

Elecard StreamEye Tools 2.92 Release Notes

June 2007

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IMPORTANT INFORMATION

The shareware version of Elecard StreamEye Tools 2.9 has the 21-day evaluation period. When it expires, you should purchase a license and activate Elecard StreamEye Tools 2.9 or, otherwise, uninstall it completely.

For more details on the registration contact Elecard Sales Department (sales@elecard.net.ru).
And to find more information on the activation procedure visit Elecard site <http://www.elecard.com>.

OVERVIEW

The Elecard StreamEye Tools 2.9 is a set of powerful tools designed for professionals and prosumers in the video compression field. Elecard StreamEye Tools 2.9 enables the user to perform an effective in-depth analysis of video sequences.

The following programs are incorporated into Elecard StreamEye Tools 2.9:

- Elecard StreamEye v.2.9.2
- Elecard YUV Viewer v.2.1
- Elecard Video QuEst (Quality Estimator) v.1.0
- Elecard Stream Analyzer v.1.0
- Elecard Buffer Analyzer v.1.0

PRODUCT DESCRIPTION

Elecard StreamEye

The StreamEye program is a tool designed for professionals and prosumers in the video compression field. Elecard StreamEye enables the user to perform an effective in-depth analysis of video sequences. The StreamEye provides the user with a visual representation of the encoded video features and a stream structure analysis of MPEG-1/2/4 or AVC/H.264 video streams, MPEG-1 System Streams, MPEG-2 Program Streams and MPEG-2 Transport Streams.

The StreamEye is based on the Elecard Media Indexing technology. StreamEye displays frames, their size, type, time position (based on PTS), and order in the stream; the average bit rate and bit rate declared in sequence headers as well as other common video stream parameters. The indexing technology allows StreamEye to provide the user with the ability to quickly navigate through a stream with frame accuracy.

Elecard YUV Viewer

The Elecard YUV Viewer is a tool designed for professionals and prosumers in the video compression field. Elecard YUV Viewer is designed to view YUV data sequence in YUV video files, compare files against one another to find out if binary images match, and view the result of comparison. The application also allows the user to calculate quality metrics, such as PSNR, NQI and VQM. It has been designed and implemented for reverse engineering and analysis.

Elecard Video QuEst

Elecard Video QuEst is a tool designed for professionals and prosumers in the video compression field. Elecard Video QuEst allows the user to calculate video quality metrics, such as PSNR, NQI, VQM, SSIM, DELTA, MSE and MSAD. It has been designed and implemented for reverse engineering and analysis.

Elecard Stream Analyzer

Elecard Stream Analyzer is a powerful tool designed for syntax analysis of encoded media streams and presentation of the analysis log in a human readable form. Stream Analyzer operates with MPEG-1 Video/Audio, MPEG-2 Video/Audio, AAC, AC-3 and AVC/H.264 files.

Elecard Buffer Analyzer

Elecard Buffer Analyzer is a tool designed for professionals and prosumers in the video compression field. Elecard Buffer Analyzer allows analyzing of the decoder video buffer parameters.

Installation

Please, uninstall all previous versions of Elecard StreamEye Tools before installing a new one. Run the delivery pack and follow the instructions of Wizard. After you click "Finish" the program is ready to run and doesn't require rebooting your computer.

Uninstallation

To uninstall the program, click *Start->Programs->Elecard->Elecard StreamEye Tools ->Uninstall Elecard StreamEye Tools*.

During the uninstallation all the installed filters and programs are uninstalled.

Note: During the uninstallation some dialogs can be placed behind the top window that stops the process, please give attention to this situation and switch active windows.

SUPPORTED FORMATS

Elecard StreamEye

- System Stream MPEG-1
- Video Only MPEG-1/2
- Program Stream MPEG-2
- Transport Stream MPEG-2
- AVC/H.264 Video stream
- MP4 (Intermedia Fomat)
- MPEG-4 Video stream
- H.263 Video stream

Elecard YUV Viewer

- IYUV
- YV12
- UYVY
- YV16

Elecard Video QuEst

- YV12
- UYVY

Note: *Elecard Video QuEst allows the video quality metrics calculation for any video stream, if the corresponding DirectShow® compatible decoder supporting the YV12 or UYVY output is registered in the system.*

Elecard Stream Analyzer

- MPEG-1 System Stream (ISO/IEC 11172-1)
- MPEG-1 Video (ISO/IEC 11172-2)
- MPEG-2 Video (ISO/IEC 13818-2)
- MPEG-2 Program Stream (ISO/IEC 13818-1)
- MPEG-2 Transport Stream (ISO/IEC 13818-1)
- AVC/H.264 video stream (ISO/IEC 14496-10)
- MPEG-1/2 Audio Layer 1/2/3 ((ISO/IEC 11172-3 and ISO/IEC 13818-3)
- Dolby® AC-3 (ATSC A-52)
- AAC (Advanced audio coding)
- MPEG-4 Video
- VC-1 Video

Elecard Buffer Analyzer

The program analyzes the decoder video buffer parameters for the following formats:

- MPEG-2 Video (ISO/IEC 13818-2)
- AVC/H.264 video stream (ISO/IEC 14496-10)
- VC-1 Video (SMPTE 421M-2006)

The Buffer Analyzer supports the following multiplexed formats:

- MPEG-1 System Stream (ISO/IEC 11172-1)
- MPEG-2 Program Stream (ISO/IEC 13818-1)
- MPEG-2 Transport Stream (ISO/IEC 13818-1)

- MP4 Stream (ISO/IEC JTC1/SC29/WG11)

FEATURES

Elecard StreamEye

- Navigation and displaying a media stream picture-by-picture (I, P, B)
- Displaying the current frame
- Displaying the time, type, size and number of a current frame in a stream, decoding order and offset from the file beginning
- Displaying the bit rate (declared in the sequence header) and a calculated bit rate
- Displaying a diagram representative average bit rate (moving average)
- Displaying the bit rate lines
- Displaying detailed information about macroblocks in MPEG-1 (ISO/IEC 11172-2), MPEG-2 (ISO/IEC 13818-2), MPEG-4 (ISO/IEC 14496-2), H.263 (ITU-T Recommendation H.263) and AVC/H.264 (ISO/IEC 14496-10) video streams

Exclusive Features

- Frame-accurate positioning
- Display of current frame and they properties: size, type, PTS
- Navigation modes: picture-by-picture in stream and display orders, or picture-by-picture respect to picture type (I, P, B)
- Display of the stream and gathering of statistics relating to the entire file
- AVC/H.264 support
- MPEG-4 support
- H.263 support

Elecard YUV Viewer

- YUV sequences displaying
- File comparison for binary image matching
- Displaying the comparison results
- Quality metrics (PSNR, NQI, VQM) calculation

Elecard Video QuEst

- Display of the comparison results
- Calculation of the video quality metrics (PSNR, NQI, VQM, SSIM, DELTA, MSE and MSAD)

Elecard Stream Analyzer

- Selection of packets in a text
- Selection of packets by PID and StreamID
- Stream viewing in the HEX mode
- Storing the information about the stream and currently selected packets into a .TXT file
- Search of elements by offset, PID and text
- Error report generation (Transport Packet Counters and Start Indicators)
- Calculation of the overhead in transport and program streams

Elecard Buffer Analyzer

- Plotting of the buffer fullness curve
- Ability to save chart as a bitmap file
- Ability to select a stream for analysis, if the file contains several streams.
- Ability to save the analysis report to .TXT file. Generated report contains the following information:
 - Buffer size
 - Bitrate value
 - Frame rate
 - Detected buffer overflow and underflow errors.
 - Bitrate type (CBR, VBR)
 - Total and average padding (for MPEG-2 and AVC streams)
 - Specific format information
- Displaying (and saving to .TXT file) of the following frame information:
 - The frame number in the stream order
 - The time of frame removal from the buffer

- Frame size
- Padding size (for MPEG-2 and AVC streams)
- Frame type (for MPEG-2 and AVC streams)
- The time of frame arriving into the buffer (AVC)
- Ability to interrupt and resume stream parsing

MAIN CHANGES IN VERSION 2.9

New tools:

- Elecard Stream Analyzer
- Elecard Buffer Analyzer

Updated tools:

- Elecard YUV Viewer v.2.1 (fixed bugs)

MAIN CHANGES IN VERSION 2.92

Updated tools:

- Elecard StreamEye (fixed bugs)
- Elecard Video QuEst (fixed bugs – release version)
- Elecard Stream Analyzer (fixed bugs – release version)
- Elecard Buffer Analyzer (fixed bugs – release version)

SYSTEM REQUIREMENTS

- SSE-enhanced CPU (Intel® Pentium III, Celeron, AMD® Athlon, Opteron etc.)
- 128 MB RAM
- DirectX 7.0 (and higher) compatible VGA card
- Windows® 2000/XP/2003 Server

Feedback

Visit Elecard on WWW at <http://www.elecard.com>.

On technical issues, please contact the Technical Support Team: tsup@elecard.net.ru.

For licensing information, please contact Elecard Sales Department: sales@elecard.net.ru.