

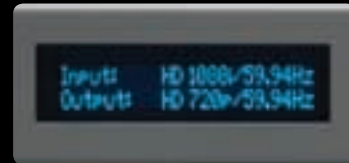
## FRONT PANEL CONTROLS



**Remote**  
Displays remote control menu.

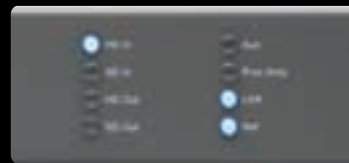
**Status**  
Displays current machine status and/or error conditions.

**Alphanumeric Display**  
Displays status information and Control information (for viewing and changing functions/parameters).



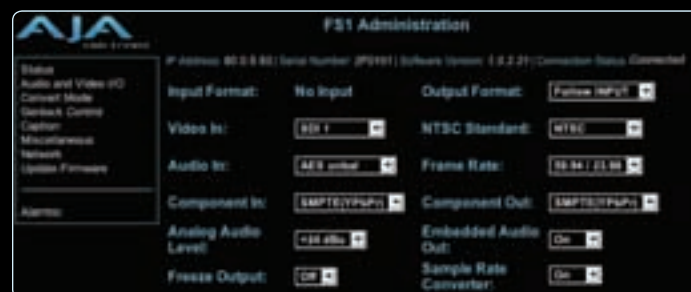
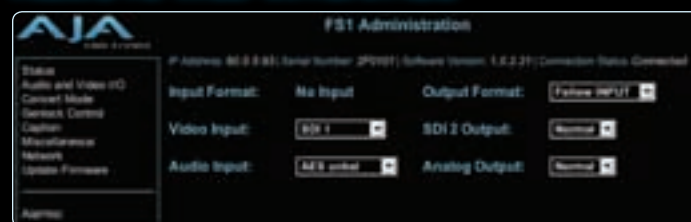
**Select and Adjust Buttons**  
Select Parameters and adjust their values.

**Activity LEDs**  
Displays at-a-glance the settings and current FS1 conditions.



**Power and Status LEDs**  
Shows the AC power status and any alarm conditions.

## REMOTE WEB INTERFACE



## SPECIFICATIONS

### Formats:

Input	Possible Output Formats		
525i59.94	525i59.94	720p59.94	1080i59.94
720p59.94	525i59.94	720p59.94	1080i59.94
1080i59.94	525i59.94	720p59.94	1080i59.94
1080pSF23.98	1080pSF23.98	1080i59.94	525i59.94
625i50	625i50	1080i50	720p50
720p50	625i50	1080i50	720p50
1080i50	625i50	1080i50	720p50
1080pSF24	1080pSF24	1080i60	
1080i60	1080i60	720p60	
720p60	720p60	1080i60	

**Notes:** 1. In the case of 1080pSF/23.98 input—and when 1080i59.94 (or 525) is selected as an output format, the FS1 automatically does 3:2 pulldown correct frame rate. Similarly, in the case of 1080pSF/24 input, FS1 automatically does 3:2 pulldown to get the correct frame rate.

2. When passing 24 or 60 framerate video, the standard definition outputs will not output valid video (the FS1 is not a framerate converter).

### Video Inputs and Outputs

- Dual SDI/HD-SDI, SMPTE 259/274/292/296
- HD component YPbPr/RGB (RGB is output only), SMPTE-274
- SD component/composite/YC (S-Video)

### Video A/D, D/A

- 12-bit
- 2x oversampled (HD)
- 4x oversampled (SD)

### Audio Inputs and Outputs

- 8-channel balanced, 25 pin D (Tascam pinout)
- 8-channel AES (BNC)
- 8-channel SDI/HD-SDI Embedded

### Audio A/D, D/A

24-Bit, 48KHz

### Audio Levels

- +12dBu, +15dBu, +18dBu, +24dBu, (Full Scale Digital)

### LAN

- 10/100 auto config., auto cable crossover
- Embedded Webserver, HTTP v1.1, SNMP

### GPI

- 2x GPI input, TTL, isolated
- 2x GPI output, TTL, isolated

### Physical

- 1 RU, 12 inches deep, fan-cooled

### Power

- 100-240 VAC, 25 watts
- Fully Redundant, diode isolated

# FS1



SD/HD Audio/Video Frame Synchronizer and Converter



## INPUT

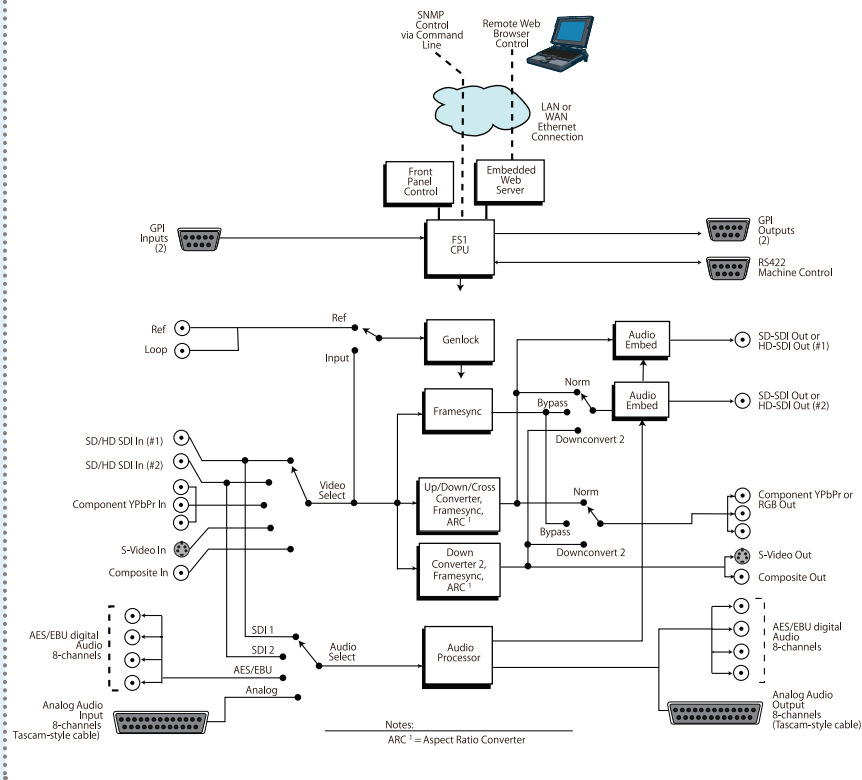
- 525i / 720p / 1080i / 59.94Hz
  - 1080 psf 23.98Hz
- 625i / 720p / 1080i / 50Hz
  - 1080 psf 24Hz
  - 1080i / 720p / 60Hz
- 8-channel AES Audio
- 8-channel Embedded Audio
- 8-channel Balanced Analog Audio



## OUTPUT

- 525i / 720p / 1080i / 59.94Hz
  - 1080 psf 23.98Hz
- 625i / 720p / 1080i / 50Hz
  - 1080 psf 24Hz
  - 1080i / 720p / 60Hz
- 8-channel AES Audio
- 8-channel Embedded Audio
- 8-channel Balanced Analog Audio

## ANYTHING IN. ANYTHING OUT. FS1 ARCHITECTURE



Featuring a flexible “anything in, anything out” architecture, the FS1 Universal SD/HD Audio/Video Frame Synchronizer and Converter can simultaneously work with both HD and SD video — all in full 10-bit broadcast quality video and 24-bit audio. The FS1 supports virtually any input or output, analog or digital, HD or SD. The FS1 can up- or down-convert between SD and HD, and provide simultaneous HD and SD outputs.

Cross-conversions between HD formats are also supported, with simultaneous output of both formats. For audio, the FS1 supports 8-channel AES, balanced analog, or embedded audio with full flexibility and audio processing controls. The FS1 supports closed captioning and the conversion of closed captioning between SD and HD formats. The FS1 is also network ready, supporting web-based and SNMP remote control.

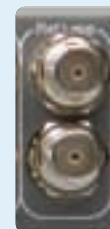


### Audio Connections

- 8-channel balanced, 25 pin D (Tascam pinout)
- 8-channel AES (BNC)
- 8-channel SDI/HD-SDI embedded
- Audio A/D, D/A: 24 Bits, 48Khz
- Audio Levels: +6dBu, +15dBu, +18dBu, +24dBu, (Full Scale Digital)

### Reference Video with Loop-Through

- Synchronize FS1 outputs to house reference video signal (blackburst or composite sync for SD, or Trilevel for HD).



### LAN and GPI Connections

- 2x GPI inputs/outputs, TTL, isolated.
- RJ45 10/100 LAN connector—offers DHCP, SNMP and embedded Web Server Remote Control



### 2 AC Power Supplies for Redundant Operation

2 AC power connectors, each 3 pin (with Ground), one for each independent power supply. Power supplies autosense from 100 to 240VAC at 50/60Hz. Only one has to be connected for operation; connect both for redundancy. Alarm monitoring alerts locally and remotely if power supply fails (GPI also.)



### SDI/HD - SDI

- Dual SDI/HD-SDI inputs and output, SMPTE 259/274/292/296



### Analog Video

- HD component YPbPr/RGB (RGB is output only), SMPTE-274
- SD component/composite/YC (S-Video)
- Video A/D, D/A: 12 bits 2x oversampled (HD), 4x oversampled (SD)

## FEATURES

- SD1 HD up/down conversion
- SD1 SD aspect ratio conversion
- HD1 HD cross conversion (720p/1080i)
- Up/down/cross converting with both the input and converted formats on SD/HD SDI outputs (both synchronized)
- HD cross converting with simultaneous downconverted SDI output
- Dual HD/SD SDI inputs and outputs
- Component analog HD/SD input and output
- Composite/S-video input and output with TBC
- 8-channel AES and balanced analog audio inputs and outputs
- 8-channel embedded audio I/O
- Fully redundant power supplies standard
- 10/100 LAN with SNMP, and embedded web server for remote control
- Video Proc Amp
- Audio Processing
- Closed caption support – including SD to HD upconversion
- Chassis styling optimized for machine room use with simple panel and remote web browser user interfaces
- Front panel alphanumeric and graphical display shows input/output settings and parameter viewing/editing choices
- LED status indicators for at-a-glance system monitoring
- Two GPI inputs and outputs, TTL, isolated

# FS1