

Release Notes



MTS4EA Compressed Video ES Analyzer 071-1787-00

This document supports software version 4.0.

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Contacting Tektronix

Tektronix, Inc.
14200 SW Karl Braun Drive
P.O. Box 500
Beaverton, OR 97077
USA

For product information, sales, service, and technical support:

- In North America, call 1-800-833-9200.
- Worldwide, visit www.tektronix.com to find contacts in your area.

Release Notes

This document does the following:

- Describes the changes that were implemented in the current version of the MTS4EA software
- Describes the known problems or behaviors that you may encounter while using the MTS4EA software
- Lists the platforms on which the MTS4EA software has been verified
- Describes the changes that were implemented in previous versions of the MTS4EA software

Changes Implemented in the Current Software Version

The changes listed below were implemented in software version 4.0.0.5. Refer to *Changes Implemented in Previous Software Versions* on page 5 for a list of previous software repairs and enhancements.

- Audio Stream Playback** Support for playback of audio streams was added, with the following audio standards being supported:
- MPEG-1 part 3
 - MPEG-2 part 3
 - MPEG-2 part 7 (AAC)
 - MPEG-4 part 3 (AAC, HE-AAC)
- Audio Waveform View** The audio waveform view now shows the time domain waveform of the decoded audio stream.
- Bitstream Editing** You can now perform bitwise editing of video elementary streams, including delete, insert, and invert of individual bits; full change tracking and change highlighting can now be performed; the edited stream can now be decoded or saved to disk; syntax element labels are now shown in the editor.
- Image Inspector** You can now view the pixel values for each color component of the current highlighted macroblock; you can now show the magnified image as well as decimal values.
- Misc. Enhancements** A number of other major enhancements were implemented:
- When using an uncompressed reference input, the time-based frame rate can now be ignored.
 - H.264/AVC monitoring: Frame time stamps are now derived from DPB SEI messages when present.
 - The fidelity graph now has three alternative modes for x-axis labeling: time, frames, or fields.
 - In the alert log view, alerts can now be copied to the Windows clipboard.
 - The decoded video output file can now be specified through the analysis options dialog as well as the command line.

Software Problems and Behaviors

Listed below are the known software problems and behaviors that you may encounter while using the MTS4EA software:

Installation Delays

The MTS4EA installation procedure may take several minutes to complete, depending on platform performance.

Toolbar Positions in Project Files

The window position of toolbars (including Macroblock and Summary tooltips) are not stored in MTS4EA project files.

Audio Support on Windows NT 4.0 OS Platforms

The TS4EA audio playout feature is not supported on platforms using the Windows NT 4.0 OS because of limitations in the operating system.

Verified Platforms

The MTS4EA software has been verified with the platforms listed in Table 1.

Table 1: Verified platforms for the MTS4EA software

Platform type	Operating system	Security level patches
Computer	Windows 2000	Windows 2000 Service Pack 4 Windows OS updates: KB329115,KB823182, KB823559, KB824105, KB824141, KB824146, KB825119, KB826232, KB828035, KB828741, KB828749, KB823732, KB837001, KB839645, KB840315, KB841872, KB841873, KB842526, KB840987, KB841356, KB841533, KB867282, KB871250, KB873333, KB873339, KB885250, KB885835, KB885836, KB888113, KB890047, KB890175, KB891711, KB891781 MDAC: KB870669 Media Player: KB828026 Internet Explorer 6: SP1, Q867801, Q832894, Q823353, Q837009, Q831167 DirectX: KB839643
Computer	Windows XP Pro	SP2
Tektronix AD953-II	Windows NT 4.0	SP6.0a
Tektronix AD953A	Windows NT 4.0	SP6.0a Windows OS updates: KB823182, KB824141, KB824146, KB825119, KB828035 Internet Explorer 6 with SP1 and Q828750
Tektronix MTS400 Series	Windows XP Pro	SP2 Windows OS updates: KB867282, KB873333, KB873339, KB873374, KB885250, KB885626, KB885835, KB885836, KB886185, KB887472, KB887742, KB888113, KB888302, KB890047, KB890175, KB890830, KB891781

Changes Implemented in Previous Software Versions

The following major and minor changes were implemented in previous versions of the MTS4EA software:

Version 3.1.1.0 - Major Changes

The following major changes were implemented in software version 3.1.1.0:

H.264/AVC Fidelity Range Extensions. Support was added for the following H.264/AVC fidelity range extensions:

- High
- High 10
- High 4:2:2
- High 4:4:4 profiles (all levels)

H.264/AVC Monitoring. Is now compatible with JM 9.3 code base.

VC-1 Monitoring. Support was added for RCV file format (SMPTE CD2r3 release).

Microsoft Windows Media v9 RC-1 Monitoring. Incorporated changes for Microsoft Windows Media v9 RC-1 release.

Version 3.1.1.0 - Minor Changes

The following minor changes were implemented in software version 3.1.1.0:

H.264/AVC Monitoring. The following problems were fixed:

- Fixed the problem in CABAC streams where certain bitstream errors could lead to incorrect decoding of when playback is repeated.
- Fixed the incorrect interpretation of the pan_scan_rect SEI message.

MPEG-4 Monitoring. The following changes were made:

- Video packet number is now available as overlay statistic.
- Motion compensation was corrected in quarter-sample interlace streams.

VC-1 Monitoring. The following problems were fixed:

- Corrected the tracing of IMODE and MVMODE elements.
- Corrected the MB trace when no quant is set.

Fidelity Metrics. Corrected the display of average fidelity metrics for interlace streams.

Version 3.1.0.2 - Minor Changes

The following minor changes were implemented in software version 3.1.0.2:

WMV9 Monitoring. The following changes were made:

- Added a warning about pre-RC1 interlaced streams.
- Corrected some block level elements being traced out at macroblock level (affects indentation and context, for example [PIC|MBK]).
- Improved the startcode logging, plus tracing of SUBBLKPAT and HYBRIDPRED elements (these were not always output in the log).
- Corrected the display of field pictures where the frame is an odd number of macroblocks high.
- Corrected the overlay for 4MV MBs in field coded pictures.
- Fixed the loss of stream sync in pictures using extended MVs where mvrage != 0.
- Added many new alerts.
- Range Reduction is now being performed in Advanced Profile.
- Trace flushing bits.
- Flush last frame on end of sequence.
- Fixed frame loss bugs for skip frames, and intensity-compensated field interlace pictures.

ASF Monitoring. The following changes were made:

- Support for the “WVC1” four-CC as VC-1 Advanced Profile.
- Corrected the handling of compressed payloads.

MPEG-2 Monitoring. Improved PES demux to allow non-video extraction and updated stream types from 13818-1 Amd.2.

H.264/AVC Monitoring. Corrected the parsing of filler data and user data SEI messages.

Version 3.1.0.0 - Major Changes

The following major changes were implemented in software version 3.1.0.0:

Microsoft Windows Media v9/VC-1 (WMV9/VC-1) Monitoring. Added support for Microsoft Windows Media v9/VC-1 (WMV9/VC-1) Simple, Main and Advanced Profiles (all Levels).

Added support for Microsoft Advanced Systems Format (ASF) extraction for WMV9/VC-1.

MPEG-2 Transport Stream (ISO/IEC 13818-1) Monitoring. Added support for MPEG-2 Transport Stream (ISO/IEC 13818-1) extraction for MPEG-2 and H.264/AVC Elementary Streams, and MPEG-2 PES and Program Streams.

H.264/AVC Monitoring. Added reporting of Reference frames in Summary Tooltip, MacroBlock tooltip and Trace/Interpret.

MPEG-4 Monitoring. Updated software to reflect 2004 ISO/IEC 14496-2:2004 edition.

MacroBlock Overlay Statistics. Added color maps for MacroBlock overlay statistics.

Input Type Specification. Input type can now be specified in file open dialog and in stream select dialog.

**Version 3.1.0.0 -
Minor Changes**

The following minor changes were implemented in software version 3.1.0.0:

Command Line. Added flags to enable fidelity analysis trace in batch mode.

MPEG-4 Monitoring. The “Unexpected end of stream” error was being incorrectly reported with files using the `visual_object_sequence_end_code`. This has now been fixed.

H.264/AVC Monitoring. The following changes were made:

- Changed the color of Intra_4x4 MacroBlock type to Yellow in MacroBlock types overlay (to distinguish from Intra_16x16 types).
- Corrected the motion vector range check. It was comparing horizontal component to both horizontal and vertical limits.
- Corrected the handling of leading zero bytes in Annex B NALU format.

GUI Correction. Corrected the motion vector overlay renderer. In rare cases, incorrect clipping was causing a software crash.

**Version 3.0.0.5 -
Minor Changes**

The following minor changes were implemented in software version 3.0.0.5:

H.264/AVC Monitoring. Reduced the level of the “First access unit must be IDR” alert to an error.

H.263 Monitoring. Improved the handling of GSTUF bits.

☒ **End of document** ☒