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

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**

- User-friendly graphical interface for easy operation
- Record video and synchronized audio directly from TV, VCR, DVD player or video camera plus still images
- Record audio directly from any stereo or mono audio source including microphone
- Download and store digital video, audio and images from PC over USB 2.0 or 802.11 b/g
- Play movies on an integral LCD screen and headphones or on a TV monitor and speakers
- Display photos with or without music in still or Photo Show mode
- View and record DVB-H, T-DMB or ISDB-T broadcast content
- Personal navigation and broadcast content viewing

**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

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