

# Portable Media Player Based on DaVinci™ Technology

## Benefits

- Comprehensive design provides ODMs and OEMs a solution for rapid time-to-market
- Designed and optimized for portable applications
- Supports a multitude of operating systems such as Microsoft® WinCE and Linux
- Provides high-quality multimedia encoding and decoding. Supports all standard video, image and audio codecs
- Optional features include Windows Media® DRM, WiFi and Bluetooth
- Easy to maintain and upgrade using standardized multimedia framework



## Target Applications

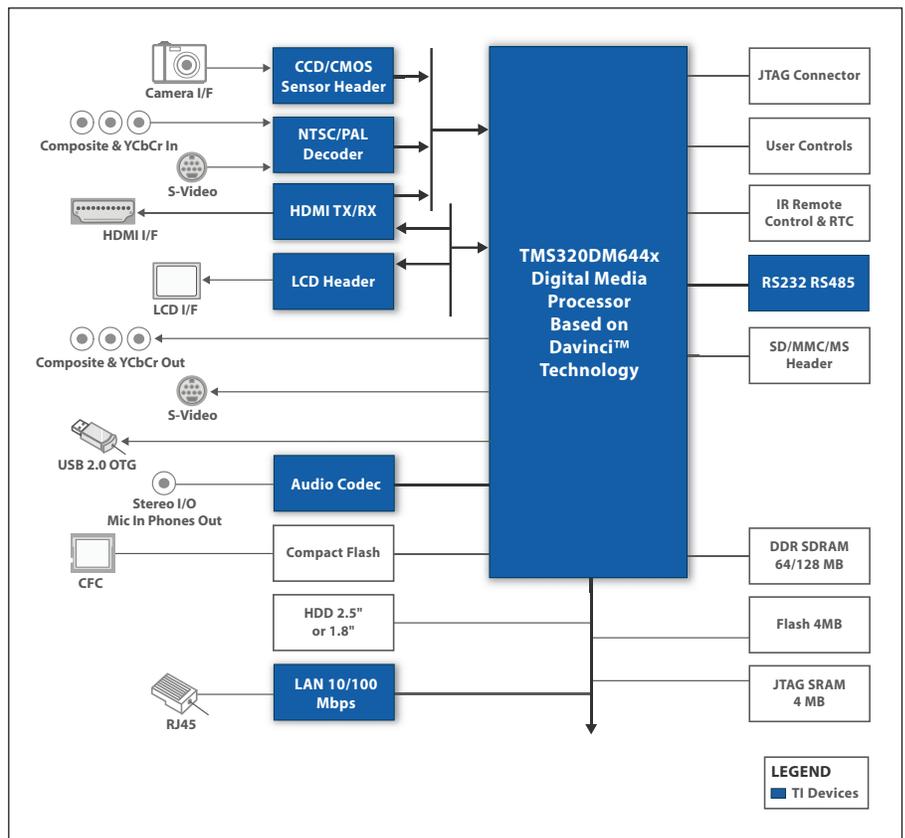
- Flash-based or HDD-based personal media player/recorder (PMP)
- Portable or mobile GPS + PMP
- DVB-T Receiver + GPS + PMP
- T-DMB Receiver + GPS + PMP
- DVB-H Receiver + GPS + PMP
- ISDB-T + GPS + PMP
- Camcorder + GPS + PMP



Today, portable media player (PMP) functionality has become a must-have for portable DTV receivers used in DVB-H/T, ISDB-T, T-DMB and VOD products. Ingenient has been at the forefront of this requirement by enabling various leading companies to introduce successful battery-powered PMPs into today's marketplace. As a primary solution provider, Ingenient offers complete solutions that facilitate extensive digital movie, music and photo playback and recording.

The MP512x-PMP-DM644x product design solution utilizes the TMS320DM644x processor based on DaVinci™ technology. This solution provides power-efficient, high-quality multimedia, giving Ingenient's customers the capability to make high-end digital media products without sacrificing portability or power. The solution also includes TI AIC33 stereo codec, TVP5160 video decoder and TPS62/TPS76 series power regulations.

## System Example: Hardware Block Diagram



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## Functional Description

<ul style="list-style-type: none"><li>• User-friendly graphical interface for easy operation</li></ul>
<ul style="list-style-type: none"><li>• Record video and synchronized audio directly from TV, VCR, DVD player or video camera plus still images</li></ul>
<ul style="list-style-type: none"><li>• Record audio directly from any stereo or mono audio source including microphone</li></ul>
<ul style="list-style-type: none"><li>• Download and store digital video, audio and images from PC over USB 2.0 or 802.11 b/g</li></ul>
<ul style="list-style-type: none"><li>• Play movies on an integral LCD screen and headphones or on a TV monitor and speakers</li></ul>
<ul style="list-style-type: none"><li>• Display photos with or without music in still or Photo Show mode</li></ul>
<ul style="list-style-type: none"><li>• View and record DVB-H, T-DMB or ISDB-T broadcast content</li></ul>
<ul style="list-style-type: none"><li>• Personal navigation and broadcast content viewing</li></ul>

## Component Selection

- TMS320DM644x processor
- TLV320AIC33 (audio codec)
- TVP5160 (video codec)
- TPS62xxx (power regulators)
- TPS76xxx (power regulators)

## Development Boards

- MP4900-BRD-DM644x-10
- Schematics
- Gerber files

## Software

- Multimedia framework
  - Integrated multimedia operational modes and functions
- Operating systems
  - WinCE 5.0
  - Linux 2.6.15
- Video pre/post processing
- Audio equalization and audio post processing
- Audio/video/communications hardware drivers
  - AIC33
  - TVP5160
  - USB 2.0 Host/Client
  - LAN
  - 802.11g
- Video codecs
  - H.264
  - MPEG4 SP/ASP
  - MPEG2
  - MPEG1
  - DivX (home theater profile)
  - XviD
  - Windows Media® Video 7/8/9

- Audio codecs
  - Dolby digital (AC-3)
  - MPEG2 AAC LC
  - MPEG4 AAC LC
  - MPEG4 AAC HE (version 1.0 and 2.0)
  - MPEG1/2 layer 1 and 2
  - MPEG1/2 layer 3 (including MP3 2.5)
  - Windows Media® Audio
  - Ogg Vorbis
- Speech codecs
  - G.711
  - G.722/722.1
  - G.723.1
  - G.726
  - G.729AB
  - GSM-AMR

## Getting Started

### Documentation

- API manuals
- User guides
- Example code
- Release notes
- Email/phone support

### Ingenient Services

- Integration
- Customization
- Solution design

## Contact Information for Questions/Support

To purchase this solution or for more information: [sales@ingenient.com](mailto:sales@ingenient.com)