

Broadcast-Quality Video Platform Solution for Real-Time, Live MPEG-4 Encoding

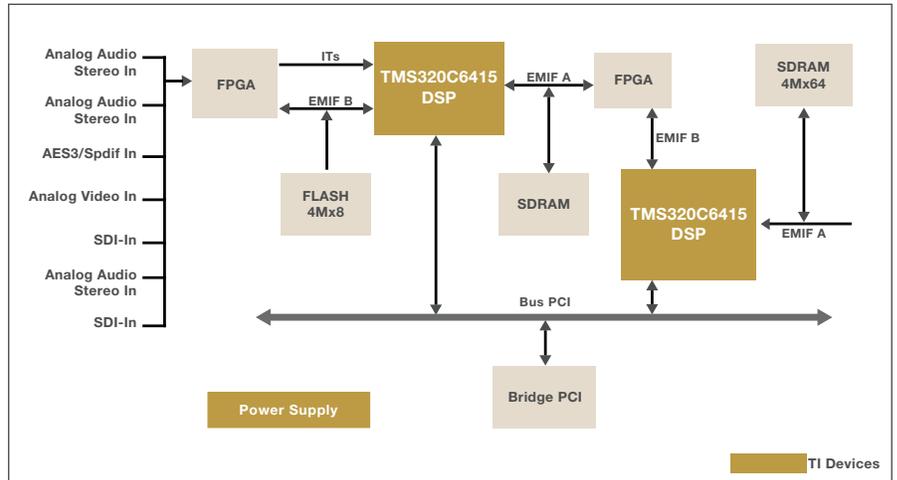
Benefits

- Provide outstanding broadcast-quality audio-video with D1 resolution, real-time MPEG-4 D1 encoding plus audio (Compatible with ISMA and Nero Digital)
- Easily customize system design via TI's programmable TMS320C6415 DSPs based solution
- Reduce time-to-market with a complete off the shelf, turnkey solution with hardware, encoding algorithms, drivers, control center, media player and technical support from Ateme
- Simplify design process with multiple board integration into any standard PC
- Differentiate products with preview monitoring (AMK420) and real-time decompression during encoding
- SDK available for PC applications under Linux and Windows®

Solutions for video/imaging products based on TI DSPs provide developers the flexibility to design a wide range of products. By leveraging the DSP programmability, processing performance, video specific peripherals and support for all major multimedia codecs, developers can design differentiated products with customized features to meet changing market needs.

For developers of video solutions requiring live MPEG-4 encoding, Ateme has developed a TI DSP-based solution to reduce time to market and minimize risk with its Kompressor AMK 4x0 platform. This broadcast video solution is embedded with multiple TI TMS320C6415 DSPs to execute high-end video compression algorithms, such as MPEG-4 live encoding of synchronized video and audio. The Kompressor boards are targeted toward many video applications, which require high quality and performance, with full D1 video and AAC audio. The PCI board is short form and available with SDK for PC applications under Linux and Windows and is delivered with GUI application examples, file recording and web streaming.

System Example: Broadcast Video Platform based on C6415 DSP-based AMK420 Board



Target Applications

- Broadcast market
- Online encoders
- Live streaming and recording appliances
- Offline PC encoding workstations
- Video conferencing
- Telemedicine, e-learning

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Functional Description

Two types of boards from Ateme are available to implement the Kompressor solution depending upon system needs:

- The AMK420 is a short PCI board with digital inputs and analog outputs, MPEG-4 Advanced Simple Profile and AAC encoding
- The AMK400 is the same board as the AMK420, but has analog audio and video inputs, MPEG-4 ASP and AAC encoding

Hardware

- Two (2) TMS320C6415 DSPs
 - TMS320DM642 Multimedia DSP can be used to replace C6415 DSP and FPGA
- (2) Altera FPGA
- Memory
 - Flash (4M x 8)
 - Two (2) SDRAM (4Mx64)
- PCI2050B Bridge PCI

Software

- MPEG-4 Encoder Advanced Simple Profile for all resolutions up to D1(720 x 480 @ 30fps or 720 x576 @25 fps) with AAC audio. MPEG-4 Simple Profile also available for ISMA compatibilities
- AAC audio encoder
- Ateme windows control applications for board configuration, MP4 file recording, RTP/RTSP unicast and multicast streaming
- The capacity to use Ateme catalog algorithms, for encoding, streaming, etc. in MPEG-4, MPEG-2, MPEG-1, MJPEG, H26x
- PC Drivers + DLL with API (useable with a documented SDK)
- GUI PC player, to decompress and reconstitute the compressed audio and video

Component Selection

The AMK 400/420 PCI-board solution comprises the following:

- Hardware – PCI board w/ TMS320C6415 DSP and Altera FPGA
- Embedded firmware for MPEG-4 encoding
- Windows® driver to interface with the Windows standard interface software
- Linux driver
- Windows application to immediately use the solution, delivered in source code as example or for speeding customization
- Windows Media player
- Possible to embed other encoding or streaming algorithms from Ateme's catalog: MPEG-4, MPEG-2, MPEG-1, H.264, JPEG and MJPEG

Getting Started – Development Tools

Tools

- AMK400/420 hardware platform with video and audio interfaces, PCI bus, dual powerful TI C6415 DSP processors and an Altera FPGA
- MPEG-4 Advanced Simple Profile encoding software, with pre-processing Kompressor control center, a Windows GUI application
- Software Developer Kit (SDK) for Linux and Windows complete with example source code, that shows the systems capabilities (optional)

Documentation

Kompressor data-sheet

All software user documentation and SDK APIs available from Ateme

Control center user's manual

Contact Information for Questions/Support

To purchase this solution or for more information: products@ateme.fr
www.ateme.com/products/kompressor.php

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