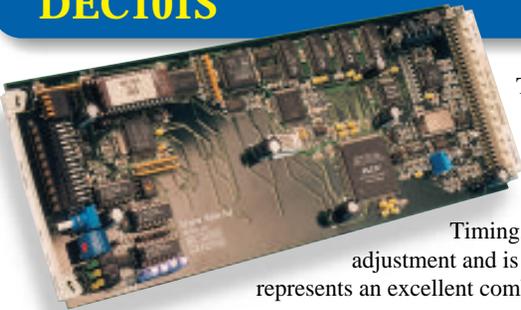


Crystal Vision

DECODERS

Crystal Vision offers a range of composite to SDI decoders to suit all broadcast and non-broadcast applications. With the ability to decode a range of standards - some offering Y/C input - most have remote control capabilities and framestore buffers and can accept non-stable signals. The four decoders form an integral part of the company's digital interface system.

DEC101S



The DEC101S is an 8 bit composite PAL/NTSC or Y/C to SDI decoder able to cope with any non-broadcast video source and particularly suitable for VHS.

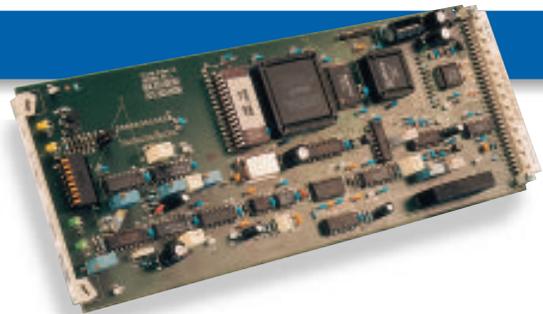
It offers a high quality, low-cost and extremely straightforward way of converting VHS to SDI and is particularly ideal for the post production market.

It includes a frame synchroniser and will happily accept jittery or damaged signals.

Timing, gains and levels are all adjustable. It has an on-board alphanumeric display for easy adjustment and is controllable from board edge or from local or remote panels. The DEC101S represents an excellent combination of features and price.

DEC102

The 10 bit DEC102 is ideal for the low-cost conversion of non-broadcast feeds to SDI. The 3 line adaptive comb decoder converts stable composite PAL/NTSC signals to SDI, and offers broadcast performance in NTSC. For broadcast use in PAL we suggest the DEC103S.



DEC103S



The DEC103S is Crystal Vision's flagship decoder. Aimed at broadcasters, OB facilities and high-end post production, this 10 bit decoder with frame synchroniser is ideal for converting *any* composite or Y/C signals to SDI, and offers very high quality decoding for a fraction of the price of comparable products.

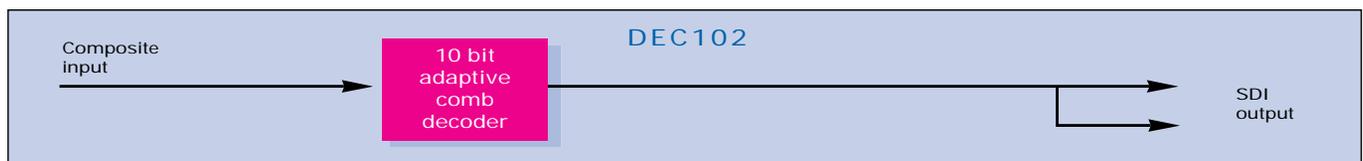
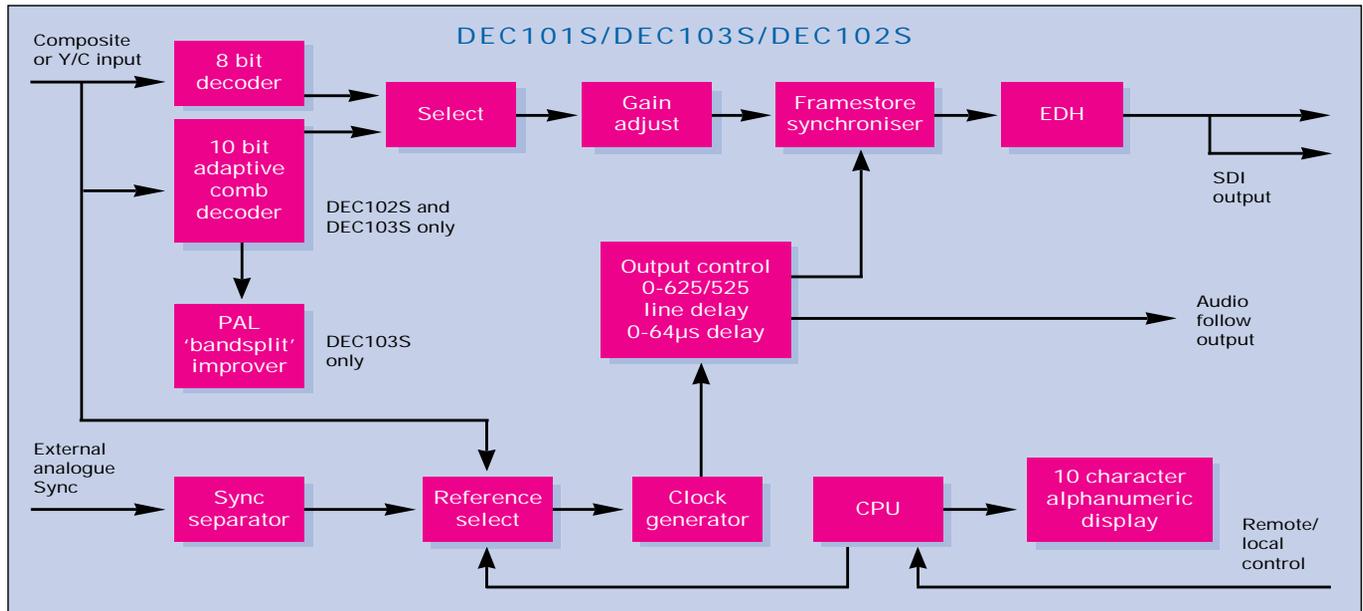
It can accept jittery or damaged signals and will automatically switch to a very tolerant 8 bit decoder when a non-stable signal is received. As well as the 3 line adaptive comb decoder, the DEC103S is fitted with Crystal Vision's own 'bandsplit' decoder which will give excellent decoding without the artefacts of a comb. This is recommended when used with broadcast PAL material.

Timing, gains and levels are all adjustable. Audio follow pulse allows an audio delay to track the video delay through the

DEC103S. It has an on-board alphanumeric display for easy adjustment and is controllable from board edge or from local or remote panels. (10 bit Y/C input is PAL only - for NTSC use the DEC102S.)

DEC102S

The DEC102S replaces the DEC103S in NTSC applications. With Y/C input in both PAL and NTSC standards, it offers broadcast quality decoding of NTSC signals and near-broadcast quality of PAL signals. (The DEC103S gives broadcast performance in both PAL and NTSC but has no 10 bit Y/C input in NTSC.)



S P E C I F I C A T I O N

MECHANICAL

All are standard Crystal Vision modules 266mm x 100mm
Weight: 200g

DEC102

Power consumption: 6.25 watts

ANALOGUE INPUT

Composite video input, 1 volt with syncs
625 line PAL or 525 line NTSC
+/- 2µs adjustment of picture position from syncs

VIDEO SDI OUTPUT

2 outputs SDI 270Mbit to EBU 3267-E & SMPTE 259M

ANALOGUE PERFORMANCE

Frequency response with comb active: +/- 0.3dB to 5.5MHz
Gain Error: <1%
Sampling: 10 bit precision 13.5Mb/s
Blanking: To analogue PAL/NTSC specifications, with selectable VBI blanking PAL lines 7 to 22 and 319 to 335. NTSC lines 10 to 20 and 273 to 282

LED INDICATION OF:

Power supplies on board, analogue input present, PAL/NTSC standard

LOCAL CONTROL

Piano Switch control of comb on/off, setup on/off (NTSC only), VBI blanked or passed, cal or adjustable horizontal position (by board edge pot)
Link selection of auto or manual PAL/NTSC standard selection

DEC102S

Power consumption: 8 watts

ANALOGUE INPUT

Composite or Y/C video input, 1 volt with syncs
625 line PAL or 525 line NTSC

VIDEO SDI OUTPUT

2 outputs SDI 270Mbit to EBU 3267-E & SMPTE 259M with EDH

ANALOGUE REFERENCE

Analogue Black and Burst, mixed syncs or video
Amplitude of syncs 150mV to 4V
Link on PCB selects 75ohm termination or high impedance with loop through (via PCB)

AUDIO FOLLOW OUTPUT

TTL output
Pulse length shows delay through store
Can provide control signal for audio delay systems

ANALOGUE PERFORMANCE

Frequency response with comb active: +/- 0.3dB to 5.5MHz
Gain Error: <1%
Differential Phase and Gain in 10 bit mode: <1.5°, <1.5%
Sampling: 10 bit precision 13.5Mb/s. 8 bit mode available for VHS style jittery input
Blanking: To analogue PAL/NTSC specifications, with selectable VBI blanking PAL lines 7 to 22 and 319 to 335. NTSC lines 10 to 20 and 273 to 282

LED INDICATION OF:

Power supplies on board, analogue input present, analogue reference absent, PAL/NTSC standard, 10 bit decoder in operation

LOCAL CONTROL

Piano Switch controls automatic/manual selection of 10 or 8 bit decoding (automatic by amount of jitter on input, VHS needs 8 bit decoder)
Automatic/manual selection of PAL/NTSC standard
Composite/Y/C input and VBI blanked or unblanked
Variables and options set by shaft encoder with values and

prompts on 10 character alphanumeric display on board edge. These variables may also be set remotely
Framestore output timing (0 to 2 fields set as vertical and horizontal offset), gain settings and NTSC setup level

REMOTE CONTROL

RS422/485 and RS232
19200 baud 8 bits, 1 stop no parity
2 serial ports - 1 connected to frame front panel, 1 is linked to rear of frame
Front panel control from frame active panel and remote panel

DEC103S

As DEC102S with the addition of 'bandsplit' decoder option. This is an additional 10 bit decoding system for PAL composite inputs. With some types of real pictures this produces improvements in picture sharpness, and reduction of comb artefacts. The DEC103S is recommended for broadcast use in PAL systems. The DEC103S loses the 10 bit Y/C input in NTSC use, and so the DEC102S is recommended in NTSC systems. When both standards are used, the DEC103S can be used for improved PAL decoding at the expense of NTSC Y/C input, or the DEC102S can be used if 10 bit NTSC Y/C input is required.

DEC101S

This is a reduced cost DEC103S, with only the 8 bit decoder. It converts both composite or Y/C input, but uses the 8 bit decoder for stable as well as unstable sources. This is an ideal decoder to use with VHS or other non-broadcast composite or Y/C sources. All inputs, features and operation modes are the same as DEC102S but with reduced analogue performance.
Power consumption: 6.25 watts

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ORDERING INFORMATION

DEC101S	8 bit PAL/NTSC or Y/C to SDI decoder with TBC/framestore - ideal for VHS source
DEC102	10 bit PAL/NTSC to SDI decoder with 10 bit adaptive comb
DEC102S	10 bit PAL/NTSC or Y/C to SDI adaptive comb decoder with TBC/framestore
DEC103S	10 bit PAL/NTSC or Y/C to SDI adaptive comb decoder with TBC/framestore and additional 'bandsplit' decoding in PAL
FRxxx	Any Crystal Vision interface frame (some require rear modules)
FP2-LF	Active control panel for 2U frame
FP1-L	Active front panel for 1U frame. Allows control of all modules in frame
FP2-LF	Active front panel for 2U frame. Allows control of all modules in frame
REM1U	1U remote control panel. Can be used instead of active front panel on frames. 65mm deep control panel can operate up to 32 modules
REM1US	Narrow 1U remote panel