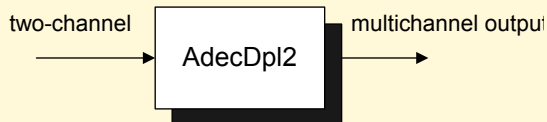


AdecDpl2 is a Dolby Surround Pro Logic II Decoder Library to derive/produce 5.1-channel audio from a two-channel delivery medium on processors based on the TriMedia 32-bit architecture.



AdecDpl2

Description

The Dolby Surround Pro Logic II Decoder library can be used in any product using a 32-bit TriMedia VLIW processor core. It can be configured to meet high-end audio requirements, such as 5.1 channel decode with 24-bit PCM output samples.

The Dolby Surround Pro Logic II decoder library does not implement typical post processing functions as bass management. A fixed 10ms channel delay on the surround channels is added when the decoder is used in Movie or Prologic emulation mode.

Applications

- DVD Players
- DTV Systems
- Set-Top Boxes
- Digital Video Recording systems

Documentation

A detailed document describing the API and the internal behaviour of the component is available.

Licensing

This software library is ported to TriMedia from reference code provided by Dolby Labs. Under the terms of the porting agreement, Philips is an "Implementation Licensee." This library can only be provided to entities licensed by Dolby as a "System Licensee."

If a customer is interested in developing a product containing Dolby technologies, they must contact Dolby Laboratories and apply to become a System Licensee. A written request that includes a description of the intended application is required to begin the application process. All such requests should be faxed to Dolby Laboratories Licensing Corporation at 415-863-1373 and marked "Request for Dolby System License Application." Information explaining how to proceed with the application will be sent to the customer, including a confidential questionnaire that must be completed and returned for the qualification process to begin.

Features:

- DVP compliant
- 16, 18, 20, and 24-bit PCM sample resolution
- certified by Dolby® Laboratories
- support for five different decoder modes: Movie, Music, Matrix, Pro Logic Emulation and Virtual Compatible mode
- support for three different multi-channel main output configurations
- support for three user-adjustable controls: Dimension control, Center Width control and Panorama mode
- streaming and non-streaming TSSA interface

AdecDpl2

Technical Information

Memory Usage

Static	1910 Bytes
Dynamic (excluding pSOS task stack size)	Application dependant Packet Buffersize = 16384 bytes. In case of 16bits PCM : Buffersize * 8 = 131072 bytes (apfStereo16) In case of 18/24bits PCM: Buffersize * 4 = 65535 bytes (apfStereo32) In case of 18/24bits PCM: Buffersize * 8 = 131072 bytes (apfDeintStereo32)

Additional memory is required for buffering of input and output data. This amount is application-dependent.

Processor Load (MIPS)

Minimum CPU load	9.4 (32kHz)
Maximum CPU load	14.2 (48kHz)
Average CPU load	13.9 (44.1kHz)

All the measurements have been done with:

Description of the TriMedia board:

Type	TriRef
CPU	TM1302
CPU clock	192 MHz
Memory	32 MB SDRAM
SDRAM/CPU clock ratio	1:1

Configuration of the host PC:

Type	NA
CPU	Pentium III
CPU clock	NA
Memory	NA
OS	Windows 2000

Other Information

Supported Processors	TM1300, PNx8500, PNx8525
Version number	1.4
Patent Lincence Issues	Please visit www.dolby.com
Build with Compiler Version	V5.7.1 of tcs2.2-dvp0003WinNT

Related TSSA Software Components

AdigAi, ArendAO, ArendSpdif

Example Programs

This library is shipped with one example program. The example exolAdecDpl2 implements a real time music player. It uses the streaming interface of the Dolby Surround Pro Logic II decoder library. PCM-data is read from a file by the Fread component and sent to the DPL2 decoder. The DPL2 decoder sends the decoded PCM samples to the Audio Renderer component.

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