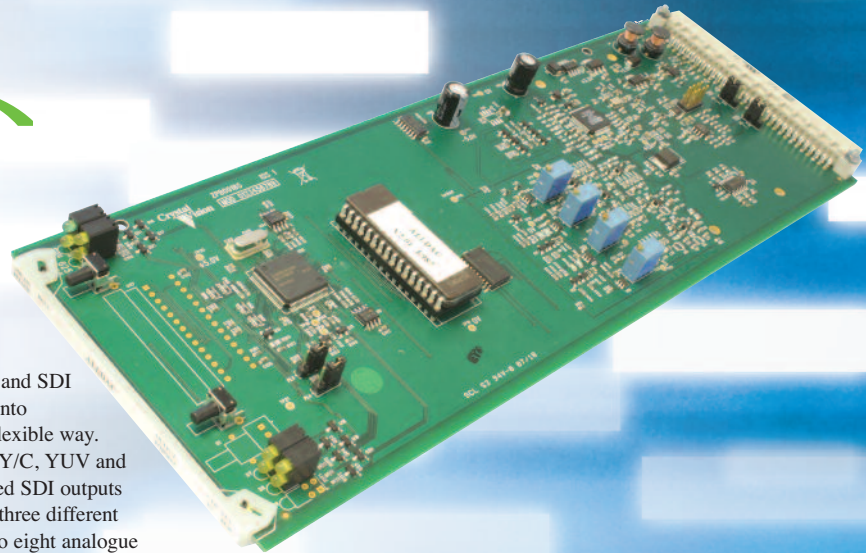


Crystal Vision



Encoding Converter and Distribution Amplifier



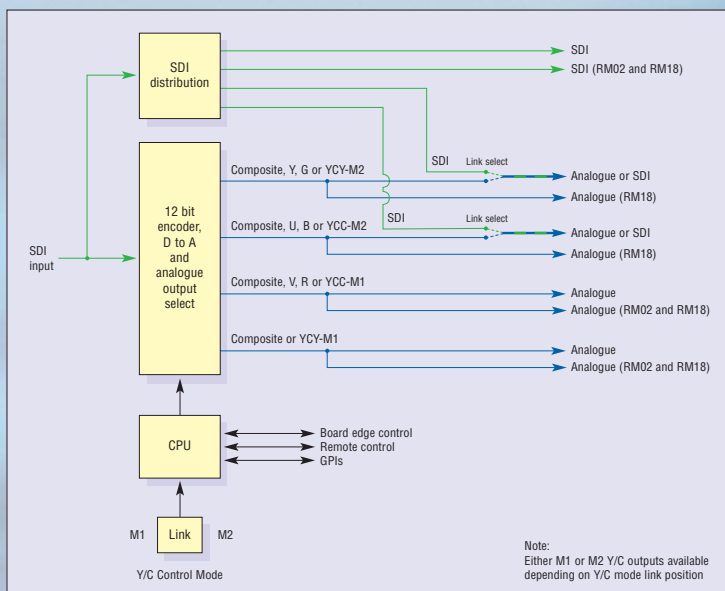
ALLDAC combines all the features you could possibly want for a digital to analogue converter in one affordable product.

Combining a 12 bit broadcast D to A converter and an analogue and SDI distribution amplifier, ALLDAC has been designed to convert SDI into combinations of analogue and digital and to do so in an extremely flexible way. The analogue outputs can be configured as a mixture of composite, Y/C, YUV and RGB by board edge or remote control, while the number of relocked SDI outputs is selected by adjusting on-board links. ALLDAC can be used with three different frame rear modules – the RM01, RM02 and RM18 – providing up to eight analogue and four relocked SDI outputs and allowing you to choose exactly what you need for your application. With ALLDAC what you get is entirely up to you, with eleven possible different output combinations available when using the RM18.

ALLDAC has high quality 12 bit D to As with four times oversampling, and offers Crystal Vision's best encoding performance yet, with enhanced analogue accuracy and frequency response. Data in the vertical blanking interval is always passed to the analogue composite output, while setup on the Y output can be selected in 525 line applications, allowing ALLDAC to output the US (NTSC-M) and Japanese (NTSC-J) standards. The ability to select NTSC Betacam chrominance levels for YUV outputs – giving 700mV for 75% colour bars instead of the standard 700mV for 100% bars – increases the range of systems with which it can be used.

Housed in the standard frames, the 100mm x 266mm module can be easily integrated with any other product from the Crystal Vision range, and saves you space by allowing 24 boards in 4U, 12 in 2U, six in 1U or two in a desk top box. Control is as flexible as ALLDAC – with options including an intuitive board edge interface, an active frame front panel, a remote control panel or the Statesman PC software.

It's the variety of outputs that makes ALLDAC ideal for so many different uses! The wide range of applications could include distributing SDI signals, monitoring in RGB or composite on plasmas or large displays, driving waveform monitors and vector scopes, high quality recording from an SDI source or analogue transmissions.



- 12 bit broadcast encoding converter and distribution amplifier
- Converts SDI into flexible combinations of analogue and SDI distribution
- Up to eight analogue outputs, configurable as mixtures of composite, Y/C, YUV or RGB
- Ideal for use as a DA, with up to four relocked SDI outputs
- Excellent encoding performance
- Ideal for all monitoring applications and for broadcast applications where you do not need to time the output sub-carrier to an external reference and a TBC is not required
- Space-saving: 100mm x 266mm module allows 12 ALLDAC in 2U (24 in 4U, six in 1U and two in desk top box)
- Flexible control, including PC software

SPECIFICATION

MECHANICAL

Standard Crystal Vision module 266mm x 100mm
Weight: 160g
Power consumption: 5 Watts

VIDEO INPUT

One SDI input
SDI 270Mbit to EBU 3267-E and SMPTE 259M
Cable equalisation >200m Belden 8281 or equivalent
Auto or manual 625/525 line selection

VIDEO OUTPUTS

Outputs can be configured as a mixture of composite, Y/C, YUV, RGB and relocked SDI distribution. The final number of outputs is dependent on the frame rear module fitted:
RM01: 1 SDI, 2 analogue, 2 selectable (SDI or analogue)
RM02: 2 SDI, 4 analogue, 2 selectable (SDI or analogue)
RM18: 2 SDI, 6 analogue, 2 selectable (SDI or analogue)
Board edge push button switch selects composite / Y/C / YUV / RGB. The number of SDI outputs is selected by on board links
ALLDAC is a plug in replacement for both DDAA132 and ENDAC on all rear modules, with signals on the same connector for composite, YUV and RGB. For Y/C outputs it is necessary to select M1 link position for compatibility with DDAA132 and M2 for compatibility with ENDAC
1 Volt with syncs
Switchable Betacam levels on YUV output
SDI 270Mbit to EBU 3267-E and SMPTE 259M

ANALOGUE PERFORMANCE

12 bit precision
Frequency response: +/-0.5dB 0 to 5.5 MHz
Gain error: <1%
Differential phase: <1.5°
Differential gain: <1.5%
Signal to Noise: <-60dB

DELAY THROUGH BOARD

3us

GPI OUTPUT LEVELS

Active: connect to ground, 220 ohm current limit resistors. Pulled up to +5V through 10 kohm

GPI OUTPUT

Input absent

LED INDICATION OF:

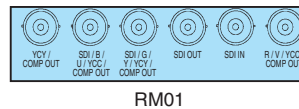
Power supplies on board
Betacam levels selected
Input standard
Output format

LOCAL CONTROL

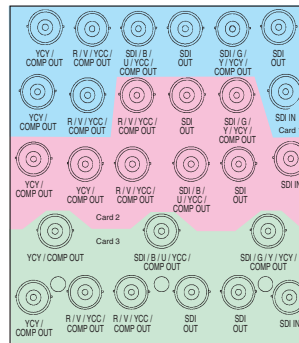
Board edge push button switch selects composite / Y/C / YUV / RGB on configurable outputs. On board links configure number of SDI outputs. Separate switch selects Betacam levels (YUV only)

REMOTE CONTROL

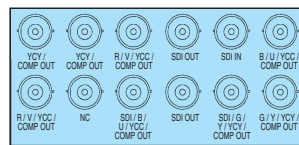
RS422/485
19200 baud, 8 bits, 1 stop no parity
Control from frame active front panel and remote panel
Statesman allows control from any PC on a network



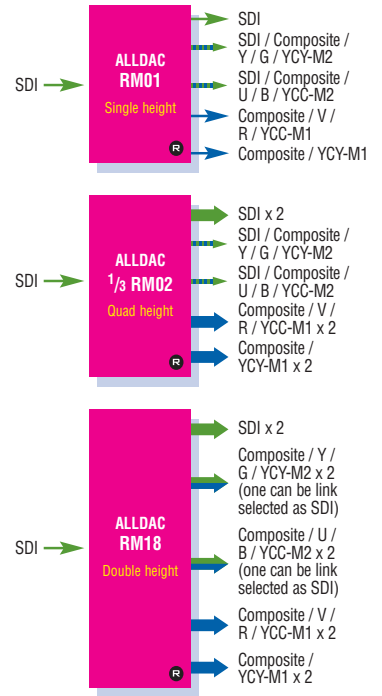
RM01



RM02



RM18



OUTPUT COMBINATIONS

| RM01 combinations | | | RM02 combinations | | | RM18 combinations | | |
|-------------------|---------------|-----|-------------------|---------------|---------|-------------------|---------------|---------|
| SDI | Composite x 4 | | SDI x 2 | Composite x 6 | | SDI x 2 | Composite x 8 | |
| SDI x 2 | Composite x 3 | | SDI x 3 | Composite x 5 | | SDI x 3 | Composite x 7 | |
| SDI x 3 | Composite x 2 | | SDI x 4 | Composite x 4 | | SDI x 4 | Composite x 6 | |
| SDI | Composite x 2 | Y/C | SDI x 2 | Composite x 4 | Y/C | SDI x 4 | Composite x 4 | Y/C |
| SDI x 2 | Composite | Y/C | SDI x 2 | Composite x 2 | Y/C x 2 | SDI x 2 | Composite x 4 | Y/C x 2 |
| SDI x 3 | | Y/C | SDI x 3 | Composite | Y/C x 2 | SDI x 3 | Composite x 3 | Y/C x 2 |
| SDI | Composite | YUV | SDI x 4 | | Y/C x 2 | SDI x 4 | Composite x 2 | Y/C x 2 |
| SDI | Composite | RGB | SDI x 2 | Composite x 2 | YUV | SDI x 4 | Composite x 2 | YUV |
| | | | SDI x 2 | Composite x 2 | RGB | SDI x 4 | Composite x 2 | RGB |
| | | | | | | SDI x 2 | Composite x 2 | YUV x 2 |
| | | | | | | SDI x 2 | Composite x 2 | RGB x 2 |

ORDERING INFORMATION

| | |
|-------------|--|
| ALLDAC | 12 bit encoding converter and distribution amplifier |
| Indigo 4 | 4U frame with passive front panel for up to 24 Crystal Vision modules |
| Indigo 4SE | 4U frame with passive front panel fitted with Statesman CPU for up to 24 Crystal Vision modules |
| Indigo 2 | 2U frame with passive front panel for up to 12 Crystal Vision modules |
| Indigo 2AE | 2U frame with active front panel for up to 12 Crystal Vision modules |
| Indigo 2SE | 2U frame with passive front panel fitted with Statesman CPU for up to 12 Crystal Vision modules |
| Indigo 1 | 1U frame with passive front panel for up to six Crystal Vision modules. Power supply redundancy available with Indigo 1-DP |
| Indigo 1AE | 1U frame with active front panel for up to six Crystal Vision modules. Power supply redundancy available with Indigo 1AE-DP |
| Indigo 1SE | 1U frame with passive front panel fitted with Statesman CPU for up to six Crystal Vision modules. Power supply redundancy available with Indigo 1SE-DP |
| Indigo DT | Desk top box with passive front panel for up to two Crystal Vision modules |
| Indigo DTAE | Desk top box with active front panel for up to two Crystal Vision modules |
| Indigo DTSE | Desk top box with passive front panel fitted with Statesman CPU for up to two Crystal Vision modules |
| RM01 | Single slot frame rear module. Allows maximum number of ALLDAC in frame (24 in 4U, 12 in 2U, six in 1U, two in desk top box). Gives access to one SDI output, two analogue outputs and two outputs selectable between SDI and analogue |
| RM02 | Four slot frame rear module. One rear module used for three ALLDAC, allowing 18 ALLDAC in 4U and nine in 2U. Gives access to two SDI outputs, four analogue outputs and two outputs selectable between SDI and analogue |
| RM18 | Two slot frame rear module. Allows 12 ALLDAC in 4U, six in 2U, three in 1U and one in desk top box. Gives access to two SDI outputs, six analogue outputs and two outputs selectable between SDI and analogue |
| REMIND | 19" remote control panel |
| REMIND-E | 19" Ethernet remote control panel |
| Statesman | PC Control System |



Crystal Vision Ltd.

Lion Technology Park, Station Road East, Whittlesford, Cambridge CB22 4WL, England.
Tel: +44 (0)1223 497049 Fax: +44 (0)1223 497059
E-mail: sales@crystalvision.tv www.crystalvision.tv