The HD TBS800 is a 3Gb/s/HD/SD motion adaptive format converter with TBS/Synchronization capabilities. It provides multi-rate 3Gb/s/HD/SD inputs and outputs, and is capable of providing linear upconversion, downconversion, and crossconversion within the same frame rate.

TBS800 is AFD ready, enabling integration of SMPTE 2016 (AFD) into your workflow.

In addition the product handles embedded, AES (balanced or unbalanced) and analog audio, with a range of additional features such as Aspect Ratio Conversion (ARC) and color space conversion.

The HD TBS800 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 HD TBS800

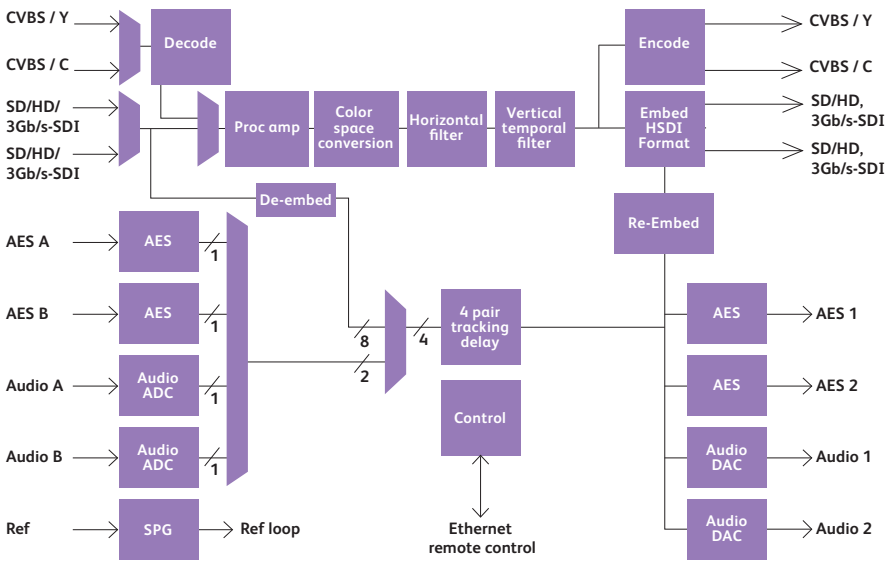
3Gb/s, HD & SD Format Converter and Synchronizer

Features

- 3Gb/s, HD & SD synchronizer
- Up, down & cross conversion
- Automatic Aspect Ratio Conversion (AFD, VI, L23)
- Multi-rate 3Gb/s/HD/SD SDI inputs and outputs
- Composite input/output
- AES, analog & embedded audio
- Audio processing, delay and routing
- Reference loop through (Bi/Tri Sync)
- Front panel control
- Powerful picture enhancement tools
- User memories
- Legalizer
- Input auto detect
- Closed caption and timecode pass-through
- Pass-through of non-PCM audio, such as embedded Dolby E
- Ethernet, RollCall and SNMP remote control
- Compact half rack width with optional rack mount kit
- Optional external PSU for redundancy

Applications

- Satellite down-link
- News & events
- Dubbing and duplication
- Audio embedding & extraction
- Audio delay & routing
- Monitoring



TBS800 Block Diagram

Full Product List

Base Model
Kudos Plus HD TBS800UD
(5078015)
3Gb/s, HD & SD Synchronizer and format converter with embedded, analog and unbalanced AES audio.

Kudos Plus HD TBS800BD
(5078025)
3Gb/s, HD & SD Synchronizer and format converter with embedded, analog 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.

snellgroup.com

Technical Specification

Signal Inputs

Serial digital	2 x 75 Ohm SD/HD/3Gb/s serial digital with embedded audio Input standards: 3Gb/s HD-SDI SMPTE425 level A, dual-link level B 1.5 Gbit/s HD-SDI SMPTE292M/SMPTE299M 270M Mbit/s HD-SDI SMPTE259M
Composite	PAL, NTSC, NTSC-J, PAL-M, PAL-N, N4.4, SECAM 12-bit DACs
Analog component	YC
Reference	1 x loop-through HDTV Trisync/ SD Bi-sync (black & burst) SMPTE 240M/274M, with auto selection dependant on output standard
Audio AES	2 x AES inputs Balanced option – via 25 way D type Un-balanced option – via 2 x BNC
Audio analog	2 x stereo analog inputs via 25 way D type

Signal Outputs

Serial digital	2 x 75 Ohm SD/HD/3Gb/s serial digital with embedded audio Output standards: 3Gb/s HD-SDI SMPTE425 level A, dual-link level B 1.5 Gbit/s HD-SDI SMPTE292M/SMPTE299M 270M Mbit/s HD-SDI SMPTE259M
Composite	PAL, NTSC, NTSC-J, PAL-M, PAL-N, 12-bit ADCs
Analog component	YC
Audio AES	2 x AES outputs Balanced option - via 25 way D type Un-balanced option - via 2 x BNC
Audio analog	2 x stereo analog outputs via 25 way D Type

Control

Remote control	10/100 BaseT Ethernet

Control Functions

Input select	Input A, Input B
Input standard (auto detect)	525, 625 720 50P 59.94P 1080 50i 59.94i 1080 50P 59.94P
Output standard	525, 625 720 50P 59.94P 1080 50i 59.94i 1080 50P 59.94P

Conversion Functions

Modes	Up Conversion, Down Conversion, Cross Conversion
Manual or automatic ARC	AFD (SMPTE 2016) VI (RP186) WSS (L23)
SD input format	Normal 4:3, Anamorphic 16:9 Letterbox 14:9, Letterbox 16:9
SD output format	Normal 4:3, Anamorphic 16:9 Letterbox 14:9, Letterbox 16:9
Auto zoom	On/off
Manual zoom	Zoom +/- 20%
SD>HD scaling	Fit to height/fit to width
Safe area marker	Off, 16:9, 4:3

Audio Functions

Processing	2 groups, (4 stereo pairs, 8 channels) internal channel A,B,C,D
Audio source selection	De-embed channel [1:16] Analog A Left, analog A Right Analog B Left, analog B Right AES A Left, AES A Right AES B Left, AES B Right Tone, mute
Audio source routing	Pair or channel selectable
– Pair	Pair A, pair B, pair C, pair D
– Channel	A Left, A Right, B Left , B Right C Left, C Right, D Left, D Right
Analog output	A & B
AES output	A & B
Embedded group A&B	Group1, Group2, Group3, Group4, Off
Embedded group C&D	Group1, Group2, Group3, Group4, Off
Analog headroom	+12 to +24dbu (+18dbu) in 0.5dB steps
Audio gain (A,B,C,D)	+18 to -18dB (0dB) in 0.1dB steps
Audio delay	-40ms to +80ms relative to video delay
Analog level	+12 to +24dbu (+18dbu) in 0.5dB steps
Tone frequency	100Hz to 10kHz in 100Hz steps

System

Pattern	Off, black ramp, bars
Proc amp	Black level: +100 to -100mV (0) in 0.8mV steps Contrast: -6dB to +6dB (0) in 0.2dB steps Saturation: -6dB to +6dB (0) in 0.2dB steps Y Gamma: 0.4 to 1.7 (1) in 0.1 steps
Freeze	On/Off
Genlock	Reference lock, Input lock (same format), Follow input (same frame rate), Free run
Control source	Front panel or remote control
Closed captions	CEA608/CEA708 WST/RDD8
Memories	16 user memories

Throughput delay

Same frame rate "sync" mode	0.4ms < delay < 2 fields + 0.4ms
Same frame rate "ARC" mode	4 fields + 1ms < delay < 6 fields + 1ms Where field = 16.7 or 20ms

Communications

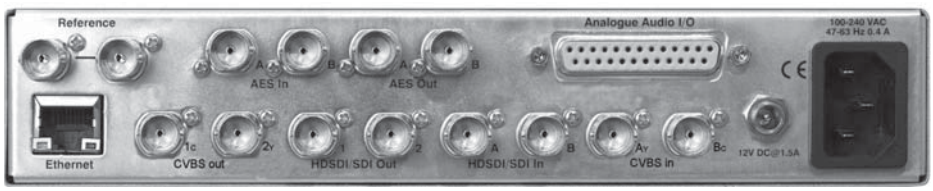
Remote control	Ethernet control interface for web based applet. Integration into RollCall network (IP) using RollTop PC application
DHCP	On/Off
SNMP	VI monitoring and control

Power

Input voltage range (Primary)	100 – 240 VAC, 47 – 63Hz 0.4A via three pin IEC power socket
Input voltage range (Secondary)	12V DC @ 1.5A via 2.1mm ring lock jack

Mechanical

Temperature range	0 to 45° C operating
Cooling	Internal fan, side venting
Weight	Approximately 1.6kg
Case type	1/2RU rack mounting
Dimensions	44mm x 220mm x 255mm (h,w,d)



TBS800 v5