

The CVR600BDV 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, DV, 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 CVR600BDV 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 CVR600BDV

SDI, DV & Composite Standards Converter & Synchronizer with AES & 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

Full Product List

Base Model
Kudos Plus CVR600BDV
(3598406)

The CVR600BDV is a multi-standard broadcast quality synchronizer, noise reducer and time base stabilizer with SDI, DV, composite and YC interfaces, 12 bit sampling and 10 bit processing featuring embedded and balanced AES 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

Video Input

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)

Video Output

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)

Video Input/Output

1 x DV	4 pin DV connector (will not simultaneously decode and encode) with 32, 44.1 or 48kHz audio – one pair
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Audio Options

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

Control Features

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
DV audio	Encode from processed pair 1-2
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, PAL-M
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 DV features	AGC, ACC, comb, DNR, CTI Audio sample rate; AVC (play/record/stop/forward/rewind)

Indication/Monitoring

Input standard	Present; Standard
Reference	Present; Error (Error indicated if the reference is not the same line standard as the input)
Power	Standby

RollCall

All Control features available from RollCall via PC USBshare application. Indication/monitoring parameters are available for Logging and Rolltrack.

System Parameters

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%

Power

Input Voltage Range (Primary)	100-240 VAC, 47-63Hz 0.4a via three pin IEC power socket
Input Voltage Range (Secondary)	12 DC @ 1.5A via 2.1mm ring lock jack

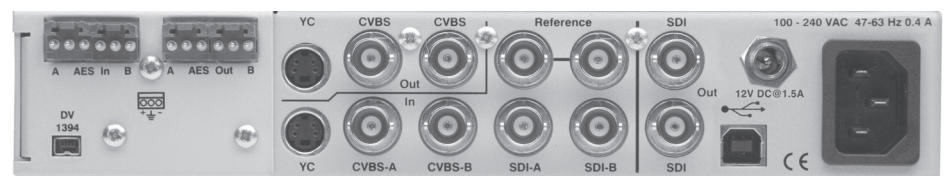
Mechanical

Dimensions	½ 1RU rack (44x220x250mm)
Temperature	0°C to 35 °C operating -20 °C to +70 °C storage

*Floating Mode

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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