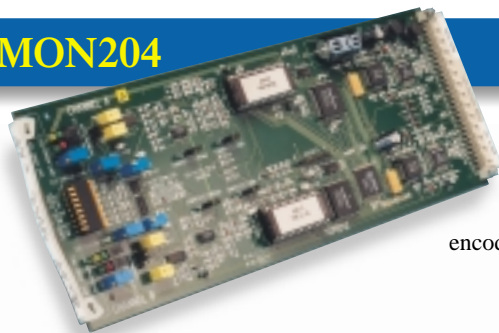


# Crystal Vision

## MONITORING ENCODERS

Crystal Vision offers a choice of four monitoring encoders to allow customers to have 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 encoders will pass through sub-black and super-white signals and have 9 bit digital to analogue converters 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.

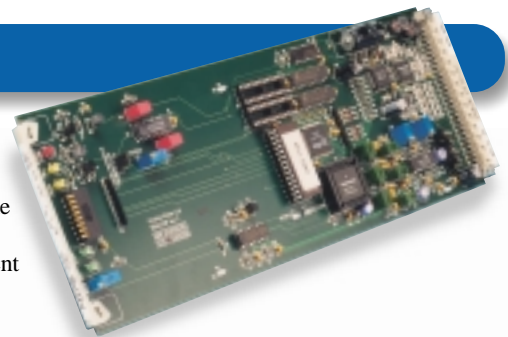
### MON204



The MON204 is a dual SDI to PAL/NTSC or Y/C monitoring encoder which provides two composite or a single Y/C output for each input. The high-packing density gives 24 encoders in 2U which makes it the obvious encoding choice when SDI loop-throughs are not required.

### DDAA132

The DDAA132 is an 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) and four reclocked SDI outputs when using a RM02 frame rear module. This will allow 9 boards in 2U. With 12 modules in 2U, it gives two analogue outputs and three reclocked SDI outputs. 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.



### DDAA172

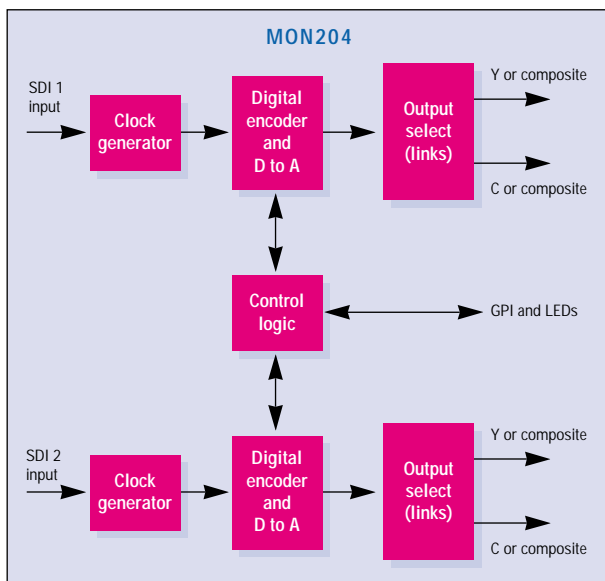
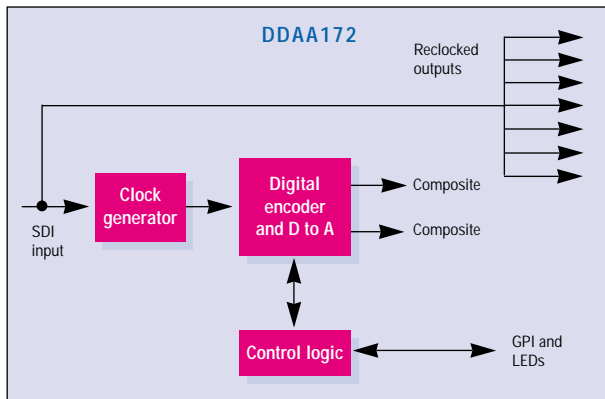
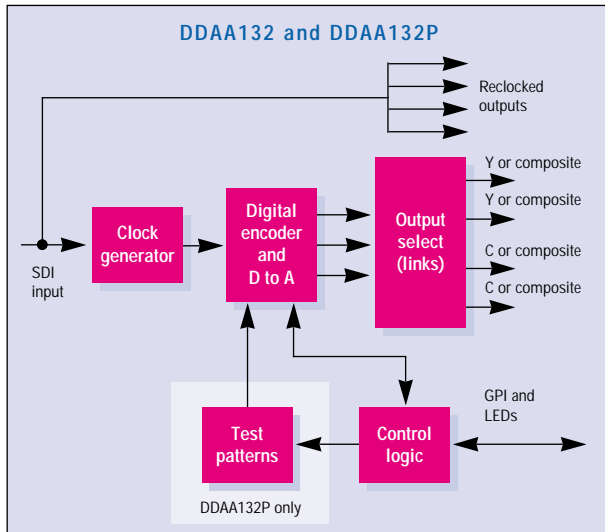


The DDAA172 is an SDI to PAL/NTSC monitoring encoder with distribution amplifier which is ideal where there is a need for many SDI outputs and no requirement for Y/C outputs. It has one input and a maximum of two composite outputs and seven reclocked SDI outputs using a RM02 frame rear module. Using a standard RM01 frame rear module which allows 12 boards in 2U, the DDAA172 offers one composite and four reclocked SDI outputs.

### DDAA132P

The DDAA132P offers the most features of the four. It 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.





## SPECIFICATION

### ALL MODULES

#### MECHANICAL

Standard Crystal Vision module 266mm x 100mm  
Weight: 200g  
Power consumption: 5 watts for DDAA132, DDAA132P and DDAA172; 6.25 watts for MON204

#### VIDEO SDI INPUT

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)

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

### MON204

2 x SDI inputs

#### ANALOGUE OUTPUTS

There are 2 analogue outputs of each SDI input. Each pair can be either PAL/NTSC or Y/C  
Any frame and rear module combination that has 6 video BNCs will enable all outputs

#### ANALOGUE PERFORMANCE

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

#### GPI INPUTS

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

2 x VBI blanked or unblanked for Channels A and B  
Above controls also available at board edge, as well as setup on/off and chroma bandwidth select. Both only effective in NTSC

#### GPI OUTPUTS

2 x SDI present for Channels A and B

#### LED INDICATION OF:

Power supplies on board  
2 x SDI input present for Channels A and B  
2 x SDI input lock error for Channels A and B  
2 x 625/525 input standard for Channels A and B

### DDAA132

Single SDI input

#### OUTPUTS

Maximum of 4 reclocked SDI loop-through outputs  
Will drive >200m Belden 8281 or equivalent  
3 outputs with rear module RM01 and 4 with RM02

#### ANALOGUE OUTPUTS

There are a maximum of 4 analogue outputs. Each pair can be either PAL/NTSC or Y/C  
2 outputs with rear module RM01 and 4 with RM02

### ANALOGUE PERFORMANCE

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

#### GPI INPUTS

625 or 525 standard (if manual select)  
VBI blanked or unblanked  
Setup on/off (NTSC only)  
Above controls also available at board edge, as well as chroma bandwidth select (only effective in NTSC)

#### 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

### DDAA172

Single SDI input

#### OUTPUTS

Maximum of 7 reclocked SDI loop-through outputs  
Will drive >200m Belden 8281 or equivalent  
4 outputs with rear module RM01 and 7 with RM02

#### ANALOGUE OUTPUTS

There are a maximum of 2 composite analogue outputs

1 output with rear module RM01 and 2 with RM02

#### ANALOGUE PERFORMANCE

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

#### GPI INPUTS

625 or 525 standard (if manual select)  
VBI blanked or unblanked  
Setup on/off (NTSC only)  
Chroma bandwidth (NTSC only)

Test pattern select (modulated ramp)  
Above controls also available at board edge

#### LED INDICATION OF:

Power supplies on board  
SDI input present  
SDI input lock error  
625/525 input standard for Channels A and B

## ORDERING INFORMATION

MON204	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 pluge generator
DDAA172	SDI to composite PAL/NTSC monitoring encoder and DA
ENC116	SDI to composite PAL/NTSC or Y/C broadcast encoder (see separate sheet)
FRxxx	Any Crystal Vision interface frame (some require rear modules)
RM01	Single slot rear module for FR2AV frame. Not all outputs available on some boards
RM02	Rear module for FR2AV frame. Uses 4 slots in frame for 3 boards. All outputs available

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