Universal Multimedia Player Based on DaVinci™ Technology

Benefits

- High-performance, cost-effective solution
- Easy upgrades and maintenance due to modular architecture
- Upgradeable audio and video codecs
- Progressive investment

ateme

Target Applications

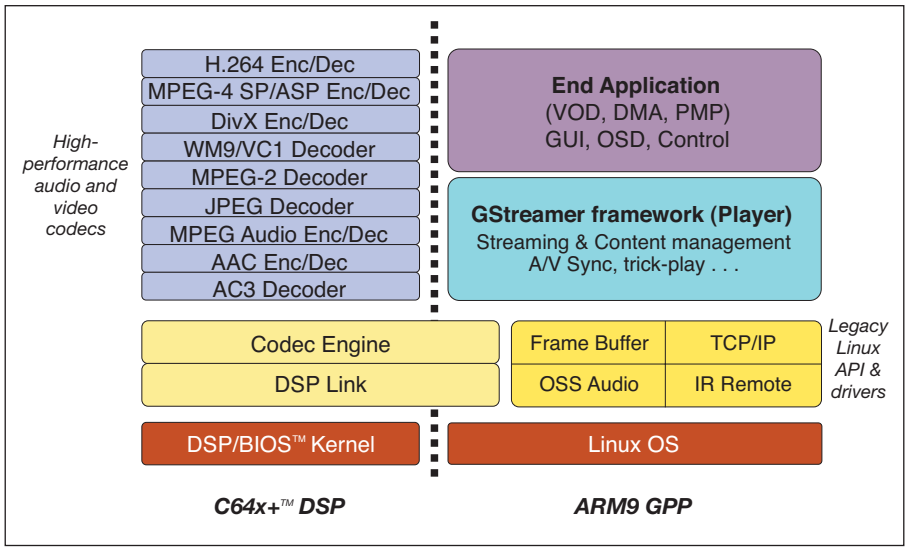
- **Video On Demand**
- **Digital Media Receiver**
- **Portable Media Player**

DAVINCI™ TEXAS INSTRUMENTS

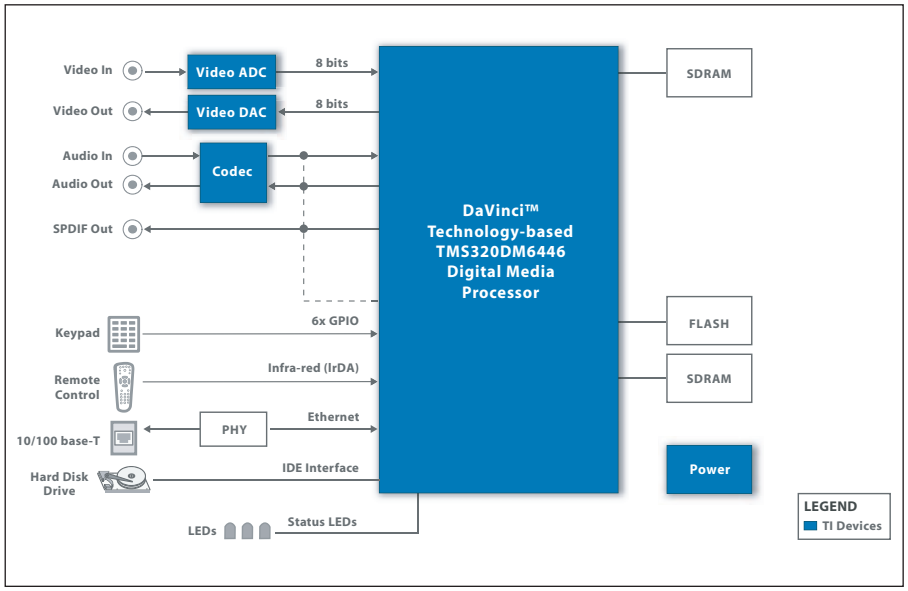
DSP™ TEXAS INSTRUMENTS
Authorized Software Provider

The ATEME Universal Player solution utilizes Texas Instruments TMS320DM644x digital media processors based on DaVinci™ technology. This powerful solution allows the best-in-class TMS320C64x+™ DSP core to handle all audio and video codecs, including MPEG4, H.264, DivX, Nero Digital™, Windows Media® Video version 9, MPEG1, MPEG2 and JPEG, while the ARM9 processor, running Linux OS, handles application control including GUI, OSD, streaming and content management.

System Example: Software System Block Diagram



System Example: Hardware System Block Diagram



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Functional Description

- Universal player (network, file, etc.)
- Video decompression: MPEG4 SP and ASP, H.264, Windows Media® Video version 9, MPEG1, MPEG2, DivX, Nero Digital™
- Audio decompression: AAC audio, MPEG audio (Layers 1, 2, 3)
- Image decompression: enhanced JPEG with on-the-fly resize, zoom and rotate
- Streaming: RTP/RTSP, MPEG2 TS
- ATA/IDE interface for hard disk drive or compact flash
- USB 2.0 host or device
- RS232 serial link
- 10/100 Base-T Ethernet
- Time shifting
- IrDA for remote control

Component Selection

TI Digital Video Evaluation Module (DVEVM)

Hardware

- Based on the TMS320DM6446 processor
- Additional hardware components:
  - NTSC/PAL video camera
  - LCD screen, speakers and microphone
  - IR remote
  - Hard disk drive (2.5-inch 40 G)

Software

- Codec demos including H.264, MPEG4, MPEG2, AAC, G.711
- Multimedia APIs and frameworks
- MontaVista 2.6.10 Linux support package

Connectivity

- Connectivity capabilities: USB 2.0, 10/100 EMAC
- Multiple on-board memory types: CompactFlash™, ATA, SD, DDR
- Video input via NTSC/PAL
- Video output via NTSC/PAL and YPbPr/RGB
- CD-quality audio input and output
- Daughter card connections to most peripheral interfaces

ATEME A/V Framework based on GStreamer

A/V Framework required for:

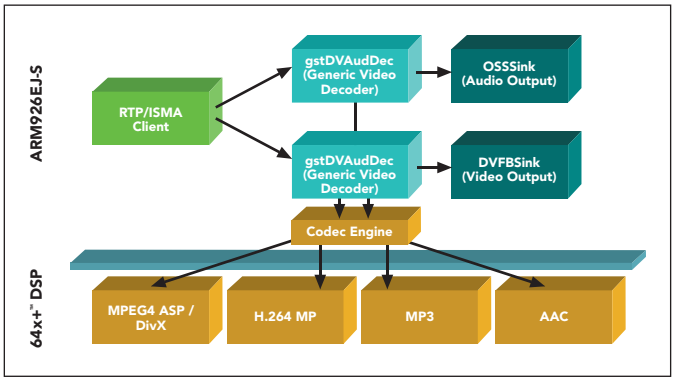
- Stream-in and stream-out (network protocols, file reader/writer)
- Multi-codec management (auto identification, generic API)
- Stream flow management
- Clock recovery and A/V Sync
- Connection to peripheral drivers (capture/rendering driver)

GStreamer (www.gstreamer.net) is:

- Recognized Open Source project
- Already used in existing embedded system
- Graph-based design (connect boxes only)
- Modular and flexible for easy maintenance of application

ATEME A/V Framework benefits:

- GStreamer core already ported to devices based on DaVinci™ technology
- Encapsulation and connection to TI codec engine
- Additional plug-ins with proven interoperability (RTP, 3GPP, ISMA, TS)
- Support and engineering services



The above shows a sample configuration for a multimedia player application. For other applications, more filters should be applied.

Getting Started

Tools

- TI Code Composer Studio™ Integrated Development Environment
- MontaVista Linux 4.0 Professional Development Environment
- Onsite technical training for customers —contact ATEME

Documentation

All relevant technical documentation is available from ATEME.

Contact Information for Questions/Support

To purchase this solution or for more information, please contact:
products@ateme.fr
www.ateme.com/products/index.php

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