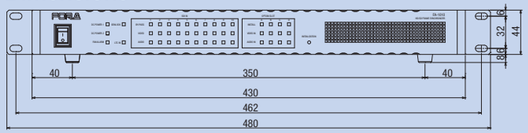
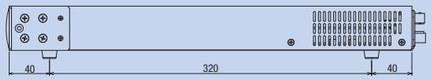
Specifications

Video Formats	1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 1080/24PsF, 1080/23.98PsF, 720/59.94p, 720/50p 525/60 (NTSC), 625/50 (PAL)
Video Inputs	3G-SDI: 3 Gbps (Level A/B), HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps, 75Ω, BNC × 10
Video Outputs	3G-SDI: 3 Gbps (Level A/B), HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps, 75Ω, BNC × 10
Genlock Input	BB: NTSC 0.429 Vp-p/PAL 0.45 Vp-p or Tri-level Sync: 0.6 Vp-p, 75Ω, BNC × 1, loop-through (to be terminated with 75Ω terminator, if unused)
Sync Modes	Frame Sync, Line Sync, AVDL, ADVL (minimum)
System Phase Control	
Frame Sync Mode	H phase: -1/2 H to +1/2 H V phase: -1/2 frame to +1/2 frame Maximum delay: 1 frame + 1H / Minimum delay: 1H
Line Sync Mode	H phase: -1/2 H to +1/2 H V phase: -1/2 frame to +1/2 frame Maximum delay: 1 H +1/2 H / Minimum delay: 1H+2 H
AVDL Mode	H phase: -1/2 H to +1/2 H V phase: -1/2 frame to +1/2 frame Maximum HD delay: 5H +1/2H +1H / Minimum HD delay: 1/2H Maximum SD delay: 1H +1/2H +1H / Minimum SD delay: 1/2H
Video Delay	Maximum 8 frames (in Frame Sync mode)
Video Processing Functions	Proc. Amp., Color corrector
Proc. Amp.	Video level: 0.0% to 200.0% Chroma level: 0.0% to 200.0% Black level: -20.0% to 100.0% HUE: -179.8° to +180°
Video Clip Mode	YPBPR, RGB, Composite
Color Correction Mode	Balance, Differential, Sepia
Audio Input	
Embedded Audio	3G Level A/HD: 16 channels (Group 1 to 4), 48 kHz, 16 to 24-bit, synchronous/asynchronous, 3G Level B: 16 channels (Link A)
	SD: 16 channels (Group 1 to 4), 48 kHz, 16 to 24-bit, synchronous only
Audio Input (optional)	
AES/EBU	Unbalanced, 1.0 Vp-p, 75Ω, BNC × 4 (also serve as AES/EBU outputs), Maximum 4 pairs of stereo channels, 32/44.1/48 kHz, 16 to 24-bit
	Balanced, 1.0 Vp-p,110Ω, 25-pin D-sub (female) × 1, Maximum 4 pairs of stereo channels, 32/44.1/48 kHz, 16 to 24-bit
Analog Audio	Balanced or unbalanced, 4 channels (2 stereo pairs), 25-pin D-sub (female) × 1 (also serves as analog audio output), 600Ω or High impedance, 48 kHz, 24-bit
Audio Output	3G/HD: 16 channels (Group 1 to 4), 48 kHz, 16/20/24-bit, synchronous/asynchronous
Embedded Audio	SD: 12 channels (Group 1 to 3), 48 kHz, 16/20/24-bit, synchronous only
Audio Output (optional)	
AES/EBU	Unbalanced, 1.0 Vp-p, 75Ω BNC × 4 (also serve as AES/EBU inputs), Maximum 4 pairs of stereo channels, 48 kHz, 16/20/24-bit
	Balanced, 1.0 Vp-p,110Ω, 25-pin D-sub (female) × 1, Maximum 4 pairs of stereo channels, 48 kHz, 16/20/24-bit
Analog Audio	Balanced or unbalanced, 4 channels (2 stereo channels) 25-pin D-sub (female) × 1 (also serves as analog audio input), 100Ω or lower impedance, 48 kHz, 24-bit
Audio Delay	5 ms to 1,000 ms (adjustable in 1 ms steps)
Audio Processing	Sampling rate converter (SRC), Gain control, Down mix, Channel re-mapping, Channel mute (can be set per a channel)
Interface	Ethernet (10Base-T/100Base-TX/1000Base-T): RJ-45 × 1
Temperature / Humidity	0ºC to 40ºC / 30% to 90% (no condensation)
Power	100 V AC to 240 V AC ±10%, 50/60 Hz (Redundant power supply as standard)
Consumption	Approx. 78 W (at 100 V AC to 120 V AC), Approx. 73 W (at 220 V AC to 240 V AC)
Dimensions / Weight	Approx. 430 (W) × 400 (H) × 44 (D) mm, Approx. 6.0 kg
Consumables	Power supply unit (to be replaced approx. every 5 years) / Cooling fan (to be replaced approx. every 6 years)
Accessories	Quick Setup Guide, CD-ROM (Windows GUI, Operation Manuals), AC cord, Rack mount brackets
Options	FA-10RU: Remote control unit
	FA-AUX30: AUX extension panel (with a connection capability with the FA-10RU, FA-10GPI)
	FA-10AES-BL: Balanced Digital Audio I/O
	FA-10AES-UBL: Unbalanced Digital Audio I/O
	FA-10AES-UBLC: Extension Cable for Unbalanced Digital Audio Output of the FA-10AES-UBL (When the cable is connected to the terminal, it exclusively functions as an output terminal.)
	FA-10ANA-AUD: Analog Audio I/O
	FA-10GPI: GPI I/O

Dimensions





Unit: mm

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ISO 9001 and 14001 certified (Sakura R&D)

Multi-channel Signal Processor

FA-1010 "THE Processor"

FOR-A®
INNOVATIONS IN VIDEO and AUDIO TECHNOLOGY

MULTI-CHANNEL SIGNAL PROCESSOR

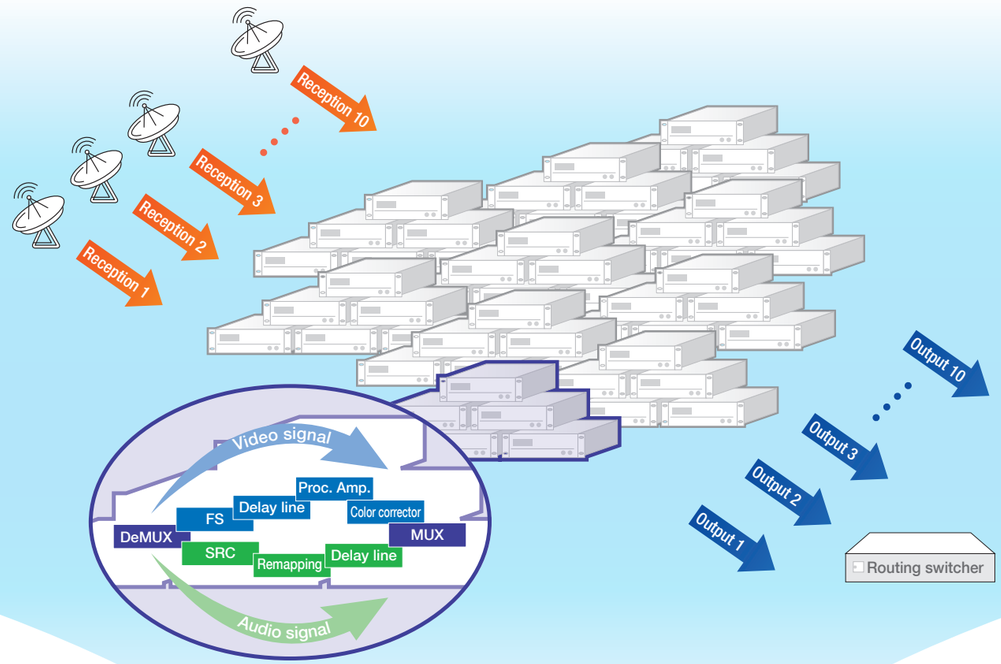
FA-1010

THE Processor

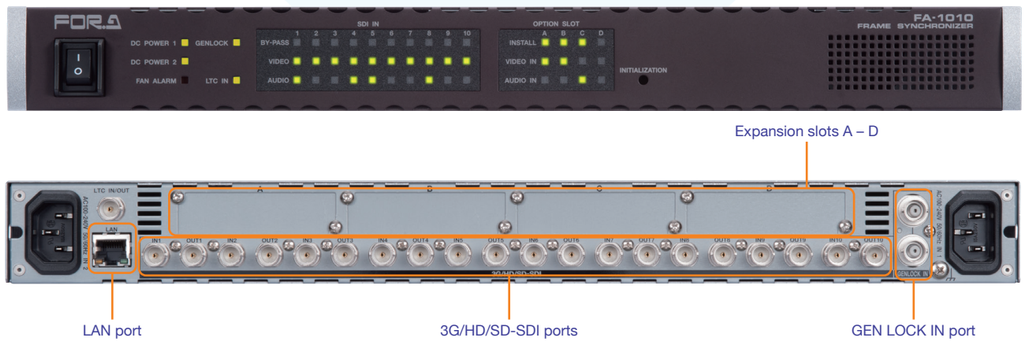
All-Round Frame Synchronizer

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).
It supports 3G-SDI and HD/SD-SDI input/output as standard and naturally includes all the typical features of a frame synchronizer as well as a color corrector (standard) enabling the conversion of a variety of video signals. For audio signal processing, it is highly versatile with delay adjustment and remapping functions plus a sampling rate converter. A single unit can provide the optimal functionality for all video production scenes, including transmission, outside broadcasting, news reporting, production, editing and distribution.

Comprehensive & More Compact



Integrates various signal processing units that required separate equipment for each channel into a single FA-1010 unit



Abundant Functions as Standard

10 3G/HD/SD-SDI Inputs/Outputs

10 SDI inputs have been included in the standard configuration. For SDI input, signals are synchronized independently in the FA-1010, so during switchover there is no shock even if asynchronous signals are input; that means a clean switch in both video and audio. An I/O bypass function has also been provided in case power is cut or there is an emergency.

Digital Audio I/O

For embedded audio, there are 16 channels per 3G/HD-SDI synchronous/asynchronous input, and there are 12 channels per synchronous input in SD-SDI. That means support for up to 160 channels with all 10 inputs. Many types of signal processing are possible, including SDI embedding and de-embedding, and if an optional expansion card is installed, A/D and D/A conversions are also possible, thus flexibly supporting even multi-channel audio content. Additionally, individual sampling rate converters are provided. Signal processing without any phase gap between channels is possible for such processes as delay adjustment, level adjustment, down-mixing and remapping. Also, users needn't worry about ancillary data being erased such as closed captions and time code due to signal processing.

Color Corrector

In addition to the Proc. Amp., the FA-1010 incorporates a color correction capability. This enables you to perform color corrections with 3 color correction modes and also reproduce the original colors in the selected color space using the gamma adjustment, clip, and various level adjustment capabilities.

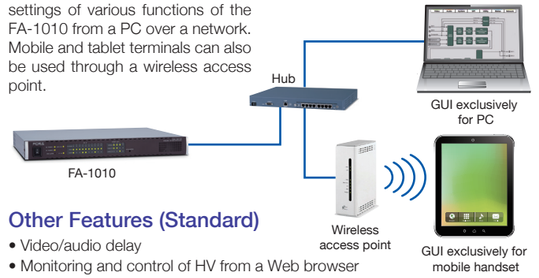
Powerful Frame Synchronizer

FOR-A's frame synchronizers have always exhibited superior performance when processing video with poor quality signals. Synchronizer modes that can be selected among from Frame, Line, and AVDL. Adjustment range in AVDL mode is 5H in HD and 1H in SD. Moreover, in every mode both H and V* ancillary data can be passed through.

* If input/output formats differ, there are limitations on the packets that can be passed through.

GUI Control

An in-built Web server combined with the GUI exclusively for PC (see the figure below) means users can change settings of various functions of the FA-1010 from a PC over a network. Mobile and tablet terminals can also be used through a wireless access point.



Other Features (Standard)

- Video/audio delay
- Monitoring and control of HV from a Web browser
- SNMP monitoring and control (partial)
- Redundant power supply

Options

FA-10RU
Remote Control Unit

One-touch switching of video input channels. Enjoy efficient color correction during frequent channel switching.

FA-AUX30
AUX Extension Panel

Offers one-touch assignment and activation of common functions in the operator's routine.

Expansion Cards

4 slots in the rear panel can be used to expand the necessary functions.

• FA-10AES-BL	Balanced Digital Audio I/O
• FA-10AES-UBL	Unbalanced Digital Audio I/O
• FA-10AES-UBLC	Unbalanced Digital Audio Out (an extension cable for the FA-10AES-UBL)
• FA-10ANA-AUD	Analog Audio I/O
• FA-10GPI	GPI I/O

Block Diagram