advanced media technologies®

MODEL

TXS 3600

MULTICHANNEL VIDEO/AUDIO TRANSCODER

sencore

The TXS 3600 is a Multichannel Video and Audio Transcoder which provides a powerful processing engine for linear broadcast transcoding.

Supporting MPEG transport stream inputs and outputs, the product can be configured to transcode up to sixteen PIDs of MPEG2 or H.264 video in a 1RU form factor, along with up to four audio PIDs per video PID.

The TXS uses Sencore's state of the art video compression techniques to acheive low bitrates and high picture quality. In addition, it provides a wide array of audio codecs which allow decoding and re-encoding to common broadcast formats. The combined solution rivals costly single-channel encoders in both value and performance.

The hardware can be configured and licensed to provide maximum value in any use case, from a single-channel per box up to sixteen channels.

The TXS 3600 carries forward Sencore's tradition of Ease of Use, providing an intuitive web GUI for unit control and status. It also supports full control through SNMP and a web services API.

APPLICATIONS

- Dense HD Transcoding for IPTV Headends (Existing HD to low-bitrate, high-quality H.264 with AAC)
- Downconversion for Creation of SD Tier (MPEG2 or H.264 HD to SD)
- Bandwidth Savings for Content Backhaul (MPEG2 video and audio to H.264 video and AAC audio)
- Support of Legacy Decode Systems (H.264 video and AC-3 audio to MPEG2 video and audio)
- Transrating for Bandwidth Reduction (MPEG2 to MPEG2 or H.264 to H.264)

KEY FEATURES

- Latest generation compression technology, enabling lower bitrates for both H.264 and MPEG2
- Video Transcoding/transrating of up to 16 HD or SD channels to or from either the MPEG2 or H.264 codec
- Transcoding/transrating up to 4 audio PIDs of any type per video service, including: HE-AAC v1/2, AAC-LC, Dolby Digital (AC3) or Plus (EAC3), MPEG2, Linear PCM
- ASI and IP SPTS or MPTS inputs
- ASI and IP SPTS outputs
- Frame-accurate mapping of captions, SCTE-35 messages, AFD codes, and other ancillary data
- Hot-swappable, redundant, load-sharing power supplies
- Easy-to-use web interface
- Full control, status, and alarm monitoring via SNMP

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SPECIFICATIONS

Multichannel Video/Audio Transcoder TXS 3600

TRANSCODER

Multi-format MPEG2/H.264 with Integrated Full Decoder/Re-encoder
Up to 16 Video PIDs per 1RU Chassis

VIDEO PROCESSING

Codec and Profile Support:
H.264 up to HP @L4.1
MPEG2 up to MP @HL

Video Formats Supported:
HD 1080-line interlaced @25, 29.97 and 30 Hz
HD 1080-line progressive @23.97, 24, 25, 29.97, and 30 Hz
(1920, 1440, and 1280-pixel widths supported)

HD 720-line progressive @50, 59.94, and 60 Hz
(1280 and 960-pixel widths supported)

NTSC 480-line interlaced @29.97Hz
PAL 576-line interlaced @25Hz
(720, 704, 640, 544, 528, 480, and 352-pixel widths supported)

Additional Web, Mobile, and IPTV PiP Formats @29.97Hz
(960x720, 720x480, 640x480, 640x360, 416x240, 352x240, 320x240, 320x180, 192x192, 128x96, 96x96)

Additional Web, Mobile, and IPTV PiP Formats @25Hz
(352x288, 192x192, 176x144, 128x128, 128x96, 96x96)

Advanced Video Processing:

Scene detection	Fade detection
De-blocking filter	Skin tone detection
Automatic 3:2 Conversion	Automatic MBAFF/PAFF Support
CABAC Entropy Encoding	Reference B-Frames

TS Output Bitrate:	500 Kbps to 30 Mbps
Video Output Bitrate:	100 Kbps to 30 Mbps
Video Output Mode:	CBR or capped VBR

AUDIO PROCESSING

Up to 4 PIDs of audio pass-through per transcoded video PID (standard)
Up to 4 PIDs of audio transcode per transcoded video PID (optional)

Pass-Through Formats:	Dolby Digital (AC-3) HE-AACv1/v2, AAC-LC (ADTS+LOAS) Dolby Digital Plus (EAC-3) MPEG1/2 L1/2

Formats Supported for Encode and Decode:

Dolby Digital (AC-3):	Stereo and Mono
AAC-LC (LOAS or ADTS):	Surround, Stereo, and Mono
HE-AAC (LOAS or ADTS):	Surround, Stereo, and Mono
HE-AACv2 (LOAS or ADTS):	Stereo and Mono
MPEG2L2:	Stereo and Mono

Formats Supported for Decode Only:

Dolby Digital (AC-3):	Surround
MPEG1/2 L1/2:	Stereo and Mono
Linear PCM (SMPTE 302):	1-6 Channels

Formats Supported for Encode Only:

Dolby Digital Plus (EAC-3):	Surround (3/2) thorugh Mono (1/0)
Audio Level Adjustment:	Manual, -20 to +20dB in 1dB Steps
Transcode Sample Rate:	48kHz

CLOSED CAPTION SUPPORT

Input Format:	Standard EIA 608/708
Output Formats:	Standard EIA 608/708 or SCTE-20

TRANSPORT STREAM PROCESSING

PID Filtering and Remapping Capabilities
PSI Viewer for Incoming Services
Bitrate Measurement of Incoming Services and Streams

Ancillary Data Pass-through:	AFD DVB Subtitles DVB VBI Data (EN301775) North American VBI (SCTE 127) Closed Captioning (EIA 708) Teletext SCTE35

ASI INPUTS AND OUTPUTS

ASI Connectors per chassis:	Up to 8 bidirectional (standard) Up to 8 additional inputs or outputs (optional)
Connector:	BNC
Impedance:	75Ω
Packet format:	Auto detect 188/204 byte
TS Bitrate:	500 Kbps to 213 Mbps
Input TS Type:	SPTS or MPTS
Output TS Type:	SPTS

IP INPUTS AND OUTPUTS

Number of Ports:	Up to 4 GbE ports (standard)
Connector Type:	RJ45 10/100/1000 - Auto Negot.
Input Format:	UDP or RTP
IP Encapsulation:	1 to 7 TS packets per IP packet
Addressing:	Unicast and Multicast
IGMP compatibility:	Version 1, 2 & 3
Per TS Bitrate:	500 Kbps to 213 Mbps
Input TS Type:	SPTS or MPTS
Output TS Type:	SPTS

MANAGEMENT

Connector:	RJ-45 10/100 - Auto Negotiating
Protocols:	HTTP and SNMP
User Interfaces:	Full control via web GUI Basic setup/status via front panel
Automation Interfaces:	Full status and control via SNMP Configurable SNMP traps Web services access to main GUI

DIMENSIONS/POWER

Height:	1 RU, 1.75” (5cm)
Width:	17.4” (44.2 cm)
Depth:	23” (58 cm)
Power:	100-240 VAC 50/60 Hz @3 Amps -48 VDC supply available
Supply Type:	Dual, hot-swappable, redundant load sharing power supplies

ENVIRONMENTAL CONDITIONS

Operating Temp:	0° to 45°C
Storage Temp:	-40°C to 65°C
Relative Operating Humidity:	<95% (non-condensing)

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