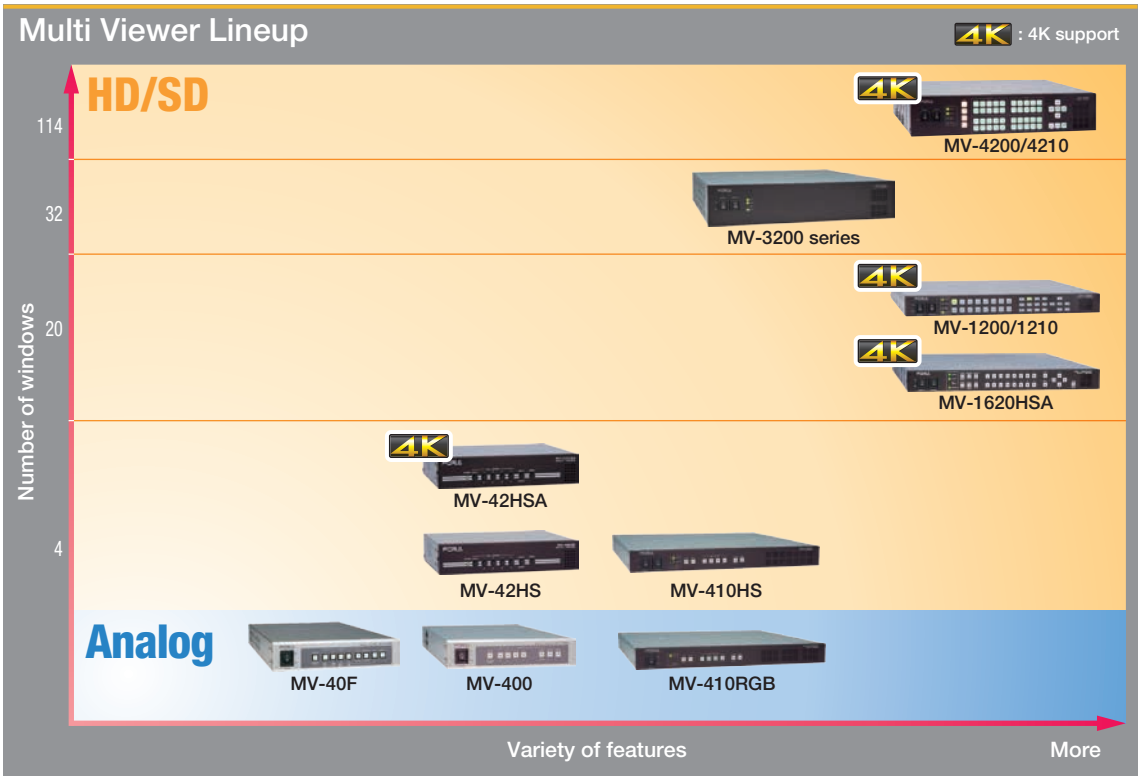
Planned for future release

Remote Control Panels for MFR Series

MFR-RU Series

Product Lineup





Comparison table

		HD/SD models							Analog models		
		MV-4200/4210	MV-3200	MV-1200/1210	MV-1620HSA	MV-410HS	MV-42HSA	MV-42HS	MV-410RGB	MV-400	MV-40F
Rack unit size		2U	2U	1U	1U	1U	1/2U	1/2U	1U	1/2U	1/2U
Number of windows (max.)		114	32	24*1	20	4	4	4	4	4	4
Screen layout		Free layout	Free layout	Free layout	Free layout	Free layout	1/2/4	1/2/4	Free layout	2/4	2/3/4/P-in-P
Video inputs	Number of inputs (max.)	68	32	16	16	4	4	4	4	4	4
	3G-SDI	Yes	Optional	Optional/Yes	Yes	No	Yes	No	No	No	No
	HD/SD-SDI	Yes	Optional	Optional/Yes	Yes	Yes	Yes	Yes	No	No	No
	Analog	Yes	Optional	Optional/Yes	Yes	Yes	Optional	Optional	Yes	Yes	Yes
	PC	Optional*2	Optional	Yes/Optional*2	No	No	No	No	Yes	No	No
Video outputs	Number of outputs (max.)	8	4	6	2	1	1	1	1	1	1
	HDMI	Yes*2/No	No	Yes*2/Optional	Yes	No	No	No	No	No	No
	3G-SDI	Yes	Optional	Optional/Yes	Yes	No	No	No	No	No	No
	HD-SDI	Yes	Optional	Optional/Yes	Yes	No	Yes	Yes	No	No	No
	Analog	No	No	No	No	No	No	No	No	Yes	Yes
	PC (digital)	Yes*2/No	Yes	Yes*2/Optional	Yes	Yes	Yes	Yes	Yes	No	No
	PC (analog)	No	Yes	No	No	Yes	No	No	Yes	Yes	No
	1920 x 1080 resolution	Yes	Yes	Yes/Optional	Yes	Yes	Yes	Yes	Yes	No	No
	1280 x 1024 resolution	No	Yes	No	No	Yes	No	No	Yes	Yes	No
Audio	Analog input	Optional	Optional	No	Optional	No	No	No	No	No	No
	Analog output	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Other features	Video streaming	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	No
	Window rotation (90°/180°/270°)	No	Optional	No	Optional	No	No	No	No	No	No
	Audio level display	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
	Window title display	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Clock display	Yes	Yes	Yes	Yes	Yes	Optional	Optional	Yes	No	Yes
	Count up/down timer, remaining time counter	Yes	Yes	Yes	Yes	No	No	No	No	No	No
	Sequence	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
	Layout editor	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	No
	Remote control software	Yes	Yes	Yes	Yes	No	No	No	No	Yes	No

*1 Provisional
*2 HDCP not supported.

3G/HD/SD/Analog/HDMI/DVI/RGBHV Mixed High Resolution Multi Viewer (Up to 114 Windows, 8-monitor Outputs)

MV-4200/4210 4K

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

12G-SDI support model

12G-SDI

Planned for future release

3G/HD/SD/Analog/HDMI/DVI Mixed High Resolution Multi Viewer (Up to 16 Inputs, 6-monitor Outputs)

MV-1200/1210 NEW 4K

Compact (1U) multi viewer for monitoring, featuring up to 16 inputs and 6 outputs. Build a versatile, flexible 4K (UHD) editing environment.

- HDMI 2.0b output (optional)
- HD to 4K up-resizing
- Logo display in title areas
- Layout Manager: Full-featured, interface for easy layout editing
- Tally, Title, and Timecode
- Time of day, Timer, and Information Display

3G/HD/SD/Analog Mixed High Resolution Multi Viewer (Up to 20 Windows, Dual-monitor Outputs)

MV-1620HSA 4K

A compact 1U multi viewer that accepts up to 16 channels of mixed 3G/HD/SD-SDI and analog composite signals for monitoring on 1-2 screens. Supports dual-monitor output and displays up to 20 windows.

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

MV-3200 Series

A 2U multi viewer that accepts up to 32 channels of mixed HD/SD-SDI, analog composite and DVI signals for monitoring on up to 4 screens by installing optional I/O cards.

4K Monitoring Downconverter

MV-42HSA 4K

A 4-channel multi viewer that accepts 3G/HD/SD-SDI and analog composite signals. Supporting 4-input split-screen of 3G-SDI, the viewer unit is perfect for use as a down converter to display 4K (UHD) footage on an HD or PC monitor.

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

MV-42HS

A 4-channel multi viewer that resizes and displays up to 4 channels of HD/SD-SDI on a single screen.

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

MV-410HS

A 4-channel multi viewer that supports mixed HD/SD-SDI and analog composite signal input.

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

MV-410RGB

A 4-channel multi viewer that accepts mixed input of DVI and analog composite signals.

High Resolution Multi Viewer (Quad-Split)

MV-400

A 4-channel multi viewer that accepts analog composite signals for PC monitoring.

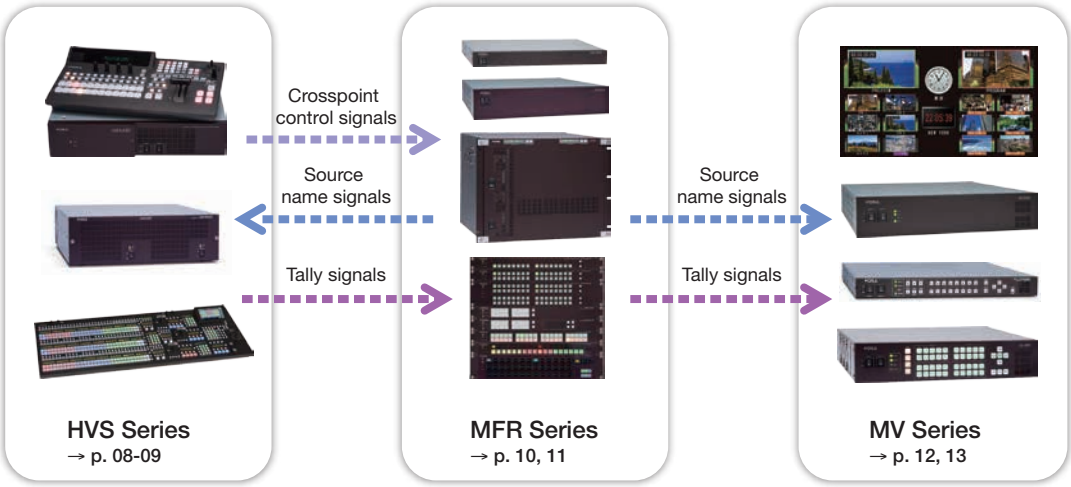
Multi Viewer (Quad-Split, P-in-P)

MV-40F

A multi viewer that features 5 split screens and three types of picture-in-picture screens.

Link Source Names and Tally Signals

- Integrated management of source name signals from MFR routing switchers, which automatically send names to HVS switchers and MV viewers.
- HVS tally signals are automatically sent to MVs for coordinated display.
- MFR crosspoints can be controlled from HVS units.



Integrated Control Software

GearLink™

Software for centralized visual control of video switchers and other peripherals. Customize buttons and the screen layout for a bird's-eye view of workflows and convenient system control.

- Video switcher control: Change crosspoints, transitions, recall events, activate macros and change multi viewer output settings.
- Clip server control: Acquire MBP Series clip ID lists, view thumbnails, cue, play, and record.
- VTR control: cue, play, and record.
- Routing switcher control: Switch crosspoints, switch crosspoint presets, and receive signal names.
- Multi viewer control: Load preset layouts, and control timers.
- Character generator control: Load pages, play, cue in/out, and take in/out.
- Customize button functions using JavaScript, and edit actions triggered by changes in status of connected devices.
- Capture and view external video using DirectShow video capture filter-compatible devices installed in or connected to the computer.

Universal System Frame

USF-212S/212 4K

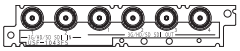
	USF-212S	USF-212
SNMP support	Yes	No
Ethernet hub card	Yes	No

Universal enclosures allow for compact (2U), economical system configuration. Holds up to 12 modules.
Add USF-212PS for redundant power.

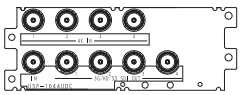
- Ample 700 W power supply
- Hot-swappable, front-accessible power unit and module bays
- New combined video and IP design
- Two genlock inputs (BB or Tri-level Sync)
- Expandable gigabit Ethernet hub card for fast module-computer communication (optional)
- USF-212: Accepts USF-1053DDA/USF-1040VEA/USF-1100VEA/USF-108ADA.

Available Modules

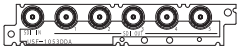
USF-1043FS
3G/HD/SD-SDI Frame/Line Synchronizer



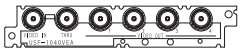
USF-1044UDC
4K (UHD) Up/Down Converter
NEW 4K WCG



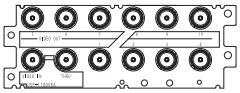
USF-1053DDA
5-output Multi-bit Rate Digital Video Distributor



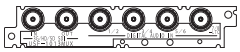
USF-1040VEA
4-output Analog Video Distributor



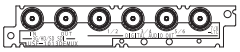
USF-1100VEA
10-output Analog Video Distributor



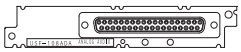
USF-1013MUX
3G/HD/SD-SDI Digital Audio Multiplexer

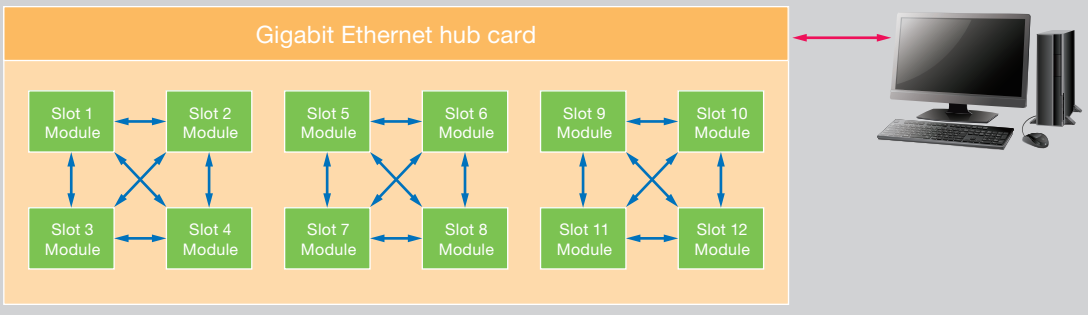


USF-1013DEMUX
3G/HD/SD-SDI Digital Audio Demultiplexer



USF-108ADA
8-output Analog Audio Distributor





Frame Synchronizer Lineup

4K : 4K support HDR : HDR support WCG : WCG support

10-channel input/output

FA-1010

3G/HD/SD-SDI,
input x 10/output x 10,
Max. 192 audio channels,
frame synchronizer x 10,
color corrector x 10,
10 x 10 clean switch,
4K (UHD) capability

5-channel input/output

FA-505

3G/HD/SD-SDI,
input x 5/output x 5,
Max. 112 audio channels,
frame synchronizer x 5,
color corrector x 5,
up/down/cross converter x 5,
5 x 5 clean switch,
4K (UHD) capability

2-channel input/output

FA-9520

3G/HD/SD-SDI,
input x 2/output x 2,
Max. 32 audio channels,
frame synchronizer x 2,
color corrector x 2,
up/down/cross converter x 2,
automatic video optimizer,
logo generator

1-channel input/output

FA-9500

3G/HD/SD-SDI,
input x 1/output x 1,
Max. 16 audio channels,
frame synchronizer,
color corrector,
up/down/cross converter,
automatic video optimizer,
logo generator

Comparison table

		FA-1010	FA-505	FA-9520	FA-9500
Video inputs	Number of SDI	10	5	2	2
	HD-SDI (1.5 G), SD-SDI	Yes	Yes	Yes	Yes
	3G-SDI (Level-A)	Yes	Yes	Yes	Yes
	3G-SDI (Level-B)	Yes	Yes	No	No
	Number of analog composite	—	—	1	1
	Number of analog component	—	—	Optional 1 channel/slot (available for up to 2 slots)	Optional 1 channel/slot (available for 1 slot)
Video outputs	Number of SDI	10 (w/o distribution)	10 (5 ch distributed in 2 ea.)	4 (2 ch distributed in 2 ea.)	4 (2 ch distributed in 2 ea.)
	3G-SDI (Level-A), HD-SDI (1.5 G), SD-SDI	Yes	Yes	Yes	Yes
	3G-SDI (Level-B)	Yes	Yes	No	No
	Number of analog composite	—	—	2 (1 ch distributed in 2 ea.)	2 (1 ch distributed in 2 ea.)
	Number of analog component	—	—	Optional 1 ch/slot (available for up to 2 slots)	Optional 1 ch/slot (available for 1 slot)
Video features	Proc. amp./Color corrector	10 ch	5 ch	2 ch	1 ch
	Sync mode (Frame, Line, AVDL)	10 ch	5 ch	2 ch	1 ch
	Sync mode (Input lock)	No	No	1 ch (FA-9500 mode only)	1 ch
	Up/down/cross/aspect converter	No	5 ch	2 ch	1 ch (up to 2 optional ch)
	3G-SDI Level-A/B conversion	10 ch	5 ch	No	No
	Video delay	10 ch	5 ch	2 ch	1 ch
	SDI I/O relay bypass	Yes	Yes	Yes	Yes
	4K mode	2 ch	1 ch	No	No
	Changeover	No	No	Optional	Optional
	Logo generator	No	No	Yes	Yes
	Automatic video optimizer	No	No	Yes	Yes
	ANC data demultiplexer	10 ch	5 ch	2 ch	1 ch
	ANC data multiplexer	10 ch	5 ch	2 ch	2 ch
	Aspect ratio converter (S2016-3 AFD, RP186 VI, BT1119 WSS)	No	Passing/deletion/conversion of data packets available	Passing/deletion/conversion of data packets available	Passing/deletion/conversion of data packets available*1
	Closed caption (CEA608, CEA708)	No	Passing/deletion/SD-HD conversion of data packets available	Passing/deletion/SD-HD conversion of data packets available	Passing/deletion/SD-HD conversion of data packets available
	Time code inserter/generator	Yes	Yes	No	No
Audio inputs	Max. number of inputs	192 ch	112 ch	44 ch	28 ch

Multi-Channel Signal Processor

FA-1010 “THE Processor” 4K

A 10-input, 10-output signal processor that supports 3G/HD/SD-SDI offers extreme connectivity and multi-channel routing between sources, plus effective video and audio signal processing for line, relay, reporting, production, editing, and delivery applications. Color corrector comes standard. A highly versatile audio signal processor provides delay adjustment, remapping, as well as sampling rate conversion capability.

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

FA-9520 “THE Processor”

A dual channel version of the industry-leading FA-9500 processor that supports 3G/HD/SD-SDI and analog composite I/O, the FA-9520 is perfectly suited for smaller system applications that require extensive functionality, such as for master control, mobile video production, post production, and live production.

12G-SDI support model 12G-SDI

Planned for future release

Multi-Channel Signal Processor WCG HDR

FA-505 “THE Processor” 4K

This 5-input, 5-output signal processor supporting 3G/HD/SD-SDI is equipped with a variety of functionalities including frame synchronizer, color corrector. Inheriting the abundant features of the FA-1010, the FA-505 provides up/down/cross conversion capability on each input as standard and allows 1080i to 720p / 720p to 1080i conversion. Video payload ID, HDR, and conversion between the color spaces used for HD (ITU-R BT.709) and 4K/8K (ITU-R BT.2020) applications are supported. The processor is a complete toolbox for any video production scenario and ideal for 4K applications.

3G/HD/SD Multi Purpose Signal Processor

FA-9500 “THE Processor”

A multipurpose signal processor that supports 3G/HD/SD-SDI and analog composite I/O. Frame synchronization, up/down/cross/aspect conversion, full color correction, and Automatic Video Optimization (AVO) are provided as standard features. Analog component I/O, Dolby E encoder, and logo generator can be added as optional features.

		FA-1010	FA-505	FA-9520	FA-9500
Audio inputs	SDI-embedded	160 ch (16 ch x 10)	80 ch (16 ch x 5)	32 ch (16 ch x 2)	16 ch
	AES/EBU (balanced)	Optional 8 ch (stereo x 4)/slot (available for up to 4 slots)	Optional 8 ch (stereo x 4)/slot (available for up to 4 slots)	—	—
	AES/EBU (unbalanced)*2	Optional 8 ch (stereo x 4)/slot (available for up to 4 slots)	Optional 8 ch (stereo x 4)/slot (available for up to 4 slots)	8 ch (stereo x 4)	8 ch (stereo x 4)
	Analog	Optional 4 ch/slot (available for 1 slot)	Optional 4 ch/slot (available for 1 slot)	4 ch	4 ch
Audio outputs	Max. number of outputs	192 ch	112 ch	44 ch	28 ch
	SDI-embedded	160 ch (16 ch x 10)	80 ch (16 ch x 5)	32 ch (16 ch x 2)	16 ch
	AES/EBU (balanced)	Optional 8 ch (stereo x 4)/slot (available for up to 4 slots)	Optional 8 ch (stereo x 4)/slot (available for up to 4 slots)	—	—
	AES/EBU (unbalanced)*2	Optional 8 ch (stereo x 4)/slot (available for up to 4 slots)	Optional 8 ch (stereo x 4)/slot (available for up to 4 slots)	8 ch (stereo x 4)	8 ch (stereo x 4)
	Analog	Optional 4 ch/slot (available for 1 slot)	Optional 4 ch/slot (available for 1 slot)	4 ch	4 ch
Audio features	Audio-embedding	160 ch (16 ch/array)	80 ch (16 ch/array)	32 ch (16 ch/array)	16 ch (16 ch/array)
	AES/EBU processing	Optional max. 32 ch (stereo x 16)*3	Optional max. 32 ch (stereo x 16)*3	8 ch (stereo x 4)	8 ch (stereo x 4)
	Analog audio processing	Optional 4 ch	Optional 4 ch	4 ch	4 ch
	Loudness controller	No	No	Optional	Optional
Other features	Windows GUI control	Yes	Yes	No	No
	Web GUI control	Yes*4	Yes*4	Yes	Yes
	GPI control	Optional 10 ch inputs + 10 ch outputs/ slot (available for up to 4 slots)	Optional 10 ch inputs + 10 ch outputs/ slot (available for up to 4 slots)	7 ch inputs/outputs (input/output switchable)	7 ch inputs/outputs (input/output switchable)
	SNMP (U2C)	Yes	Yes	Yes	Yes
	Redundant power supply	Optional	Optional	Optional	Optional
	FA-10RU support	Yes	Yes	No	No
	FA-95RU support	No	No	Yes	Yes
	FA-10DCCRU support	Yes	Yes	Yes	Yes

*1 FA-95SCV is required. *2 Input/output switchable *3 Max. 24 ch (stereo x 12) used for analog audio. *4 Limited number of functions available on Web GUI.

File-base Video Format Converter

FRC Export Plug-in App

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

- Frame rate converter
- Up/down/cross conversion (1080i↔720p)
- Two conversion modes: Vector motion compensation and linear conversion
- Includes industry leading scene cut detection.
- Up conversion uses motion-adaptive interlace-to-progressive conversion.

4K/HD/SD Frame Rate Converter

FRC-9000 4K

Enhanced operation and expandability at an affordable price. Capable of supporting 4K (UHD) with optional software.

- 3G/HD/SD multi-format support
- 4K (SQD or 2SI*) support (optional)
- Up/down/cross conversion*
- Conversion with Motion Compensation Processing
- Interlace-to-Progressive conversion
- Upgradeable to dual channel conversion in HD/SD-SDI (optional)
- Able to store up to 4 Dolby E encoder/decoder modules (optional)

* Planned for future support

HD/SD Frame Rate Converter

FRC-30/UFM-30FRC

FRC-30

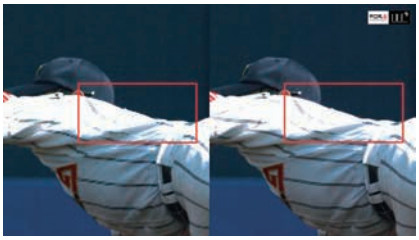
Modular-type UFM-30FRC Frame Rate Converter

A 1U high, half-U wide frame rate converter based on the UFM-30FRC and capable of both motion compensation and linear conversion, the FRC-30 achieves outstanding levels of conversion regardless of video content, and offers up/down/cross conversion as standard.

- 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

Upconversion plug-in (Adobe® Premiere® Pro CC)

Up Convert Effect Plug-in APP NEW 4K



Compared to typical resizing (left), spatiotemporal frame interpolation (right) produces images that are diagonally, significantly smoother.

Super-resolution upconversion for sharp, highly detailed video. An upconversion plug-in for Adobe® Premiere® Pro CC in Windows®.

- Installed as a plug-in for Adobe® Premiere® Pro CC in Windows®. Can be applied as a timeline effect.
- High-quality conversion, even from HD to 4K (UHD), applying a conversion algorithm for spatiotemporal frame interpolation as performed by the URC-4000 Super Resolution 4K Upconverter. Maintains clarity and sharpness in interlaced-to-progressive conversion when processing diagonal lines and other details.
- Can also be used with telecined video from film. (23.98p conversion, using frame rate pulldown conversion and reverse telecine)

Supported formats		
HD (1080/59.94i, 720/59.94p)	→	4K (2160/59.94p)
HD (1080/50i, 720/50p)	→	4K (2160/50p)
HD (1080/23.98p)	→	4K (2160/59.94p)
Pulldown-converted HD (1080/59.94i)	→	4K (2160/59.94p)
SD NTSC (525/59.94i)	→	HD (1080/59.94i, 720/59.94p)
SD PAL (625/50i)	→	HD (1080/50i, 720/50p)

Super Resolution 4K Upconverter

URC-4000 4K WCG

Provides powerful, real-time up conversion of HD video into 4K (UHD). Original FOR-A I/P and resolution conversion technology unleashes a new era in 4K conversion. Spatiotemporal frame interpolation allows precise spatial and temporal changes in images to be detected on a pixel-by-pixel basis. Aliasing from conversion is reduced, and the resolution of still image areas is restored. Resolution is further improved through multi-scale nonlinear enhancement.

- Redundant power supply (optional)
- 3G-SDI Level-A and -B output
- Visual interface for Windows®
- Supports SNMP (Simple Network Management Protocol).
- Supports ITU-R BT.709 to ITU-R BT.2020 color space conversion.

4K Up/Down Converter

USF-1044UDC NEW 4K WCG

Actual product may differ in appearance from the image above.

4K (UHD) up/down conversion* module for USF-212S

- SQD and 2SI 4K signals supported
- ITU-R BT.2020/709 4K color space supported
- Clean edge
- Aperture
- H/V enhancement
- Noise reducer
- Audio gain/audio delay
- Embedded audio: 16 channels (12 for SD output)

* Up/down conversion between SD and HD is not available.

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, real-time color correction 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

A digital video stabilizer that 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 supplies video signals, no special connection required
- Supports external control via Ethernet and serial interfaces.

Video Stabilizer & Automatic Video Optimizer

IVS-200

Besides vertical and horizontal camera shake, the IVS-200 able to correct rotation camera shake, and comes with FOR-A's Auto Video Optimizer (AVO) function that automatically adjusts video levels.

- Compact, simple and DC operation
- Analog composite I/O
- Processes unsteady images in real time
- Corrects video shake in two dimensions, including vertical, horizontal, diagonal, and rotational.
- Corrects for video sources: 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

Advanced 3D Chroma Keyer

ACK-3000 NEW

Realistic chroma key compositing with two types of 3D shadows: under feet + whole body

- Color correction to match composited images to the background
- Adjusts up to three light sources (position, direction, diffusion), shadows of up to three objects (position, direction, size), and masks.
- Adds defocus effect to subject.

Virtual Processor/Chroma Keyer

VRP-100

Virtual processor with multi-format (3G/HD) support. Superior chroma keying backed by innovation. Detailed compositing that outshines traditional chroma keying. FOR-A technology makes it possible. Now with multi viewer output.

3G/HD Keyer/Chroma Keyer

DSK-400 4K

A 4K (UHD) keyer that has 12 inputs and 8 outputs for 3G-SDI. Add DSK-400CK for 4K chroma keying. Controllable via DSK-400 GUI, an HVS-100OU connected to HVS-100, or HVS-100 GUI control software.

Video Platform

MBP-2244WS/2244WS-4K NEW 4K

A virtual studio processing platform that provides hardware acceleration for real-time computer graphics. Equipped with 4 inputs (video wall V1/K1 and V2/K2, with K2 switchable to camera input), and 4 individually selectable outputs. With on-board processing of camera delay and 2 separate video mixers (4 layers), provides a real-time graphics solution for video walls and 3D graphics from a single computer. For 4K (UHD) needs, choose MBP-2244WS-4K.

HD/SD Chroma Keyer

MBP-100CK

High performance chroma keyer supporting HD/SD-SDI 3 inputs and 8 outputs

Video Platform/Chroma Key Option

MBP-1244/12CK

MBP-1244+12CK

Video platform intended for virtual/On-Air graphics systems

Real Time CG System

SmartDirect RCG

Powered by BRAINSTORM

A turnkey RCG system with integrated video I/O board (MBP-1244), CG rendering engine, and control software. Allows users to complete the required hardware introduction simply by mounting a PTZ (Pan, Tilt, Zoom) sensor onto a camera. An option also allows Qoncept's MTS-100 marker-less sensor, which does not require a hardware sensor, to be used in place of the PTZ sensor. The intuitive and simple user interface requires no special operational training, minimizing the lead time to operation.

Marker-less Sensor

MTS-100

Qoncept

Graphics follow PTZ operations without a hardware sensor

Innovative fully marker-less AR system.

- Detects positional information of reference points via image recognition.
- Supports all existing camera and lens types.
- Able to composite CGs into live broadcasting, aerial shooting, special effects shooting and live camera footage in real time.
- Multi-Target tracking: Able to register and track multiple targets simultaneously.
- Stable tracking
- Low delay: Less than 2 frames-delay

Advanced Virtual System

Infinity Set

BRAINSTORM

A real-time 3D graphics system designed as a versatile solution for a range of equipment, from inexpensive sensor-less setups to advanced studios linked by sensors. Provides a new environment for next-generation cross-media broadcasting.

- Accepts multiple video sources, including live camera feeds.
- Recreates 3D information from each source to synthesize realistic graphics.
- Creates 3D versions of two-dimensional subjects in real time camera feeds.
- Adds natural shadows to 3D objects.
- Camera DOF can be set as desired by selecting defocused elements.
- A novel approach to natural VR incorporating both an array of tracking data (which can be freely combined) and convenient, flexible sensor-less subject tracking
- Real-time camera tracking, applying tracking data in recorded video with the virtual set

Sensor-less Virtual Studio System

VRCAM2

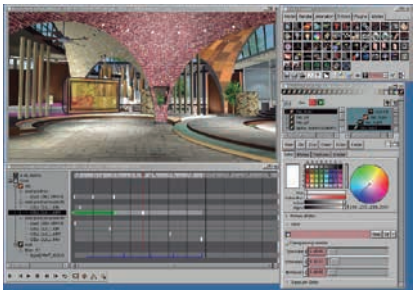
Powered by BRAINSTORM

A sensor-less virtual studio system designed for single person operation without the need for camera operators, VRCAM2 has been upgraded to include more camera positions, sensored cameras, and a host of other useful features for program production.

HD/SD Virtual Studio/RCG System

digiStorm

Powered by BRAINSTORM



Brainstorm eStudio GUI

A state-of-the-art On-Air graphics solution that opens up a world of “broadcast graphics” and allows immediate form to be conceived through the powers of creative imagination, digiStorm was jointly developed, combining the technological resources of FOR-A and Brainstorm Multimedia’s well-established virtual studio software program eStudio.

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

A CG resource collection for Brainstorm eStudio that includes 10 practical virtual CG sets in one package.

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 one package.

LTO Video Archiving Recorder

LTR-200HS7 NEW <Provisional>

Actual product may differ in appearance from the image above.

A multi-format LTO-7 archiving recorder that also offers a generous 6 TB of internal storage for backup, the LTR-200HS7's ability to support broad video codecs accommodates many archiving needs. Useful in both archiving and exchange of recorded material or programs, highlights of this full-featured LTFs-based recorder unit include HD/SD-SDI input/output, broadcast-quality codecs, and MXF (OP-1a) wrapping and unwrapping. MXF or MOV files on LTO tape can also be used with NLE systems.

- Converts SDI signals to MXF files* and records to LTO tape.
- Archives material from connected VTRs.
- Plays and provides SDI output for MXF files on LTO tape; can also export as MXF files.
- Partial Retrieval: Extract needed segments of video files on LTO tape as separate files.
- Supported codecs: MPEG-2, AVC-Intra, DVCPRO HD, Avid DNxHD®, Apple ProRes (LTR-PRS), DVCPRO 25/50 (LTR-PD-SD)

* MOV files when using Apple ProRes (with optional LTR-PRS)

LTO Video Archiving Recorder

LTR-100HS6 [MPEG-2 support]
LTR-120HS6 [AVC-Intra/DVCPRO support]
LTR-200HS6 [Multi-codec]

- Includes video codecs and SDI I/O for recording to and playback from LTO-5 and LTO-6 cartridges in MXF file formats.
- Open-standards-based, highly versatile, excellent storage stability. Bridges baseband and file-based workflows.
  LTR-100HS6/120HS6/200HS6 supports:
  MXF OP-1a, LTO, LTFS
  LTR-100HS6 supports: MPEG-2
  LTR-120HS6 supports: AVC-Intra, DVCPRO
  LTR-200HS6 supports: MPEG-2, AVC-Intra,
  DVCPRO HD, Avid DNxHD®,
  Apple ProRes (LTR-PRS), DVCPRO 25/50 (LTR-PD-SD)

LTR-100HS: recipient of Broadcast Engineering "Pick Hit Award" at NAB 2010.

LTO Remote Software

LTR Browser

Remote control software that allows PC access (Windows or OS X computers available) of LTO tape mounted in LTR and LTS* series recorders.

- Shows a list of files and their metadata stored on the LTO tape.
- File archiving/retrieval with metadata
- Plays proxy video from files on the LTO tape.
- Modification of metadata
- Sends partial retrieval command while viewing proxy video.

* Requires codec support options when used with the LTS series.

LTR-100HS6 Continuous Recording Option

LTR-10CR

- More than 24 hours of continuous recording
- Hot-swappable, and can record over multiple tapes.
- Extracts up to 3 hours of required MXF file material from LTO tapes.
- Ability to export MXF files to NAS during recording

LTO Server

LTS-70 NEW 4K / LTS-60 4K

LTS-70

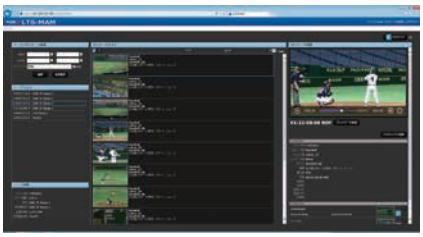
LTFS-based media archiving server that supports LTO-5/6 and 7 tapes. Reading and writing of files on LTO tape is possible via FTP from Windows® or OS X computers. Be prepared for high-capacity archiving and backup in the 4K generation.

- Comprehensive file backup/archiving
- Automatic proxy video and thumbnail generation while archiving (optional)
- Partial Retrieve and Batch Retrieve functions (optional)
- MAM configuration available
- LTS-60: Supports LTO-5/6.
- LTS-70: Supports LTO-5* / 6 / 7. High-speed interfaces (10 GbE or USB 3.1 ports) available (optional)

* Read only

LTO Server Media Asset Management Software

LTS-MAM

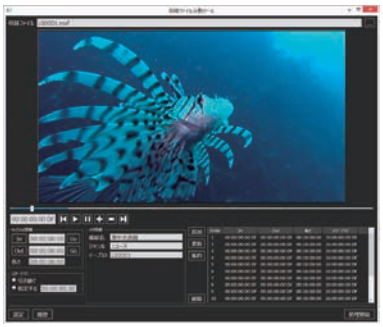


Combine LTS-MAM media asset management software with an LTS-70/60 LTO server to create an archive system.

- LTS-MAM enables contents to be searched and proxy video to be previewed whether or not a tape is mounted.
- 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 LAN and LTO tapes inserted into the LTS-70/60.
- LTR Series-recorded LTO tapes are automatically registered to the LTS-MAM database simply by inserting them into the LTS-70/60.
- Partial retrieve and batch retrieve functions (optional software required)
- LTS-MAM software supports linkage functions with TS3100 and TS3200 LTO auto-loaders made by IBM. (optional software required)

Software for Splitting MXF Files

VST-200 NEW <Provisional>



Contact FOR-A for additional details on systems that streamline file conversion and LTO storage of large videotape libraries.

Ingests an entire videotape as an MXF file, and then splits it into multiple files for individual programs. Supports splitting workflows: Detects in/out candidate lists automatically, and imports external information.

- Creates in/out point information for splitting, and splits MXF files with no loss of audio quality.
- Automatically detects black screens, color bars, silence, and timecode breaks as in/out point candidates.
- Includes playback features for manual adjustment of in/out points.
- Easily tag each split program with metadata.
- Send splitting results to MediaConcierge or external systems.

LTR/LTS Copy Controller

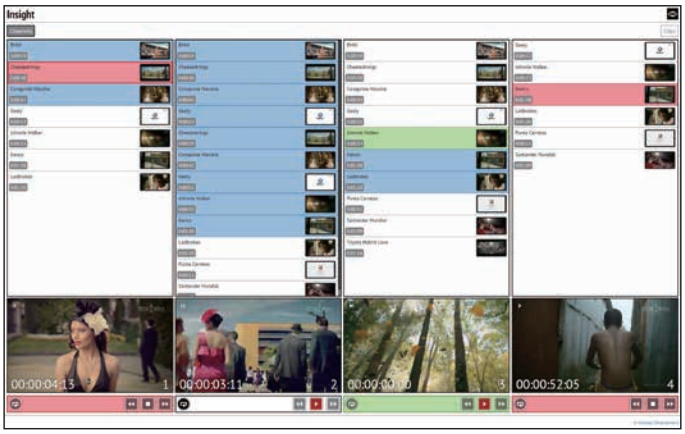
LTS-I-CP NEW

Installed on a computer connected via Ethernet to two LTR/LTS units, enables LTO tape files to be copied from either unit. Supports differential copying, and can export copy results in CSV format.

Multi Channel Video Server

Insight [ODYSSEY] NEW

ODYSSEY Development



Versatile four-channel playout system designed for studio and OB van environments. Having wide range of supported wrappers and codecs makes Insight an excellent tool for media contribution and general video playout tasks.

- Up to four channels in a single 1 RU enclosure. Channels can be configured as input, output, or combined video + key.
- Allows separate resolution playback per channel. i.e. SD, HD, 3G.
- Supports multiple users over a web browser interface. No special software to install or license.
- Sub-clip editing functionality allows the creation of multiple instances of clips based on in-point and out-point.
- Files can be ingested and sent to network locations for full workflow integration.
- Mixed file formats can be included in a single playlist.
- Order Model number FGP-400 (includes redundant power supply)

Clip Server

MBP-200SX/202SX

Simultaneous dual-channel recording (encoding) and playback (decoding), using hardware codec*.

Model	MBP-200SX	MBP-200SX-S1	MBP-202SX	MBP-202SX-S1
Number of inputs	1	1	2	2
Number of outputs	1	1	2	2
SSD	480 GB (480 GB x 1)	960 GB (480 GB x 2, RAID-0)	480 GB (240 GB x 2, RAID-0)	960 GB (480 GB x 2, RAID-0)

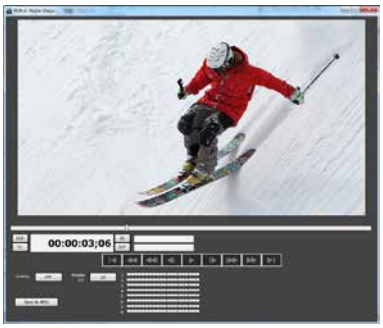
* MBP-200SX: Single-channel only available.

- Converts between HD-SDI signals and MXF files (compatible with Sony XDCAM), using built-in hardware codecs.
- Direct playout from external XDCAM drive
- Controls two channels at once, using control software. (installed)
- Supports embedded audio and ancillary time codes.

MXR File Player

IMP-200 NEW <Provisional>

FOR-A INNOVATIONS IN VIDEO and AUDIO TECHNOLOGY | IBE interactive broadband environment

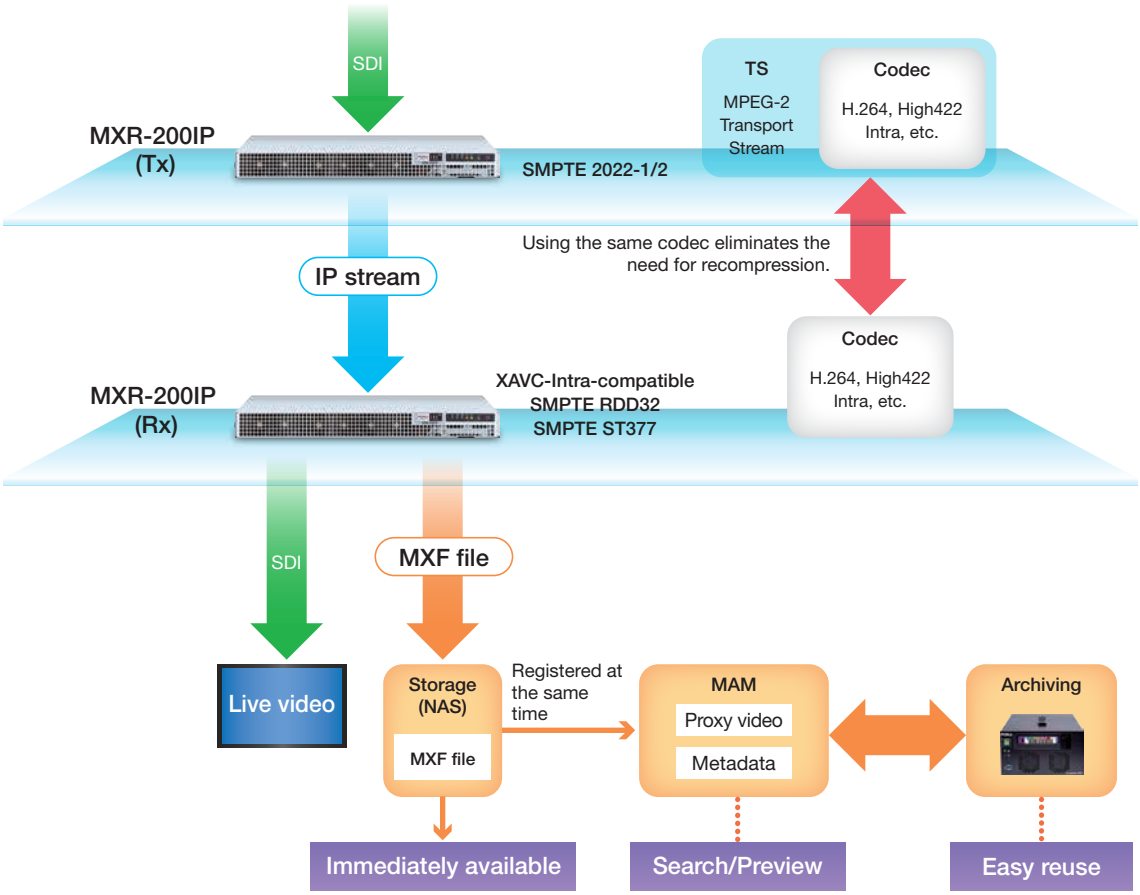


A software-based file player that is easily integrated into video production workflows and provides a convenient preview of MXF files. Play files as you are recording them, view time codes, and set In/Out points.

- Supports AVC-Intra or MPEG-2 wrapped in MXF (OP-1a) files.
- Can play files while recording.
- 5.1 ch audio to stereo downmixing
- Convenient keyboard shortcuts
- Can export via SDI with an additional FOR-A MBP video card. (optional)
- An SDK that can be embedded into third party applications and control cue-up, play, pause, rewind, fast-forward, stop, and get time code is available.

Video over IP NEW

IP streaming with a codec compatible with file-based workflows enables immediate use as file-based resources, without recompression of input signals. Can also be used to build a system for live video streaming. Proxy video of material found with MAM System can be previewed, or edited in an NLE system during other processes. A solution that preserves image quality, reduces delays, and enables economical deployment.



IP Streamer for Filebased Production

MXR-200IP NEW <Provisional>

Streams over IP, with MXR compatibility for file-based workflows. Saves received data without recompression to editable MXF files.

- Compact (1U) enclosure with dual channels for both SDI and IP input, which are respectively encoded and decoded for IP (x 2) and SDI output
- Supports H.264 High 422 Intra.
- Auto-correction of dropped packets through FEC redundancy, following SMPTE ST 2022-1/2

HD/SD Video Typewriter

VTW-350HS

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

A telestrator system that enables freehand drawing and positioning of objects and image files over video.

- Full-featured finger-based Telestrator
- Supports HD/SD-SDI video.
- Draws and points in real time over input video.
- Straight line, free-hand, and pre-programmed graphic shape modes 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

An HD/SD title generator that is capable of superimposing camera titles, date and time, logos, and graphics on input video signals.

- Text: Up to 40 characters x 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 max. 2 lines (256 characters for 1st line, 128 characters for 2nd line).

High-sensitivity HD Camera

FZ-B1

Lens and accessories are optional.

- 2/3" HbCMOS ultra high sensitive HD digital camera
- Power efficient non-cooling type camera
- HD-SDI output 1080i (59.94 Hz or 50.00 Hz)/ 720p (59.94 Hz or 50.00 Hz)
- Genlock connector (BB/Tri-level Sync)
- IR cut or through glass switching for multi-wavelength 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

Lens and accessories are optional.

- 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 (59.94 Hz or 50.00 Hz)/720p (59.94 Hz or 50.00 Hz)
- Minimum illuminations 0.003 Lx for color motion shooting

Example Applications

- 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

UHDTV Signal Converter

SCV-8000 NEW 4K 8K

SCV-8000 is a joint development product with NHK, Japan.

Bidirectional 8K (Dual Green SHV) HD-SDI (x 16) - 3G-SDI (x 8) and bidirectional 4K (UHD) Level-A/B, SQD/2SI signal conversion. Supports embedded audio, time code, and other ancillary data.

- 8K: 1.5G/3G conversion, 4K: SQD/2SI conversion
- Automatic conversion mode switching, based on input signal payload (8K/4K). Manual conversion is also available. Each channel is separately configurable. (4K)
- Audio channel remapping in 1.5G to 3G conversion
- Convenient displays of operational mode (DG 8K/4K), conversion mode and frame frequency settings on the front LCD panel
- Redundant power supply

8K/4K/HD Test Signal Generator

ESG-8000 4K 8K WCG

ESG-8000 is a joint development product with NHK, Japan.

A test signal generator that is compatible with YCbCr 4:2:2 10-bit FR-SHV (Super Hi-Vision Full Resolution) signals and produces DG-SHV (Super Hi-Vision Dual Green) signals.

- Standard test patterns include color bars, ramp, steps, and other patterns. Up to 10 custom test patterns can be registered.
- Choose from ITU-R BT.2020 or ITU-R BT.709 for 8K testing (except for custom test patterns).
- Audio test signals can be selected from standard test signals, such as a 1 kHz signal, or custom WAV (linear PCM) files.
- For 8K video output in DG mode, choose from one line (1.5G-SDI: 16 channels) or two (3G-SDI: 8 channels). In FR mode, one line (3G-SDI: 16 channels) is provided. Audio is embedded in HD, 4K (UHD) or 8K output. Also supports MADI signals.
- Payload information can be multiplexed into output signals.
- Controls the unit via telnet.
- Controls and monitors the unit via SNMP.

4K/HD Test Signal Generator

ESG-4000 NEW 4K WCG

Test signal generator that generates 4K signal (3840 x 2160p, 4096 x 2160p). Distributes each of 2 lines (4K video) from quad-link 3G-SDI to 2 outputs, or 2 HD-SDI lines (HD video) to three outputs. Embeds 32-channel audio in 3G-SDI or 16-channel audio in HD-SDI output. Equipped with two outputs for MADI signals.

- Can produce any combination of 3G-SDI (Level-A/B), Square Division (SQD)/2-Sample Interleave Division (2SI), and 3840 x 2160p/4096 x 2160p.
- Standard test patterns include color bars, ramp, steps, white, black, pathological, crosshatch, multiburst, and noise. Register up to 10 custom test patterns created via computer.
- Choose from ITU-R BT.2020 or ITU-R BT.709 for 4K testing (except for custom test patterns).
- Scroll test patterns horizontally, vertically, or diagonally.
- Display time codes or channel numbers on test patterns as needed.
- Outputs standard test signals (1 kHz, etc.) Test signals can also be customized by registering 10 computer-generated WAV (linear PCM) files.
- Audio test signals that support multiple formats
- Two-line output: One line (SG-1) for 4K and HD output is provided as standard. Able to support two-line output (SG-1, SG-2) with option. 4K output can be distributed to two systems, and HD output to three. The second line supports asynchronous output.
- Output can be synced to an external reference signal, with BB or Tri-level Sync available for each of the three output lines.
- Controls the unit via telnet.
- Controls and monitors the unit via SNMP.

SDI Changeover Switcher (2 inputs)

UFM-80SDICS 4K

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 allows for a significant reduction in installation space requirements.

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.

IP Changeover Switcher (2 inputs)

IPS-6200

A standalone ASI/TS over IP changeover unit in a 1U enclosure. Monitors TS-level IP signals in redundant input and instantly switches ports if errors occur, enabling seamless output without disruptions.

TS Changeover Switcher (2 inputs)

TSS-6200

A seamless switch that constantly monitors TS signals on a redundant circuit, and automatically switches output to the normal line when an error occurs, without disrupting output.

VANC modem

EVM-2600/2650

EVM-2650

An HD/SD-SDI ancillary data transmitter that transmits up to 4 lines of RS-232C serial data through the VANC spece of HD/SD-SDI streams.

- HD/SD-SDI ancillary data transmitter
- Tx (transmitter)/Rx (receiver) 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

EDD-6200P

Measuring instruments that are able to determine video and audio delay times, delay differences between audio channels, and between video and audio using test time code signals.

FOR.A®
INNOVATIONS IN VIDEO and AUDIO TECHNOLOGY

FOR-A COMPANY LIMITED

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(Sakura R&D)

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