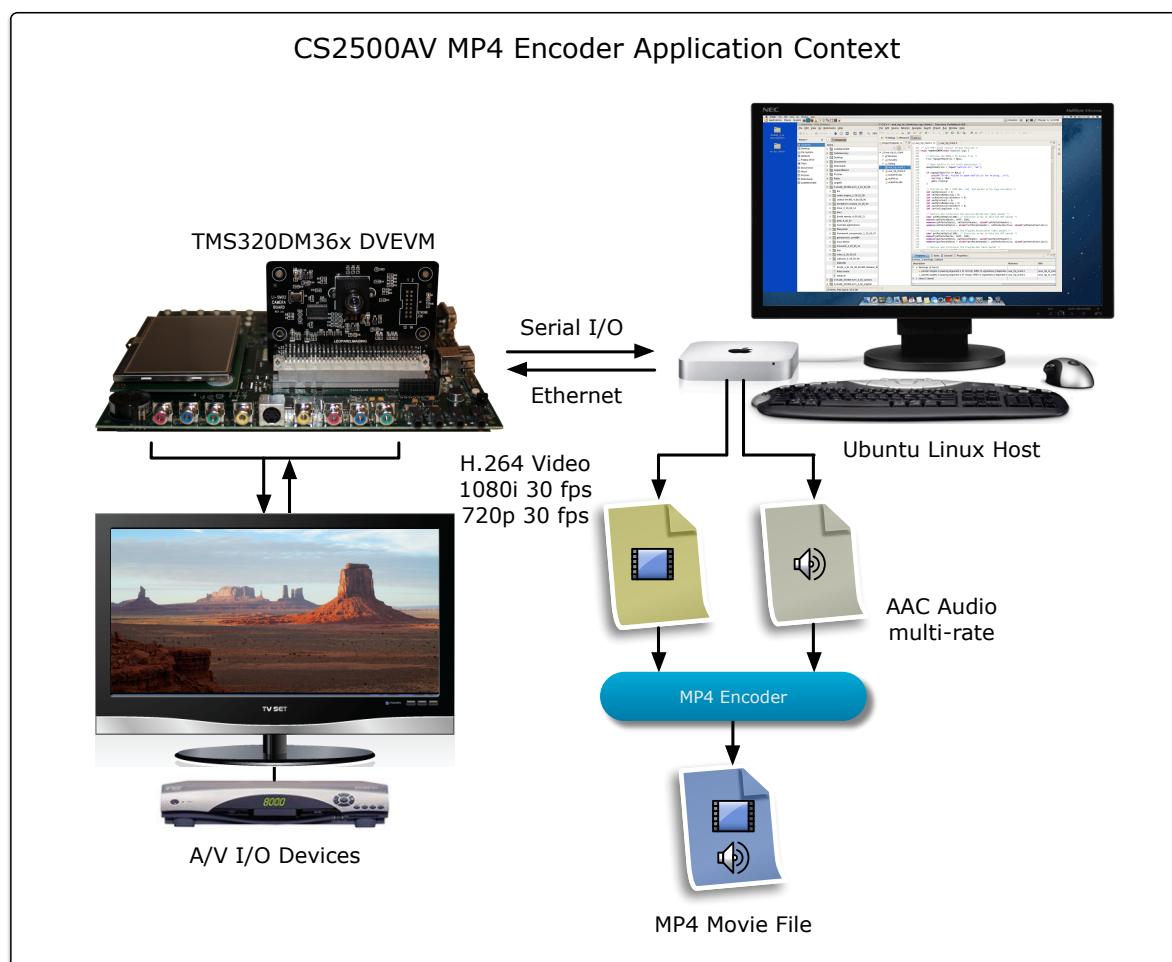# Cimarron Systems

CS25000AV MP4 Encoder Datasheet

The Cimarron Systems CS2500AV MP4 Encoder application encapsulates an H.264 video file and an AAC audio file into a canonical MP4 container file (generally, the source H.264/AAC are encoded by a Cimarron Systems DMSDK but other canonical H.264/AAC files may produce a correct MP4).
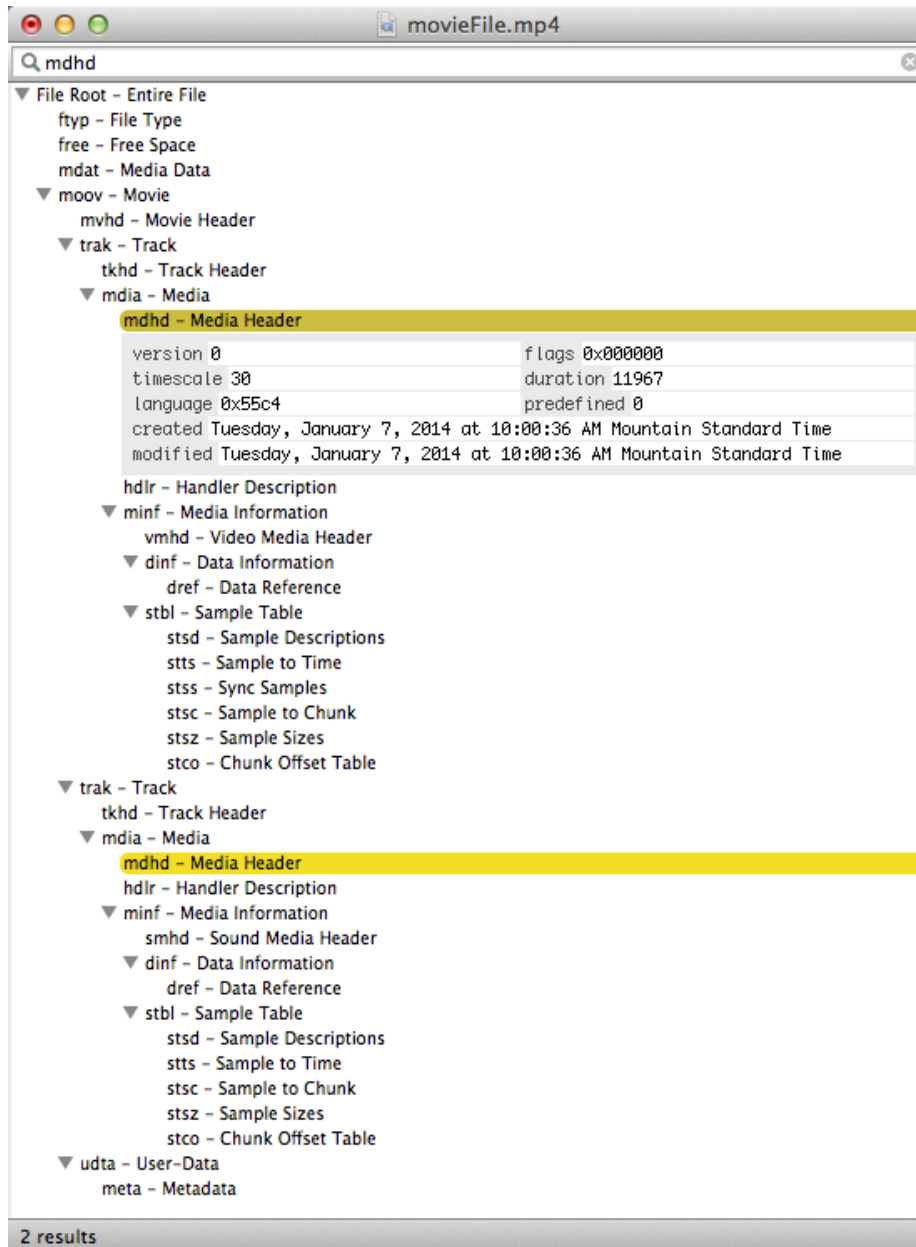
Overview of the User Environment

Figure 1 shows a context diagram of the typical environment in which the MP4 Encoder operates (please see the CS368-TI DMSDK Datasheet for details).

Figure 1: CS2500AV MP4 Encoder User Context Diagram.

Application Features

The CS2500AV MP4 Encoder application—which includes well-commented 'C' source code, make and utility files, a software developers guide, and example H.264/AAC source as well as encoded test clips—is implemented in accordance with international standards such that MP4 Movie Files it produces are playable on many popular media players. The CS2500AV MP4 Encoder is implemented in accordance with Apple's *QuickTime File Format Specification (7/13/2011 version)*—Figure 2 shows a typical Atom Inspector output for an encoded MP4 Movie File.

Figure 2: Atom Inspector Output for an Encoded MP4 Movie File.

The encoder implements the following functions:
- Analyzes the H.264 video file for possible dropped video frames so

that corrective action can be taken.

- Creates the ftyp, free, and mdat Global File Atoms.
- Creates the moov and mvhd Movie Atoms.
- Creates the trak and tkhd Video Track Atoms.
- Creates the mdia, mdhd, and hdlr Video Media Atoms.
- Creates the minf and vmhd Video Media Information Atoms.
- Creates the dinf and dref Video Data Information Atoms.
- Creates the stbl, stsd, stts, stss, stsc, stsz, and stco Video Sample Table Atoms.
- Creates the trak and tkhd Audio Track Atoms.
- Creates the mdia, mdhd, and hdlr Audio Media Atoms.
- Creates the minf and vmhd Audio Media Information Atoms.
- Creates the dinf and dref Audio Data Information Atoms.
- Creates the stbl, stsd, stts, stsc, stsz, and stco Audio Sample Table Atoms.
- Creates the MP4 file udta User Data and the meta Metadata.

System Requirements

The CS2500AV MP4 Encoder has been designed for and tested with Ubuntu Linux 10.04 LTS (or later). For more information regarding this and other Cimarron Systems products, please contact us using the contact information below.

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Revision History:

Date	Version	Notes
12/7/2012	version 1.0	Initial version.
1/3/2014	version 2.0	Minor updates.
4/18/2017	version 2.5	Minor updates.