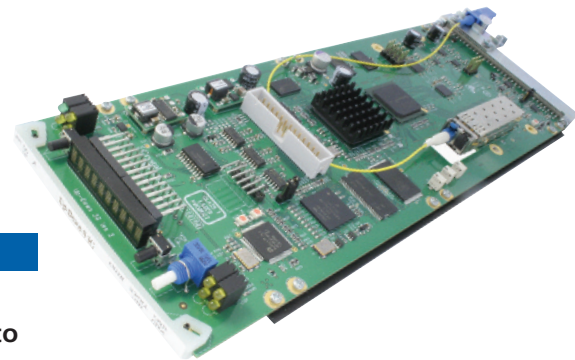


Crystal Vision

Up-Down-S 3G range

Four synchronising up/down/cross converters



PREVIEW INFORMATION

Synchronising up/down/cross converter available in four versions for the conversion of 3Gb/s, HD and SD sources, which includes special features to allow studios to easily operate in HD and SD simultaneously – and with two downstream synchronisers keeping the output valid at all times and giving you timed signals in two desired formats.

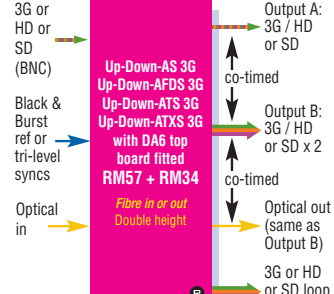
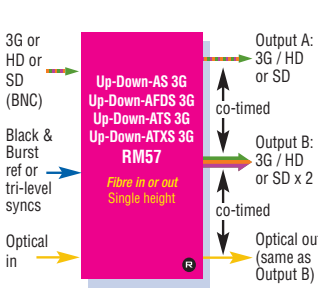
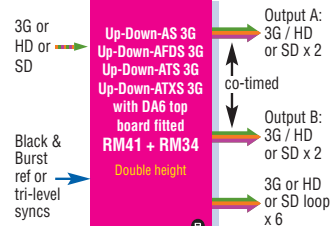
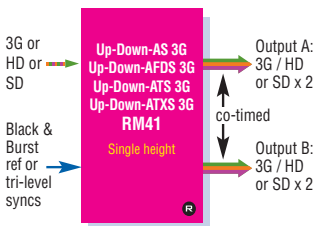
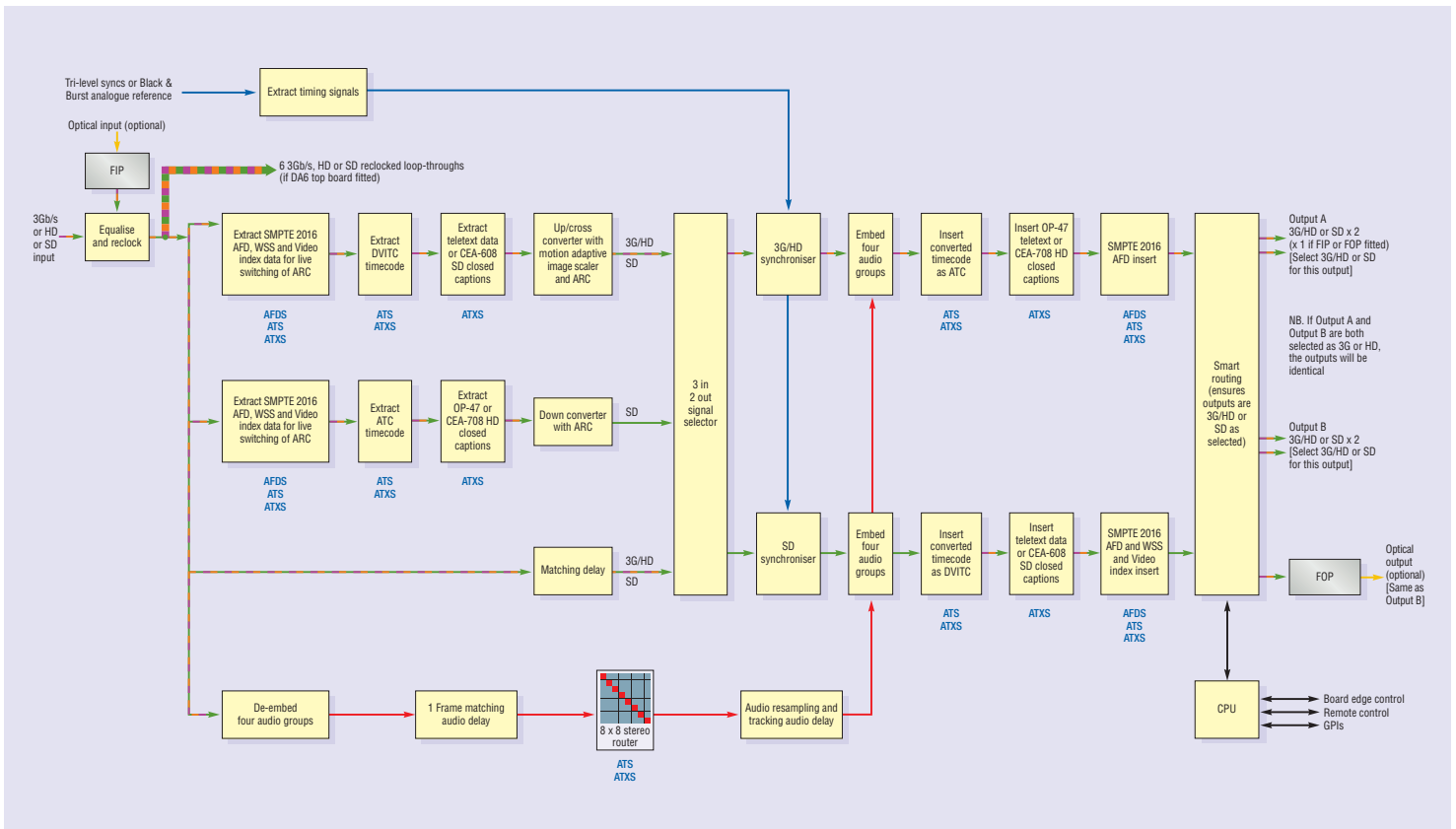
MAIN FEATURES

Which version do you need?	AFD insertion and reading	Audio routing in stereo pairs	Timecode conversion between ATC and DVITC	Teletext and subtitles data handling (OP-47)	Closed captions transport (CEA-608 and CEA-708)
Up-Down-AS 3G					
Up-Down-AFDS 3G	●				
Up-Down-ATS 3G	●	●	●		
Up-Down-ATXS 3G	●	●	●	●	●

Up conversions	Down conversions
SD to 720p	720p to SD
SD to 1080i	1080i to SD
SD to 1080p	1080p to SD

Cross conversions	
720p to 1080i	1080i to 1080p
720p to 1080p	1080p to 1080i
1080i to 720p	1080p to 720p

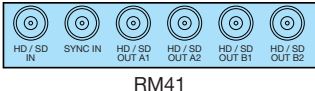
- **Up, down and cross convert any sources:** accepts 3Gb/s, HD or SD input
- **Get an output picture of exceptional quality:** with motion adaptive video de-interlacing, Crystal Vision's acclaimed proprietary down conversion including four vertical filter characteristics, adjustable detail enhancement and noise reduction
- **Easily output HD and SD copies of a feed at the same time:** perform two conversions simultaneously and configure Output A to be either 3G/HD or SD and Output B to be either 3G/HD or SD
- **Save on distribution amplifiers:** get two copies of Output A and two copies of Output B
- **Get six reclocked input loop-throughs:** simply by fitting the DA6 top board
- **Smart routing means there's no need to change your wiring:** 3G/HD and SD will always be output on the same pins even if the input format changes
- **Easy for your signals to all have the same timing:** each output will either be converted from the input or given a matching delay, as required
- **Use it to retime sources timed to a different reference or to correct processing delays:** includes two on-board synchronisers downstream of the converter (one in the 3G/HD path and one in the SD path) which means the output remains valid even when the input standard changes
- **Synchronise video that contains both normal embedded audio and embedded Dolby E:** includes audio resamplers to smoothly match the delay of normal audio to the video – and can also correctly align the guardband of embedded Dolby E in each outgoing video stream
- **Use your existing reference signals with cross-locking:** 3Gb/s, HD or SD source can be referenced to either HD tri-level syncs or SD Black and Burst
- **Compensate for mistimed sources elsewhere in the system:** with full vertical and horizontal timing adjustment (0 to 1 frame), independently adjustable on each synchroniser
- **Use it for all sorts of applications, including live playback:** will reconfigure itself instantly should the input format change
- **Ideal as your main signal path up/down/cross converter in embedded environments:** use it with up to four groups of embedded audio
- **Route your audio:** use the 8 x 8 stereo router to shuffle your embedded audio or select which groups to embed into the audio stream
- **Optional integrated fibre input/output connectivity in a single frame slot:** means you won't be limited by cable lengths
- **Easily deal with any aspect ratio conversion requirements when up and down converting:** with Anamorphic, Letterbox, Pillarbox and Full Screen conversions and customised picture size, position and cropping
- **Let it automatically select the aspect ratio for you:** use the SMPTE 2016 AFD data, WSS or Video index embedded in the input – with live update
- **Help downstream equipment to select the correct aspect ratio:** insert SMPTE 2016 AFD data, WSS or Video Index into the output
- **Maintain your picture's colour fidelity:** use the RGB and YUV lift and gain controls
- **Flag up faulty video and audio signals and provide warnings of any problems using Statesman alarms or SNMP traps:** with status indications of input missing, video black, video frozen, input incompatible, input audio missing and audio silent
- **Convert timecode as you up and down convert:** can translate between HD Ancillary Timecode and SD DVITC
- **Carry teletext and subtitle information across different definitions:** with OP-47 data stream creation when up converting and the extraction of teletext data from OP-47 packets when down converting
- **Transport closed captions across different definitions:** when down converting takes closed caption data from CEA-708 and outputs corresponding CEA-608 waveform, and when up converting decodes CEA-608 waveform and inserts data into appropriate section of CEA-708
- **Flexible control:** select from board edge, front and remote panels, SNMP, GPIs and PC software
- **Saves rack space:** the 100mm x 266mm module fits in Crystal Vision's standard frames and allows 12 boards in 2U (24 in 4U, six in 1U and two in desk top box), or half that number if a DA6 is fitted



NB. Choose between fibre in or fibre out by selecting FIP or FOP fibre option

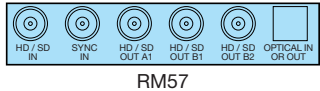
NB. Choose between fibre in or fibre out by selecting FIP or FOP fibre option

For standard applications



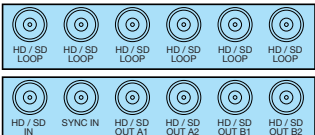
RM41

For fibre applications



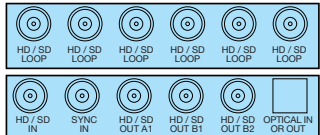
RM57

For applications when a DA6 top board is fitted



RM41 + RM34

For fibre applications when a DA6 top board is fitted



RM57 + RM34

ORDERING INFORMATION

Up-Down-AS 3G	Synchronising up/down/cross converter for 3Gb/s, HD and SD
Up-Down-AFDS 3G	Synchronising up/down/cross converter for 3Gb/s, HD and SD, with AFD reading and insertion
Up-Down-ATS 3G	Synchronising up/down/cross converter for 3Gb/s, HD and SD, with AFD reading and insertion, audio routing and timecode conversion
Up-Down-ATXS 3G	Synchronising up/down/cross converter for 3Gb/s, HD and SD, with AFD reading and insertion, audio routing, timecode conversion and transport of teletext and closed captions
DA6	Top board for Up-Down-S 3G motherboards providing six relocked input loop-throughs
FIP	Fibre input option for Up-Down-S 3G motherboards
FOP	Fibre output option for Up-Down-S 3G motherboards
Indigo frames	Available in 4U, 2U, 1U and desk top box sizes and with different levels of control
RM41	Single slot frame rear module. Allows maximum number of boards in frame (24 in 4U, 12 in 2U, six in 1U, two in desk top box). Gives access to one 3Gb/s, HD or SD input and two co-timed outputs (configurable as 3G/HD or SD), with two feeds of Output A and two feeds of Output B
RM41 + RM34	Two single slot frame rear modules used together for when DA6 top board is fitted. Allows 12 boards in 4U, six in 2U, three in 1U and one in desk top box. Gives access to one 3Gb/s, HD or SD input, six relocked input loop-throughs and two co-timed outputs (configurable as 3G/HD or SD), with two feeds of Output A and two feeds of Output B
RM57	Single slot frame rear module. Allows maximum number of boards in frame (24 in 4U, 12 in 2U, six in 1U, two in desk top box). Designed for applications using fibre inputs or outputs. When using fibre input , allows you to select between one fibre and one electrical 3Gb/s, HD or SD input, and gives access to two co-timed outputs (configurable as 3G/HD or SD), with one feed of Output A and two feeds of Output B. When using fibre output , gives access to one 3Gb/s, HD or SD input and two co-timed outputs (configurable as 3G/HD or SD), with one feed of Output A and two feeds of Output B, along with one copy of Output B on fibre
RM57 + RM34	Two single slot frame rear modules used together for when DA6 top board is fitted. Allows 12 boards in 4U, six in 2U, three in 1U and one in desk top box. Designed for applications using fibre inputs or outputs. When using fibre input , allows you to select between one fibre and one electrical 3Gb/s, HD or SD input, and gives access to six relocked input loop-throughs and two co-timed outputs (configurable as 3G/HD or SD), with one feed of Output A and two feeds of Output B. When using fibre output , gives access to one 3Gb/s, HD or SD input, six relocked input loop-throughs and two co-timed outputs (configurable as 3G/HD or SD), with one feed of Output A and two feeds of Output B, along with one copy of Output B on fibre
REMIND	19" remote control panel
REMIND-E	19" Ethernet remote control panel
Statesman	PC Control System
SNMP	SNMP monitoring and control

Features are subject to change. UP-DOWN-S3G-PROV0911