

# Blue

*driving tomorrow's vision today*



## Key Features

- Composite
- S-Video
- Un-balanced audio
- MPEG4
- MPEG1, 2
- Real-time Transcoding
- Decode whilst encode
- Video Loop-through
- VTR Control
- Text/graphics overlay
- colour bars (on/off)
- on-board TBC
- input loss warning
- pre-conditioning
- DirectShow and Linux SDK
- ISMA Compliant
- Quicktime compatible

Today's communications market demands future-proofing, and solid solutions built on firm technical foundations.

Robust products, ease of integration, value for money and great support are what's required by system integrators.

Breeze Technologies MPEG encoder solutions meet these criteria, and more.

**Blue** is a high-end streaming encoder that enables MPEG1, 2 and 4 encoding with a mix of composite, S-Video and unbalanced audio inputs and outputs.

It is already being used in applications for Compliance and Archive recording, Corporate Television Distribution and providing real-time ingest to video servers, including Darwin Streaming Server. .

Other features such as decode whilst encode, video loop-through, internal sync, time-based-correction and text overlay are all available on a single PCI card designed to deliver the highest degree of confidence, flexibility and resilience within multi-channel digital broadcast, network and archive systems.

The powerful feature of real-time transcoding brings cutting edge performance for re-packaging and re-purposing of content. This allows your existing MPEG2 content to be converted to MPEG4 in real-time.

Blue delivers the reliability, functionality and standards needed in today's and tomorrow's communication industries.

Software in the form of free issue SDKs for Windows and Linux, PowerStream (supplied), PowerStream Enterprise Edition (multi-encoder control and management) and online support is available to system integrators and developers . PowerStream is based on DirectShow architecture.

## BLUE Technical Specification

### Video Input

- S-Video, Composite, PAL/NTSC

### Audio Input

- Unbalanced stereo (line) input (2 x phono)

### Video Encoding

- MPEG1, MPEG2, MP@ML
- MPEG4, SP@L1, L2 and L3 with extensions to full D1 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, HDI, 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
- ISMA Compliant and MP4 file format compliant, including hinting

### Video Input Conditioning

- Selectable pre-filtering
- Time Base Correction
- On Screen Display, burnt-in or overlay text or graphics
- Colour bars
- Contrast, saturation, hue, gamma control

### Audio Input Conditioning

- Fade up
- Audio Loss warning
- Tone generation

### Transcoding

- MPEG2 to MPEG4
- MPEG4 to MPEG2

### Video Output

- S-video, Composite

### Audio Output

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

### Video Decoding

- MPEG1, 2 and 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

### Power Consumption

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

### Standards Compliance

- CE and FCC approved
- ISO /IEC 14496 and ISO/IEC 13818 compatible

### System Requirements

- Win XP, 2000, NT4
- Red Hat 7, Red Hat 9