

tvone



C2-7300

The C2-7300 Dual Channel Video Processor

all the power of the C2-7200 plus digital stereo audio processing

The C2-7300 2-Channel HD-SDI Video/Audio Processor has all the features and functions of the C2-7200 plus 32 channels of internal digital stereo audio processing. This allows for simultaneous embedding of 8 stereo audio channels for each of the two HD-SDI inputs and extraction of 8 stereo audio channels from each of the two independent HD-SDI outputs. These audio channels are available in the AES3-id format on the rear panel of the unit via a pair of HD-44 connectors. The optional A2-7301 conversion unit is available to convert from AES3-id to standard AES-3 on XLR connectors. Other conversion units will be introduced to accommodate other audio formats, such as Low Impedance Balanced Analog. All delay compensation, level adjustments and balancing can be controlled within the C2-7300. Due to the highly flexible internal audio routing, these 32 stereo channels (16 in and 16 out) are not restricted for use within the HD-SDI signal, but can be assigned to any of the other Composite, Component, S-Video, analog RGBHV or DVI inputs and outputs.



Key Features of the C2-7300

- Analog to HD-SDI Up, Down, Cross Conversion
- SD-SDI to HD-SDI Cross Conversion
- Dual Independent Scaling Engines
- Delay free HD-SDI Audio Pass-Thru
- 4:4:4 Sampling for full bandwidth color
- 11 Multi-format Inputs
 - 3x Composite Video
 - 3x S-Video
 - 2x SD/HD-SDI
 - 3x DVI (also handles RGB, YUV & YPbPr)
- 2 Independent Output Channels, each with:
 - SD/HD-SDI
 - Composite Video
 - S-Video
 - DVI (also handles RGB, YUV & YPbPr)
- All DVI channels support EDID v1.3
- Multiple Conversion & Scaling products in one
- Multi-format Inputs – Digital and Analog
- Analog RGBHV to 2048x2048
- All known HDTV Resolutions
- Genlock any Video Input to any other
- Seamless Switching with Cuts, Fades or Effects
- Unrestricted Dual P-I-P - Any Input over any other
- RS-232 & IP Interface Remote Control
- External Control by Windows Control Panel
- External Control by Third Party Control Systems
- External Hardware Control by Optional CC-300
- CORIO2® Technology Conversion Engines
- Zoom up to 1000% with full Positioning
- Image Shrink to 10% with full Positioning
- 16 AES3-id Stereo Channels In
- 16 AES3-id Stereo Channels Out
- 2 x 8 channel SD/HD-SDI Audio Embedding
- 2 x 8 channel SD/HD-SDI Audio Extraction

Audio Specifications

Audio Inputs

Digital Stereo	16x via HD-44 Connectors (Note 1) with direct breakout to BNC's
Format	AES3-id
Assignable	to any of the 11 Video Inputs
Input Level	0.8V to 1.2V p-p
Impedance	75Ω
Sample Rate	48KHz (extended range TBA)

Audio Outputs

Digital Stereo	16x via HD-44 Connectors (Note 1) with direct breakout to BNC's
Format	AES3-id
Assignable	to any of the 8 Video Outputs
Output Level	1V p-p
Impedance	75Ω
Sample Rate	48KHz (extended range TBA)
Rise/Fall Time	Between 30 and 44ns
Jitter	TBA
DC Offset	<50mV

SDI Audio Embedding

Format	SD or HD-SDI
Number of Channels	Up to 8 SDI Stereo Channels
Sample Rate	48KHz (extended range TBA)

SDI Audio Extraction

Format	SD or HD-SDI
Number of Channels	Up to 8 SDI Stereo Channels
Sample Rate	48KHz (extended range TBA)

Audio Control and Routing

Selectable Routing	Each AES3-id can be assigned to any of the 11 video inputs
Audio Delay	Adjustable up to 0.5 Sec for each Stereo Channel
Level Adjustments	for each Stereo Channel
Muting Control	for each Stereo Channel
Balance Adjustments	for each Stereo Channel
Audio Follow Video	Including Mixing and Fading during C2-7300 Switcher Mode

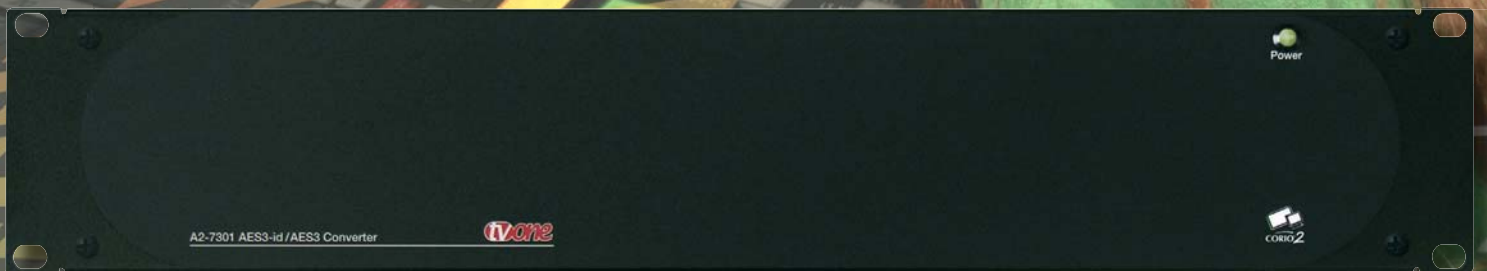
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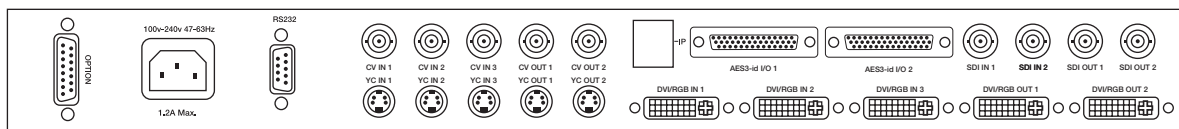
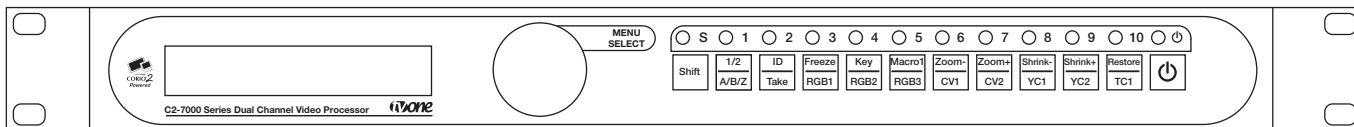
- (1) Each HD-44 Connector contains 8 AES3-id Stereo Audio Channels In and 8 AES3-id Stereo Channels Out



A2-7301 AES3-id/AES Converter Option

Input Conversion	Converts 16 AES3 Balanced Stereo on XLR's to 16 AES3-id
Output Conversion	Converts 16 AES3-id to 16 AES3 Balanced Stereo on XLR's
Interface Connector	2x HD-44 - A2-7301 to C2-7300
I/O Voltage Levels	TBA
Impedance	110Ω
Size	2RU, 19" Rackmount
Power Requirement	None





Video Inputs

Composite Video	3x via BNC Connector
S-Video (Y/C)	3x via 4-PIN Mini-DIN Connector
DVI-I (Note 2)	3x via DVI-I Connector
SDI (SD or HD-SDI)	2x via BNC

Genlock Input

Reference Signal	Any of the Video Inputs
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Independent Output 1

Composite Video	1x via BNC Connector
S-Video (Y/C)	1x via 4-PIN Mini-DIN Connector
DVI-I (Note 2)	1x via DVI-I Connector
SDI (SD or HD-SDI)	1x via BNC

Independent Output 2

Composite Video	1x via BNC Connector
S-Video (Y/C)	1x via 4-PIN Mini-DIN Connector
DVI-I (Note 2)	1x via DVI-I Connector
SDI (SD or HD-SDI)	1x via BNC

Input/Output Range

Computer Resolutions	Analog: Up to 2048x2048 DVI: Up to 1280x1024
Max Vert Refresh Rate	250Hz
Max Horiz Frequency	150KHz
HDTV Resolutions	All thru 1080p
Interlace Support	Progressive and Interlaced
Television Standards	NTSC 3.58, 4.43, PAL-B,G,I ,D, H, PAL-M, PAL-N & SECAM (In Only)
SDI	SD-SDI or HD-SDI

Input RGB Sync

Type	RGBHV, RGBS, RGsB
Level / Termination	TTL, 10K Ω
Polarity	Positive or Negative
Maximum Level	5Vp-p

Output RGB Sync

Type	RGBHV, RGBS, RGsB
Level / Termination	5Vp-p, 220 Ω
Polarity	Positive or Negative

Control Methods

Local Front Panel	10x2 Programmable Buttons +LED, Rotary Selector, and LCD
RS-232 Interface	DB-9 Male Connector
IP Interface	RJ45 Connector
Audio Switcher Control	Via D-15 Options Connector from the Main Unit

Mechanical

Desktop Case (HWD)	1.75"x17"x7.9" (44x420x200mm)
With Rack Ears (HWD)	1.75"x19"x7.9" (44x482x200mm)
Weight (Net)	8.4 lbs (3.8 kg)

Environmental

Operating Temperature	+40° to +113° F (4° to +45° C)
Operating Humidity	10% to 85%, Non-condensing
Storage Temperature	+32° to +140° F (0° to +60° C)
Operating Humidity	10% to 85%, Non-condensing

Power Requirement

Internal Power Supply	100-240VAC, 47-63Hz, 50W
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Regulatory Approvals

Video Scaler Unit	FCC, CE
Power Supplies	UL, CE, CSA

General

Image Size & Position	AutoSet or Manual
Image Zoom Range	Continuous to 1000%
Image Shrink Range	Continuous to 10%
Image Mirroring	Horizontal and/or Vertical
Image Freeze	Full Frame
Video Sampling Rate	108MHz
Resolution Memory	Approximately 1,000 Definable
Firmware Memory	Flash, Upgradeable via RS-232
Flicker Filter	4-Level Vertical
Picture-in-Picture	2 Windows + Background from any 3 Video Inputs
Number PIP Windows	2 in Dual PIP Mode 1 in Switcher & Ind. Modes
Video I/O Impedance	75 Ω
Video Decoder	9-bit Digital
Comb Filter Decoding	Adaptive
De-Interlacing (PAL-NTSC)	Pixel-level Motion Adaptive
Film Mode (NTSC)	3:2 Pull Down Detection
Video Encoder	10-bit Digital
Digital Sampling	24-bit, 8-bits per R, G and B
Colors	16.7 Million
SDI Jitter	SMPTE 259M-C (270Mbps: 525/625 line) jitter 0.070 +/-0.01 UI SMPTE 292M (1.485/1.4835Gbps: 720p, 1035i, 1080i, 1080p) jitter 0.176 +/- 0.02 UI
Video Scaling Engine	Proprietary CORIO2 [®]
Internal Format	4:4:4 YUV
Internal Test Patterns	User Defined
LCD Panel	24x2 Character
Logo Inserter	Flash Programmable
Proc Amp Adjustments	Brightness, Contrast, Saturation, & Hue for CV & SV Inputs, plus Video Level for RGB Input
Proc Amp Memory	Settings for each Video Input

Accessories Included

1x C-Video I/O Cable	6' (2m) BNC to BNC
1x S-Video I/O Cable	6' (2m) 4-Pin S-V to 4-Pin S-V
1x DVI I/O Cable	6' (2m) DVI-I to DVI-I
1x HD15 to HD15 Cable	6' (2m)
5x RGBHV I/O Adapters	DVI to HD15 Adapters
1x AC Power Cord	6' (2m) US, UK or Euro Type
1x RS-232 Cable	6' (2m) DB9F to DB9F
1x DVI-A to 5 BNC	DVI-A to 5 BNC Female Adapter
1x Operations Manual	
1x Rackmount Kit	
1x Control Software	
	2 Ears and 4 Screws
	Downloadable from website

Optional Accessories

A2-7301	AES3-id/AES Converter
CC-300	Hardware Control Panel
A2-2000	Audio Switcher (Note 3)

Product Item Number

C2-7300	Dual Channel Video Processor with SD/HD-SDI and AES3-id I/O
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Warranty

Limited Warranty	2 Years Parts and Labor
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Notes

- (2) DVI-I Input/Output connectors also accommodate RGBHV, RGBS, RGsB, YCbCr & YPbPr signal formats.
- (3) Although the A2-2000 Audio Switcher can be connected to the C2-7300 via the Options Connector, it is not advisable. The A2-2000 is an analog only device, so its usefulness is limited and may be confusing to operate.

