

PESA

User Specification Sheet

Video Conversion Cards—A/D & D/A

Part Number	Description
VADD-3101-10	Video A to D conversion card. Accepts YPbPr, SMPTE, EBU-N10, Betacam, RGB, NTSC, PAL (Composite or Y/C) and converts to SDI (SMPTE 259M)
VDAE-3101-10	Video D to A conversion card. Serial Digital (SMPTE 259M) to composite NTSC, PAL, Y/C or component video YPbPr, SMPTE, EBU-10, Betacam, RGB

PESA's VDA3100 DA line now expands to provide two compliment video conversion cards. Utilizing the VDA3100T frame, these cards provide high-density solutions for converting Analog video signals to digital and vise-versa. Up to 10 cards can be installed in one frame as well as residing in the same frame, complimenting standard PESA distribution amplifier cards.



VADD-3101-10



VDAE-3101-10

VADD3101-10 Analog to Serial Digital Conversion Card --(A/D)

The VADD3101-10 converts analog NTSC and PAL sources into excellent quality 10-bit SDI video. Using a five line adaptive comb filter you are guaranteed the best decoding of composite sources. The VADD3101-10 has one composite or Y/C input, four SDI outputs and a local reference loop. Allowing for full timing adjustments, the VADD-3101-10 was designed to satisfy the most demanding needs of analog to digital conversion requirements.

Features

Excellent quality 10-bit NTSC/PAL to SDI decoder
Component, Composite, or YC analog inputs
3 Line Adaptive Comb Filter
YPbPr, Betacam, or RGB component formats
NTSC or PAL composite formats
4 SDI Outputs

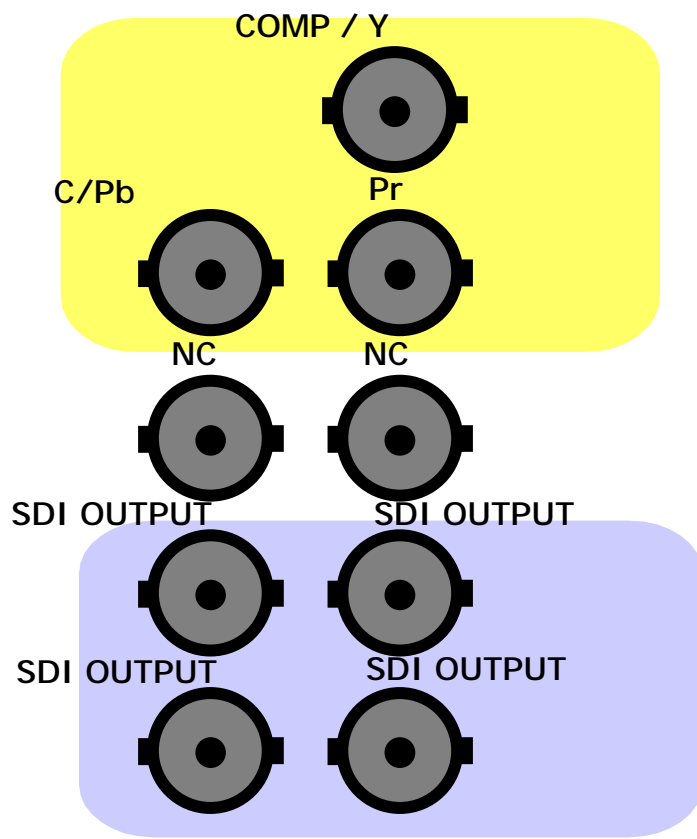
Inputs

YPbPr SMPTE, EBU-10, Betacam, RGB, NTSC, PAL
YC (S-Video)

Outputs

4 SDI, SMPTE 259M BNC's

A/D Converters:	10-bit, 2X oversampling
Freq. Resp.	Y +/- .15dB to 5.5Mhz C +/- .15dB to 2.5Mhz Less than 5% K factor (2T)
User Settings	Input Video Format Select Pedestal Present / Not Present Narrow/Wide Blanking AGC On/Off
Size	Fits PESA VDA3100T frames, up to 10 per frame
Power	7W
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VADD3101-10 Rear View Connections A-D Conversion

Dip Switch Functions for VADD-3101-10

SW 1 CMPST CMPNT (Output selection)

CMPNT (UP): Component output

CMPST (DOWN): Composite output

SW 2 CMPST Y/C (Output selection)

YC (UP): Output. If SW1 is CMPNT (UP) then 1 Y/C

CMPST (DOWN): Composite output

NOT APPLICABLE IF SW1 IS IN CMPNT

SW 3 PEDESTAL

NO PED (UP): no pedestal

PRESENT (DOWN): pedestal is present

SW 4 COMB

OFF (UP):

ON (DOWN):

SW 5 EDH

OFF (UP):

ON (DOWN):

SW 6 ACC

ON (UP):

OFF (DOWN):



VDAE3101-10 Serial Digital to Analog Conversion Card –(D/A)

The VDAE3101-10 converts serial digital 10-bit SDI video into component or composite video formats. The 4 analog outputs are user configurable to NTSC/PAL, Y/C, YPbPr, Betacam, or RGB. Component and composite outputs are completely independent. With a precision 4X oversampled D/A filter, the VDAE3101-10 provides the highest quality analog outputs.

Features

Excellent quality 10-bit Serial Digital to Analog conversion
Full 10-bit data path, 4X oversampling
SDI Input, 2 Reclocked, Loop-through SDI output
2 Reference Loop inputs
Simultaneous component and composite analog outputs
Digital noise reduction

Inputs:

SDI (SMPTE 259M), BNC (1X BNC)

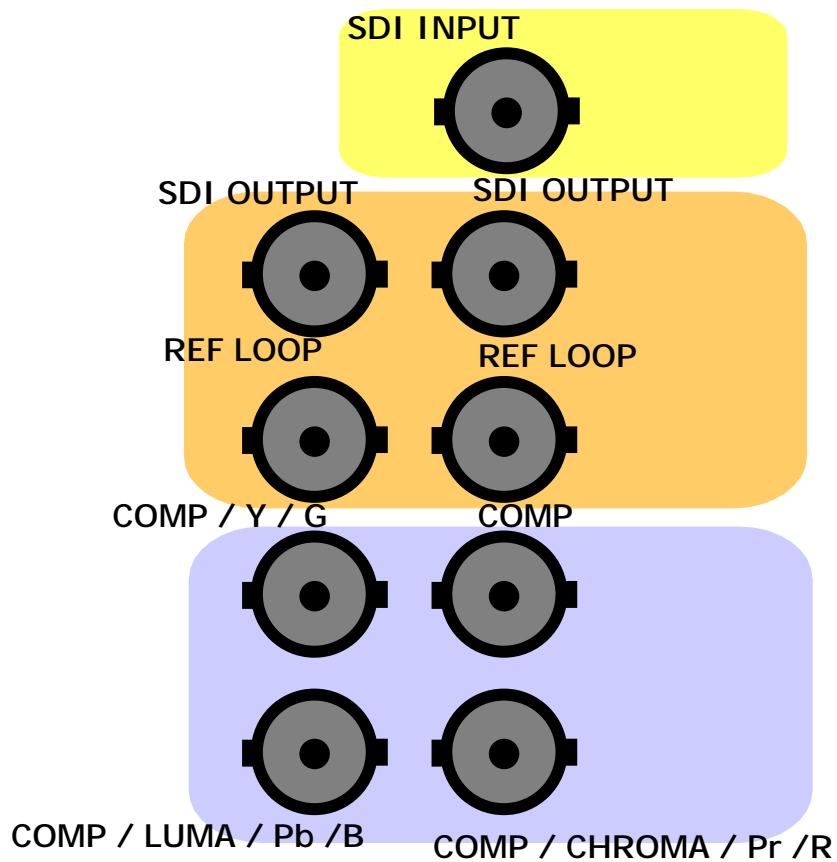
Outputs:

YPbPr-SMPTE, EBU-N10, Betacam, RGB with 3 BNC's
YC with 2 BNC's
NTSC/PAL with 1 BNC

D/A Converters: 10 bits, 4X Oversampling
 Clock Jitter Filtering to 2.5Hz
Frequency Response: Y +/- .15dB to 5.5Mhz
 C +/- .15dB to 2.5Mhz (component)
 C +/- .15dB to 1.3Mhz (composite)
 Less than .5% K factor (2T)

User Settings
 Output Video Format
 Pedestal On/Off
 Narrow/Wide Blanking
 Digital Noise Reduction

Size: Fits PESA VDA3100T frames, up to 10 per frame
Power: 7W



VDAE3101-10 Rear View Connections D-A Conversion

Dip Switch Functions for VDAE-3101-10

SW 1 CMPST CMPNT (Output selection)

CMPNT (UP): Component output

CMPST (DOWN): Composite output

SW 2 RGB YUV/YC (Output selection)

YUV/YC (UP): Output Y, R-Y, B-Y if SW1 is COMPNT. If SW1 is CMPST, output 1 composite & 1 Y/C

RGB (DOWN): Output RGB if SW1 is COMPNT. If SW1 is CMPSTE, output 3 composites.

SW 3 BETA SMPTE (Output selection)

BETA (UP): Selects BETA 525 levels (if configured for Component output)

SMPTE (DOWN): Selects SMPTE levels (if configured for Component output)

NOTE: No effect with 625 input

SW 4 Blank

NAR (UP): Vertical (line numbers indicate where video starts)

line 13, field 1; line 12, field 2 (525 line)

line 10, field 1; line 322, field 2 (625 line)

Horizontal (active video line durations)

ITU-R.470 (720 pixels PAL/NTSC)

WIDE (DOWN): Vertical (line numbers indicate where video starts)

line 22, field 1; line 21, field 2 (525 line)

line 23, field 1; line 335, field 2 (625 line)

Horizontal (active video line durations)

ITU-R/SMPTE (710 pixels NTSC, 702 pixels PAL)

SW 5 Pedestal (Composite outputs only)

ON (UP): 7.5 IRE pedestal for NTSC

OFF (DOWN): No pedestal for NTSC-J

NOTE: No effect with 625 input

SW 6 TEST

OFF (UP): Disables internal test signal

ON (DOWN): Selects internal 75% Colors Bars test signal