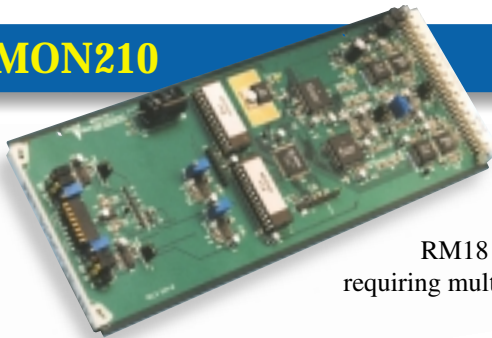


Crystal Vision

MONITORING ENCODERS

Crystal Vision offers a choice of four monitoring encoders to allow customers to select the exact combination of outputs and other features they require. Providing non-broadcast conversion of SDI sources to composite PAL/NTSC or Y/C, the encoders are ideal for driving picture monitors, waveform monitors and vector scopes and for distributing SDI signals. Most provide extra reclocked feeds of the serial digital input, while all have 8 bit inputs with a 9 bit digital to analogue converter to maintain the composite signal resolution. All products have the flexibility of selectable blanking and a basic analogue test pattern which is useful for correct installation.

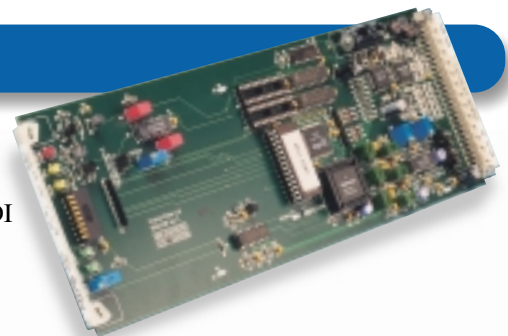
MON210



The MON210 is a dual SDI to PAL/NTSC or Y/C monitoring encoder which provides two inputs and a maximum of five composite (or two Y/C pairs and one composite) outputs for each channel when using the RM18 frame rear module. It is the choice for content monitoring applications requiring multiple analogue outputs and no SDI loop-throughs.

DDAA132

The DDAA132 is a single SDI to PAL/NTSC or Y/C monitoring encoder with distribution amplifier. It has one input and a maximum of four analogue outputs (which can be any mixture of PAL/NTSC and Y/C pairs) and four reclocked SDI loop-throughs when using the RM02 and RM18 frame rear modules. The DDAA132 is ideal when there is a requirement to monitor and distribute a feed using the same device, such as on the output of a matrix.



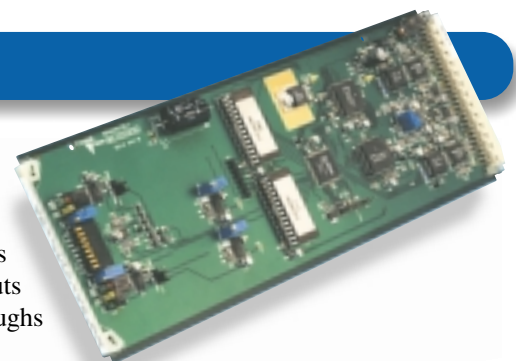
DDAA132P

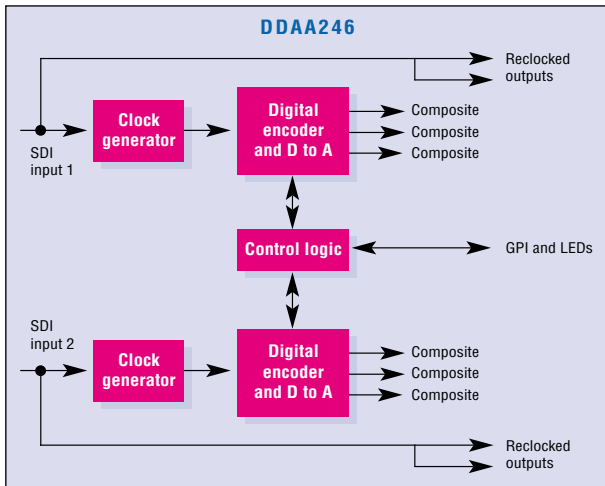
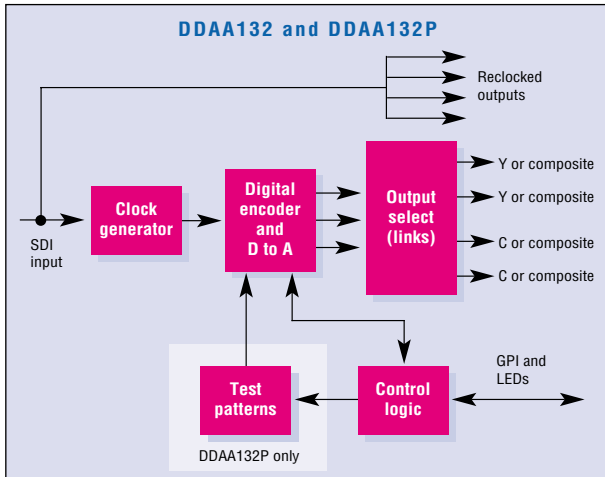
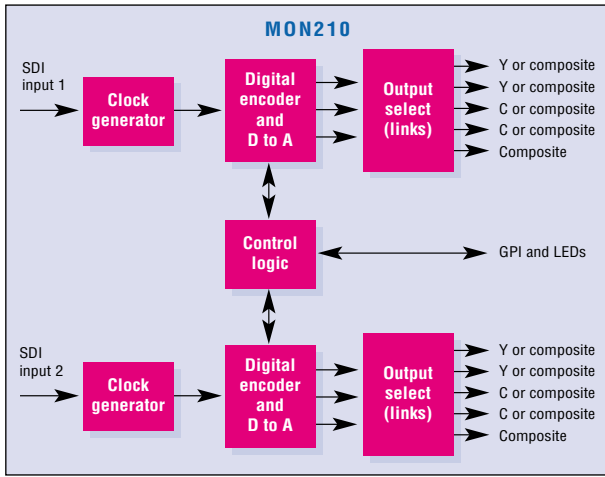


The DDAA132P is identical to the DDAA132 but in addition has four very useful test patterns on the analogue outputs which can be selected by GPI remote control. Patterns include Pluge, which is used to line up picture monitors, and Colour Bars.

DDAA246

The DDAA246 is a dual SDI to PAL/NTSC monitoring encoder with distribution amplifier. It has two inputs and a maximum of three composite outputs and two reclocked SDI loop-throughs per channel when using the RM18 frame rear module. Giving up to 24 channels in 2U (when using the RM01) it is the product to choose for applications which require more inputs and less outputs in a frame. 12 boards in a 2U frame can drive 24 monitors and send 24 loop-throughs elsewhere - making it ideal, for example, for an OB truck.





SPECIFICATION

ALL MODULES

MECHANICAL

Standard Crystal Vision modules 266mm x 100mm
Weight: 170g
Power consumption: 5 Watts for DDAA132 and DDAA132P; 7 Watts for MON210; 8 Watts for DDAA246

VIDEO SDI INPUTS

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

GPI INPUT LEVELS

Active: connect to ground
Inactive: high impedance, or 3 to 35 volts
Input current <500uA

GPI OUTPUT LEVELS

TTL active low with series 330ohm. (Can drive 5V LED)

TEST PATTERNS

Single analogue test pattern of modulated ramp available on all models, selectable at board edge. (Extra patterns on DDAA132P)

ANALOGUE PERFORMANCE

Frequency response: +/-0.3dB 0 to 5MHz
Noise: <-54dB weighted luminance or chrominance
Blanking: To PAL/NTSC specification horizontally and vertically with selectable VBI blanking. PAL lines 7 to 22 and 320 to 335 and NTSC lines 10 to 20 and 273 to 282

BOARD EDGE CONTROL OF:

625 or 525 standard
VBI blanked or unblanked
Test patterns or serial input
Setup on/off and chroma bandwidth select (only effective in NTSC)

GPI INPUTS

625 or 525 standard (if manual select)

VBI blanked or unblanked

Setup on/off (NTSC only)

LED INDICATION OF:

Power supplies on board

SDI input present

SDI input lock error

625/525 input standard

DDAA132P

Has all the features and specifications of the DDAA132 with the addition of:

TEST PATTERNS ON ANALOGUE OUTPUT

These can be enabled and selected from board edge or GPI:

- Plug
- Vertical Edge Markers
- Luma/Chroma Ramp
- EBU Colour Bars

DDAA246

INPUTS

Two SDI inputs

SDI OUTPUTS

Maximum of two reclocked SDI loop-through outputs per channel

Will drive >300m Belden 8281 or equivalent

One loop-through per channel with rear module RM01

and two per channel with RM02 and RM18

ANALOGUE OUTPUTS

Maximum of three composite analogue outputs per channel

One output per channel with rear module RM01, one output of the first channel and two of the second with RM02 and three outputs per channel with RM18

ANALOGUE PERFORMANCE

Frequency response: +/-0.3dB 0 to 5MHz

Noise: <-54dB weighted luminance or chrominance

Blanking: To PAL/NTSC specification horizontally and vertically with selectable VBI blanking. PAL lines 7 to 22

and 320 to 335 and NTSC lines 10 to 20 and 273 to 282

BOARD EDGE CONTROL OF:

625 or 525 standard for Channels A and B

VBI blanked or unblanked for Channels A and B

Test patterns or serial input for Channels A and B

Setup on/off and chroma bandwidth select (only effective in NTSC)

GPI INPUTS

625 or 525 standard (if manual select) for Channels A and B

VBI blanked or unblanked for Channels A and B

Setup on/off and chroma bandwidth select (only effective in NTSC)

GPI OUTPUTS

SDI present for Channels A and B

LED INDICATION OF:

Power supplies on board

SDI input present for Channels A and B

SDI input lock error for Channels A and B

625/525 input standard for Channels A and B

MON210

INPUTS

Two SDI inputs

ANALOGUE OUTPUTS

Maximum of five analogue outputs of each SDI input.

Four can be either PAL/NTSC or Y/C pairs; the fifth is PAL/NTSC only

The RM01 frame rear module gives two outputs of each channel, the RM02 four outputs of the first and three of the second, and the RM18 the maximum five of each

ANALOGUE PERFORMANCE

Frequency response: +/-0.3dB 0 to 5MHz

Noise: <-54dB weighted luminance or chrominance

Blanking: To PAL/NTSC specification horizontally and vertically with selectable VBI blanking. PAL lines 7 to 22

and 320 to 335 and NTSC lines 10 to 20 and 273 to 282

BOARD EDGE CONTROL OF:

625 or 525 standard for Channels A and B

VBI blanked or unblanked for Channels A and B

Test patterns or serial input for Channels A and B

Setup on/off and chroma bandwidth select (only effective in NTSC)

GPI INPUTS

625 or 525 standard (if manual select) for Channels A and B

VBI blanked or unblanked for Channels A and B

Setup on/off and chroma bandwidth select (only effective in NTSC)

GPI OUTPUTS

SDI present for Channels A and B

LED INDICATION OF:

Power supplies on board

SDI input present for Channels A and B

SDI input lock error for Channels A and B

625/525 input standard for Channels A and B

DDAA132

INPUTS

Single SDI input

SDI OUTPUTS

Maximum of four reclocked SDI loop-through outputs

Will drive >300m Belden 8281 or equivalent

Three loop-throughs with rear module RM01 and four with RM02 and RM18

ANALOGUE OUTPUTS

Maximum of four analogue outputs. Each pair can be either PAL/NTSC or Y/C

Two outputs with rear module RM01 and four with RM02 and RM18

ORDERING INFORMATION

MON210	Dual channel SDI to composite or Y/C monitoring encoder
DDAA132	SDI to composite PAL/NTSC or Y/C monitoring encoder and DA
DDAA132P	SDI to composite PAL/NTSC or Y/C monitoring encoder and DA with four test patterns
DDAA246	Dual channel SDI to composite PAL/NTSC monitoring encoder and DA
ENC116	SDI to composite PAL/NTSC or Y/C broadcast encoder (see separate leaflet)
FR2AV	2U frame for up to 12 Crystal Vision modules
FR1AV	1U frame for up to six Crystal Vision modules
DTB-AV	Desk top box for up to two Crystal Vision modules
RM01	Single slot frame rear module. Allows maximum number of monitoring encoders in frame (12 in 2U, six in 1U, two in desk top box). Limited outputs accessible on MON210 (two analogue outputs per channel), DDAA132/P (two analogue outputs and three SDI loop-throughs) and DDAA246 (one analogue output and one SDI loop per channel)
RM02	Four slot frame rear module. One rear module used for three monitoring encoders, allowing nine monitoring encoders in 2U (fits in 2U frame only). Maximum outputs accessible on DDAA132/P (four analogue outputs and four SDI loops) only. Limited outputs accessible on MON210 (four analogue outputs of the first channel and three of the second) and DDAA246 (one analogue output and two SDI loops of the first channel and two outputs and two loops of the second)
RM18	Two slot frame rear module. Allows six monitoring encoders in 2U, three in 1U and one in desk top box. Maximum outputs accessible on MON210 (five analogue outputs per channel), DDAA132/P (four analogue outputs and four SDI loops) and DDAA246 (three analogue outputs and two SDI loops per channel)

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