

# AJA FS1 Specifications



Specification	Value	Notes
<b>SDI Input</b>		
Standard	SMPTE 259M, 292M	
Connector	75 ohm BNC	
Return loss: 5Mhz to 1.5GHz	>18db	
Equalization (Belden 1694 cable): 270MHz	350m	
1.5GHz	140m	
<b>SDI Output</b>		
Standard	SMPTE 259M, 292M	
Connector	75 ohm BNC	
Return loss: 5Mhz to 1.5GHz	>18db	
Return loss: 1.5GHz to 3GHz	>18db	
Timing jitter: 270MHz	<0.1 UI	Genlock = freerun, Color Bars
1.5GHz	<0.5 UI	"
Alignment jitter: 270MHz	<0.1 UI	"
1.5GHz	<0.13 UI	"
<b>Component Input</b>		
Format	SMPTE, Betacam	
Connector	75 ohm BNC	
Return loss	>40 dB, 300 kHz to 6 MHz	
Quantization	12 bits	
Frequency response SD	Y: ±0.2 dB to 5 MHz	
	Pb/Pr: ±0.2 dB to 2 MHz	
Frequency response HD	Y: ±0.5 dB to 25 Mhz, -2.0 dB @ 30 Mhz	
	Pb/Pr: ±0.2 dB to 12.5 Mhz, -1.0 dB @ 15 Mhz	

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Specification	Value	Notes
SNR	>65 dB	Flat field, gray
<b>Component Output</b>		
Format	SMPTE, Betacam, RGB	
Connector	75 ohm BNC	
Return loss	>40 dB 300 kHz to 6 MHz	
Quantization	12 bits	
Frequency response SD	Y: $\pm 0.2$ dB to 5 MHz	
	Pb/Pr: $\pm 0.5$ dB to 2.5 MHz	
Frequency response HD	Y: $\pm 0.25$ dB to 25 Mhz, -3 dB @ 30 Mhz	
	Pb/Pr $\pm 0.25$ to 12.5 Mhz, -3 dB @ 15 Mhz	
SNR	>65 dB	Flat field, gray
<b>Composite/S Video Input</b>		
Standard	NTSC, PAL	
Connector	75 ohm BNC, S Connector	
Return loss	>40 dB 300 kHz to 6 MHz	
Quantization	12 bits	
Frequency response	$\pm 0.5$ dB, to 5 MHz, Luminance	
SNR	65 dB	
<b>Composite/S Video Output</b>		
Standard	NTSC, PAL	
Connector	75 ohm BNC, S Connector	
Return loss	>40 dB 300 kHz to 6 MHz	
Quantization	12 bits	
Frequency response	$\pm 0.1$ dB to 6 MHz, Luminance	
DC offset	$< 0.0 \pm 50$ mV	
Differential gain	$< 0.5\%$	
Differential phase	$< 0.5^\circ$	
Transient response	$< 0.9\%$ K Factor	
SNR	>65 dB	

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Specification	Value	Notes
<b>Propagation Delay</b>		
Video	1 frame nominal	
Audio	adjustable + 16 / -256ms with respect to video output	
<b>Genlock Input</b>		
Connector	75 ohm BNC	
Return loss	> 40 db, 300khz to 6 Mhz	
Signal type	NTSC/PAL analog composite, 300 mV Sync, ±300 mV Tri-level sync	
<b>AES Input</b>		
Standard	AES3, SMPTE276M	
Connector	75 ohm BNC	
Sensitivity	<200 mV	
Return loss	> 30 dB, 300khz to 6 Mhz	
Input audio rate	32 kHz to 96 kHz	Sample rate conversion
<b>AES Output</b>		
Standard	AES3, SMPTE276M	
Connector	75 ohm BNC	
Return loss	> 30 dB, 300khz to 6Mhz	
Jitter	< 0.7 ns	
Rise/fall time	2 ns (10% to 90%)	
<b>Analog Audio Input</b>		
Connector	Tascam 25 pin D	
Input impedance	30k ohms	
Input analog level	+12, +15, +18, +24db Full Scale Digital	
Frequency response	<±0.3 dB 20 Hz to 20 kHz	
THD	> -82 dB @ 1khz, -94 dB @ 20Khz	
SNR	> -94 dB @ +23 dBm	

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Specification	Value	Notes
<b>Analog Audio Output</b>		
Connector	Tascam 25 pin D	
Output analog level	+12, +15, +18, +24db Full Scale Digital	
Frequency response	$\pm 1$ dB 20hz to 13khz, -3dB @ 20 Khz	
THD	>-85 dB	
SNR	>- 94 dB @ +23 dBm	
<b>Weight and Dimension Measurements</b>		
Height	1RU, 1.75 in. (4.5 cm)	
Width	19 in. (48.3 cm)	
Depth (including BNCs)	12.5 in. (31.75 cm)	