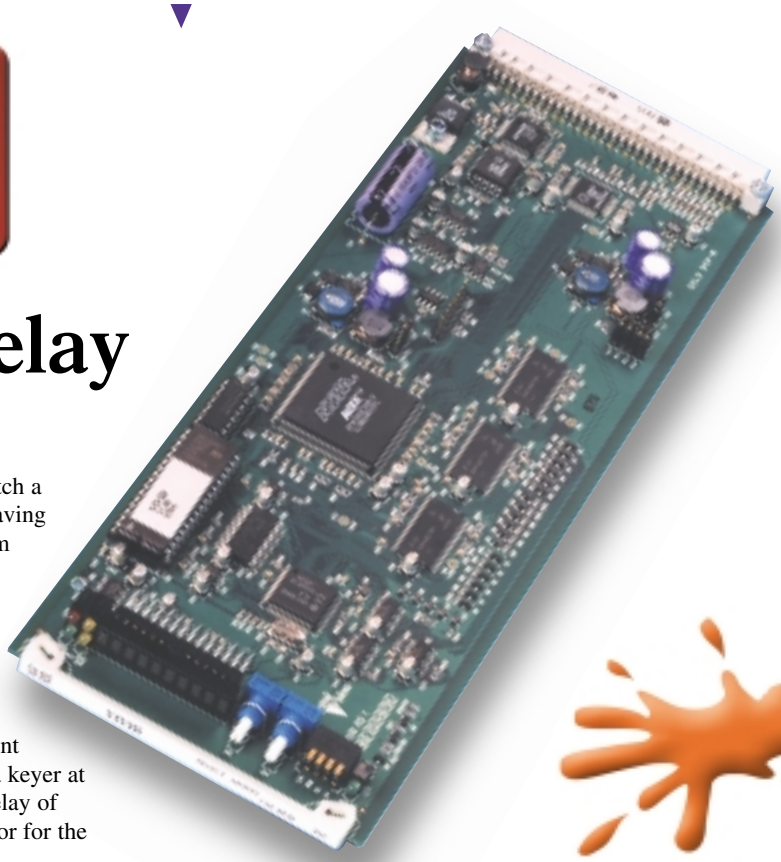
Crystal Vision

ViViD

Variable Video Delay



ViViD is ideal for broadcasters who need to match a fixed delay in another signal path: this space-saving variable video delay line is a 100mm x 266mm module which fits in Crystal Vision's standard frames and offers up to two seconds of delay.

ViViD has been designed to match system delays elsewhere in the equipment chain. A classic example is in virtual studios, where the computer system can take 15 or 20 frames to generate the background graphics. ViViD can offset this by delaying the camera by the same amount so the video feed and virtual set graphics both reach the chroma keyer at the same time. ViViD can also be used to compensate for the delay of MPEG encoders or decoders in order to co-time transmissions, or for the delay caused by a satellite link.

ViViD is available in two versions. ViViD114 offers the shorter delay with a maximum of 0.96 seconds (24 frames) in 625 line and 0.93 seconds (28 frames) in 525 line. Where longer delays are required, ViViD124 gives up to 2.08 seconds (52 frames) in 625 line and 2.0 seconds (60 frames) in 525 line. With a minimum setting of approximately five microseconds, both versions are adjustable in steps of six pixels, lines, fields or frames, making it very easy to select the exact delay you require.

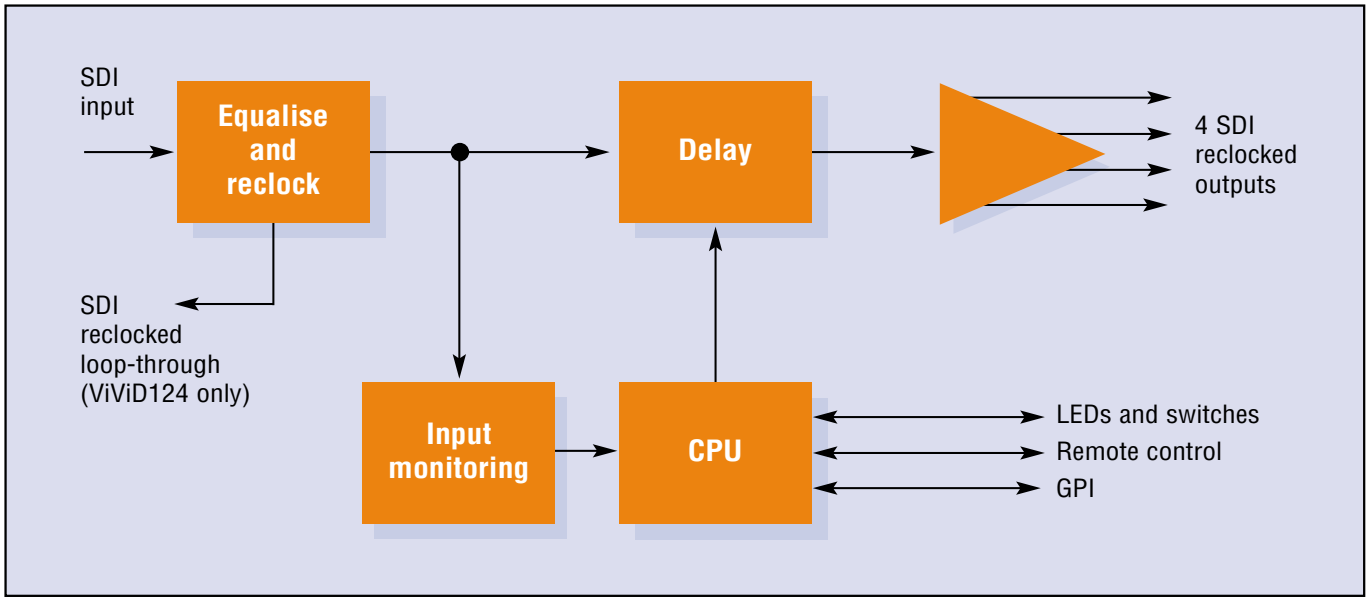
ViViD delays not just the active picture but the entire video stream, with embedded audio and ancillary data staying with the associated video.

Additional features offered by ViViD124 include syncs reconstruction and a choice of what to do on loss of input: repeat the last known good frame for a user-selectable time and then output black or blue, or immediately switch to black or blue. GPI inputs can force black/blue on loss of input or syncs reconstruction bypass, while there is GPI output indication of serial input fail and the video standard.

ViViD fits in Crystal Vision's three standard frames (2U, 1U and desk top box) allowing it to be easily integrated with any products in the range - especially the Safire digital chroma keyer. ViViD is used with the single slot RM01 frame rear module to obtain the maximum four reclocked outputs and additionally - in ViViD124 - an SDI input loop-through. The flexible control options include board edge, an active front panel on the frame or a remote control panel.

Those needing to delay AES/EBU audio should consider Crystal Vision's DADA208D digital audio distribution amplifier and delay line which offers a maximum delay of 51 fields (625 line) or 61 fields (525 line).

- **SDI variable video delay line**
- **Space-saving: 100mm x 266mm module allows 12 delay lines in 2U (six in 1U, two in desk top box)**
- **Use to match system delays elsewhere eg. virtual studios, MPEG encoders/decoders, satellite links**
- **Two versions: ViViD114 for shorter delays and ViViD124 for longer delays**
- **ViViD114: maximum delay of 0.96 secs/24 frames (625 line) and 0.93 secs/28 frames (525 line)**
- **ViViD124: maximum delay of 2.08 secs/52 frames (625 line) and 2.0 secs/60 frames (525 line)**
- **Delay adjustable in steps of six pixels, lines, fields or frames**
- **Passes entire video stream**
- **Four reclocked outputs, with an input loop-through in ViViD124**
- **Flexible control**



SPECIFICATION

BOTH MODULES

MECHANICAL
Standard Crystal Vision modules 266mm x 100mm
Weight: 190g
Power consumption: 5 Watts

SDI INPUT
SDI 270Mbit to EBU 3267-E and SMPTE 259M
Cable equalisation >250m Belden 8281 or equivalent

LED INDICATION OF:
Power supplies on board
SDI input present
SDI input lock error
525 line or 625 line input
Menu

REMOTE CONTROL
RS422/485
19200 baud, 8 bits, 1 stop, no parity

GPI CONTROL
Open-collector, active low with series 330ohm and pull-up to 5V (can drive LED)
Replace series resistor with zero ohm link for bulbs up to 36V

DELAY
Adjustable in steps of 6 pixels, lines, fields or frames
Minimum delay: 5µs

ViViD114

SDI OUTPUTS
Four reclocked delayed outputs with RM01 frame rear module
Each will drive >250m Belden 8281 or equivalent

DELAY
Maximum delay: 24 frames (625 line) or 28 frames (525 line)

ViViD124

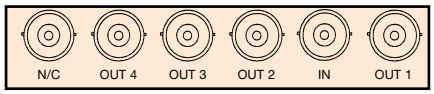
SDI OUTPUTS
Four reclocked delayed outputs and one reclocked input loop-through with RM01 frame rear module
Each output will drive >250m Belden 8281 or equivalent

GPI INPUTS
Force syncs bypass mode, force black on loss of input, force blue on loss of input

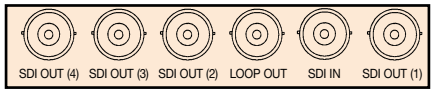
GPI OUTPUTS
Indication of input absent, 625 line input, 525 line input

DELAY
Maximum delay: 52 frames (625 line) or 60 frames (525 line)

FEATURES
Selectable output on loss of input: repeat last good frame (with user-defined timed switch to black screen), black screen or blue screen
Input syncs reconstruction



RM01 rear module - connections for ViViD114



RM01 rear module - connections for ViViD124

ORDERING INFORMATION

ViViD114	SDI variable video delay line with maximum delay of 0.96 seconds (625 line) and 0.93 seconds (525 line)
ViViD124	SDI variable video delay line with maximum delay of 2.08 seconds (625 line) and 2.0 seconds (525 line)
DADA208D	Digital audio distribution amplifier with selectable delay (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 ViViDs in frame (12 in 2U, six in 1U, two in desk top box). Gives access to all four outputs on ViViD114 and all four outputs with one loop-through on ViViD124
FP2-LF	Active front control panel for 2U frame
FP1-LAV	Active front control panel for 1U frame
FP1-SAV	Active front control panel for desk top box
REM1U	19" remote control panel
REM1US	Narrow 1U remote control panel

Crystal Vision Ltd.
Lion Technology Park
Station Road East
Whittlesford, Cambridge
CB2 4NL, England
Tel: +44 (0)1223 497049
Fax: +44 (0)1223 497059
E-mail: sales@crystalvision.tv
www.crystalvision.tv

