

Breeze Encoders

Breeze Technologies range of professional and broadcast video codecs offer system integrators and users functionality, flexibility and convenience in addressing digital video content delivery and archiving applications.

Whether you are using Lite Blue or Deep Blue as an encoder, decoder or codec you can expect great quality, high performance and wide functionality across a range of broadcast and professional video applications.



Lite Blue:

Lite Blue is a professional high performance encoder and decoder on a single PCI board. It provides MPEG1/2/4 codec facilities ranging from QSIF to Full D1 resolution from a composite video or S-video input.

Added functionality includes 'video preview', pre-filtering, time base correction and text and graphics overlay. Each of these, combined with its advanced digital processing contributes to exceptional picture and sound quality and a high level of stability across a diverse range of broadcast, corporate, institutional and industrial video applications.

Video Preview enables users to monitor in VGA or video the encoder output in real time. This function provides added confidence to users, particularly during a live event.

Whilst pre-filtering and time base correction (TBC) assist in reducing unwanted noise and poor sync, the TBC also enables the encoder to maintain integrity and stability in such times as loss or switching of the encoder video input signal. The TBC also enables continuous streaming should the input video be lost.

The addition of on-screen display (OSD) means that users can add temporary or permanent text and graphics for ident, time code or other useful information to the output stream. OSD can be used in conjunction with the TBC to warn of lost input signal.

The board comes complete with plug-and-play installation software and PowerStream DirectShow-based software that exploits the full features of the encoders. PowerStream enables encode/decode set-up, transmission modes (unicast, multicast, broadcast), file streaming, auto and scheduled start. In addition, Breeze Technologies provides full SDK and integration support.

Main Features:

- MPEG 1/2/4
- Encode Only
- Decode Only
- Codec
- TBC
- Input Filtering

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Technical Specification

Video Input

S-Video, composite (BNC), PAL/NTSC

Audio Input

Unbalanced stereo (line) input (2 x phono)

Video Input Conditioning

Selectable pre-filtering
Time Base Correction
On Screen Display, burnt-in or overlay text or graphics

Video Encoding

MPEG1, MPEG2, MP@ML
MPEG4, SP@L1, L2 and L3 with extensions to full D1 and interlaced video
Scene change detection
Adaptive field/frame motion compensation and DCT type
Inverse telecine (3:2 pulldown) (NTSC only)
Motion estimation +/- 127 pels h, +/- 63 pels v. 0.5 pels accuracy
Fixed (25 PAL, 29.97 NTSC) and variable frame rates
128kbps - 15Mbps
Horizontal resolution 128 - 720 pixels in 16 pixel steps
Fixed resolutions of QSIF, SIF, HD1, 2/3D1, 3/4D1, FD1, for NTSC and PAL
Programmable GOP structure and length: I, IP, IPB and IBBP
Low latency
Multi-board support

Audio Encoding

MPEG1 layer I and II
MPEG1 layer 3 (MP3)
AAC and AC-3
Sampling frequencies 32, 44.1, 48 and 96kHz
Bits per channel: 16, 20, 24

Multiplexing

Single channel
MPEG1 system stream
MPEG2 Program Stream or Transport Stream
MPEG4 encapsulated in MPEG2 Transport Stream
PES and ES output

Video Decoding

MPEG1, 2, 4
7-tap horizontal and 2-tap vertical filter
Letterbox conversion
3:2 pulldown
Closed caption and teletext

Audio Decoding

MPEG1 layer I and II
MPEG1 layer 3 (MP3)
AAC and AC-3
Sampling frequencies 32, 44.1, 48 and 98kHz
Bits per channel: 16, 20, 24, 32

Demultiplexing

System, program and transport stream

Graphics

Background and Video plane
2 x 32 bit alpha-blending (RGB and YUV)
2, 4 or 8 colour indexing
per-pixel transparency
Deflicker filtering

Video Output

Composite video, S-video

Audio Output

Unbalanced analogue stereo line out (2 x phono)
Unbalanced stereo monitor out (line, 3.5mm mini jack)

Power Consumption

2w @ + 5 VDC
9w @ + 3.3 VDC

Standards Compliance

CE and FCC approved

System Requirements

Win XP, 2000, NT4

Software Support

Software Development Kit
DirectShow interface
Streaming support
VTR control support