

The CVR600BD is a multi-standard broadcast quality 12-bit sampling, 10-bit processing standards converter, synchronizer, aspect ratio converter, noise reducer and time base stabilizer with SDI, composite and YC interfaces. Standards conversion between 525 and 625 line standards (NTSC/PAL) employs a powerful 20 point, 4-field, 5-line interpolation aperture to give smooth motion and maximum vertical resolution. Embedded audio is processed as well as providing balanced AES audio interfaces.

The Kudos Plus CVR600BD has a DC input for redundant PSU capability and is provided in a compact half rack width housing with remote control capability via Ethernet.

## Kudos Plus CVR600BD

### SDI & Composite Standards Converter & Synchronizer with AES and Embedded Audio



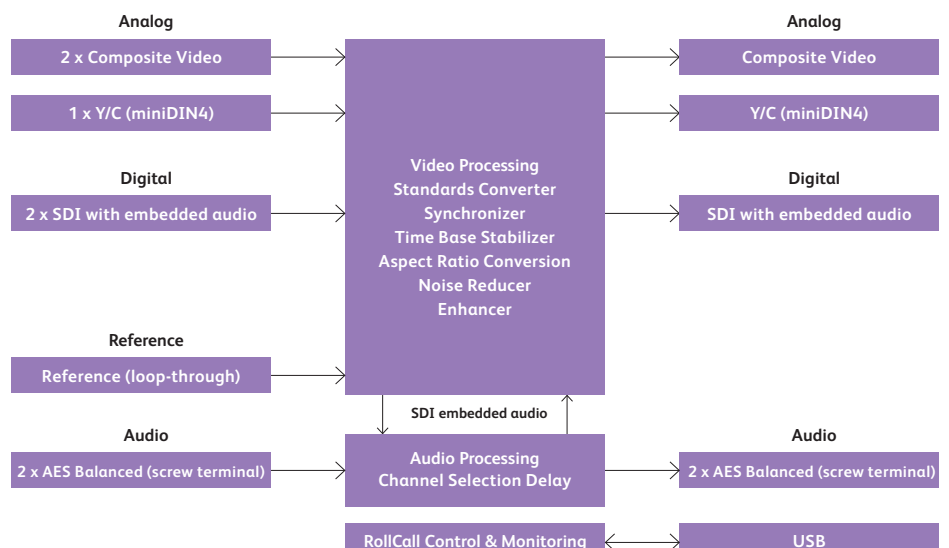
#### Features

- Standards converter & aspect ratio converter
- Synchronization & time base stabilization
- ARC with presets and size controls
- Adaptive recursive noise reduction with automatic noise level detection
- 20 point vertical-temporal aperture
- 12-bit decoding with 5-line comb filter
- 12-bit encoding
- Inputs PAL, NTSC, NTSC-J, NTSC4.4, PAL-N, PAL-M, SECAM with automatic input detection
- Outputs PAL, NTSC, NTSC-J, PAL-N, PAL-M
- 4 channel (2 pair) embedded audio processing
- Seamless PCM audio tracking delay with manual offset – up to 2.5s
- Pass through for all HANC/VANC data in synchronize mode

- Options for balanced / unbalanced AES and balanced analog interfaces
- Unique genlock 'Floating Mode'\*
- Composite inputs tolerant to noise & errors
- Video gain, black level, chroma gain, NTSC hue
- RollCall compatible via USB link
- Compact ½ rack width with optional rack mount kit. Low power (no fan)
- Optional external PSU for redundancy

#### Applications

- Universal analog / digital interface
- Audio embedding & extraction
- Satellite down-link & radio links
- Ingest / PC capture pre-processing
- Duplication
- VHS dubbing
- Format conversion



CVR600BD SDI & Composite Standards Converter

## Full Product List

Base Model  
**Kudos Plus CVR600BD**  
(3598403)

The CVR600BD is a multi-standard broadcast quality synchronizer, noise reducer and time base stabilizer with SDI, composite and YC interfaces, 12 bit sampling and 10 bit processing featuring embedded and analog audio.

Option  
**Rack mount kit**  
(INSY-MNT-KIT)

Rack mount kit to mount one or two units in a 19" rack.

**Redundant PSU**  
(INSY-PSU-EXT)

External PSU, provides redundant PSU operation.

## Technical Specification

<b>Video Input</b>	
2 x SDI	525/625 line with automatic detection(BNC)
2 x Composite	27MHz, 12-bit sampling PAL, NTSC, NTSC-J, NTSC4.4, PAL-N, PAL-M, SECAM with automatic detection(BNC)
1 x YC	27MHz, 12-bit sampling PAL, NTSC, NTSC-J, NTSC4.4, PAL-N, PAL-M with automatic detection (Mini DIN4)
Reference	Composite or Y (BNC loop-through)
<b>Video Output</b>	
2 x SDI	525/625 line(BNC)
2 x Composite	27MHz, 12-bit D to A. Output Formats PAL, NTSC, NTSC-J, PAL-N, PAL-M(BNC)
1 x YC	27MHz, 12-bit D to A. Output Formats PAL, NTSC, NTSC-J, PAL-N, PAL-M (Mini DIN4)
<b>Audio Options</b>	
2 x AES input	Balanced (2-part screw terminal) 32-96kHz PCM audio
2 x AES output	Balanced (2 part screw terminal) 48kHz PCM audio
Remote control	RollCall via USB link to a PC
<b>Control Features</b>	
Input select	SDI A,B; Composite A, B; YC
Output standard	525; 625
Audio source (1)	SDI pair 1-8; External 1-2
Audio source (2)	SDI pair 1-8; External 1-2
Audio destination	SDI group 1-4
Add audio delay	0ms to +2.5s
Analog audio level	+12 to +24dBu (in / out)
Noise reduction	Y;C (Off; 1; 2; 3; Max)
Split screen	Off/On (view noise reduction)
Vertical enhance	Off; 1; 2; 3 (max)
Horizontal enhance	-2; -1; 0; 1; 2; 3 (max)
ARC enable	Off/On
ARC H size	50% to 200% (0.5% steps)
ARC V size	50% to 200% (0.5% steps)
ARC H pan	+360 to -360 input pixels
ARC V tilt	+150 to -150 input field lines
ARC presets	Normal; 8 fixed presets
Input standard	NTSC, NTSC-J
Composite output	PAL, NTSC, NTSC-J, PAL-N, PALM
Freeze	Freezes next frame (sync mode)
Field freeze	Freezes next field
Luminance gain	Preset; ± 6dB
Chrominance gain	Preset; ± 6dB
Black level	Preset; ± 100mV

NTSC hue	Preset; ± 30 degrees
Genlock phase	Preset; approx. ±1 line
Genlock mode	Lock to reference; Lock to input; Float (stabilized) – if same line standard; Free-run
Output pattern	Black; Color Bars
Default output	When input is lost; go to black; go to color bars
Decoder / Encoder	AGC, ACC, comb, DNR, CTI
<b>Indication/Monitoring</b>	
Input standard	Present; Standard
Reference	Present; Error (Error indicated if the reference is not the same line standard as the input)
Power	Standby
<b>RollCall</b>	
All Control features available from RollCall via PC USBshare application. Indication/monitoring parameters are available for Logging and Rolltrack.	
<b>System Parameters</b>	
Processing	≥10 bit
Conversion aperture	4 field / 5 line
SDI input switch	Tolerant to SMPTE RP168 vertical interval switch.
SDI HANC data	All data passed when input & output are the same standard, except data group being embedded
Vertical interval	All luminance data passed when input & output are the same standard
Reference lock range	Greater than ±80ppm
Analog audio ADC	24 bit; THD better than <0.004%
<b>Power</b>	
Input voltage range (Primary)	100-240 VAC, 47-63Hz 0.4a
Input Voltage Range (Secondary)	via three pin IEC power socket 12 DC @ 1.5A via 2.1mm ring lock jack
<b>Mechanical</b>	
Dimensions	½ 1RU rack (44x220x250mm)
Temperature	0°C to 35 °C operating -20 °C to +70 °C storage
<b>*Floating Mode</b>	
Without a reference the output will either free-run or lock to a stabilized input sync if operating in synchronize mode. In this stabilized or 'floating mode' the output will always follow shortly after the input, so preventing lip-sync errors and frame drop/repeat. The inputs are highly tolerant to unstable and noisy sources, while the synchronizer always creates correctly aligned images, even during sync disturbances and asynchronous input switches.	

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