



MP4 Parser

Product Data Sheet

V1.1

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Features

File format

- MP4 file format defined by ISO/IEC 14496-14
- Advanced Video Coding (AVC) file format defined by ISO/IEC 14496-15
- QuickTime file format defined by Apple Inc.

Video track of the following codec types:

- MPEG-4
- H.263
- H.264
- JPEG still image
- Motion JPEG (format A, format B & M-JPEG 2000)
- SVQ3 (Sorenson video type 3)

Audio track of the following codec types:

- MP3
- AAC (including BSAC)
- MPEG-2 AAC
- AMR-NB & AMR-WB
- PCM (unsigned 8-bit, signed 16-bit little-endian or big-endian)
- IMA 4:1 ADPCM
- MuLaw PCM

More

- Piece-by-piece output of large samples
- Accurate time control on seeking (earlier, later than or nearest to the target time)

- Trick mode support by only picking up sync samples
- User data retrieving (title, artist, genre ...)
- Support files larger than 2GB (but less than 4GB)
- File loading optimized (less than 200ms under LINUX iMX51 Babage board for 2.5-hour clips)
- Overlook unrecognized or empty tracks safely
- Support non-seekable MP4 movies

Integrated into Windows® CE Direct Show, Linux GStreamer and OpenMAXIL frameworks.

Known Limitations

- No support for files larger than 4GB (large offset index table not supported yet)
- No support for multiple decoder types coexisting in one track
- No support for QuickTime file format with compressed file header

Supported Platforms

- Hardware – i.MX ARM platforms
- Software – eLinux, Windows® Embedded CE operating systems

Performance Outline

CPU Cost:

Typical spec: 1280x720, 30 fps, 7.7 Mbps

- 101.6MHz including the file reading
- 9.2 MHz on data parsing

Memory FootPrint:

Typical spec: 2hour: 22min movie with large index tables, 1 video track and 1 audio track

- 19268 KB

Movie Loading Time (time used to parse the file header):

Typical spec: 2 hour:22 min movie with large index tables, 1 video track and 1 audio track

- 2 seconds for file system to open the movie file
- 115 ms for parser to read and parse the file header

Use case:

MPEG-4 video + AAC audio
H.264 video + AAC audio

Performance measurements can deviate based on ARM core, memory and cache configuration on the board. This component is not ARM optimized.

For further details, contact Freescale customer representative