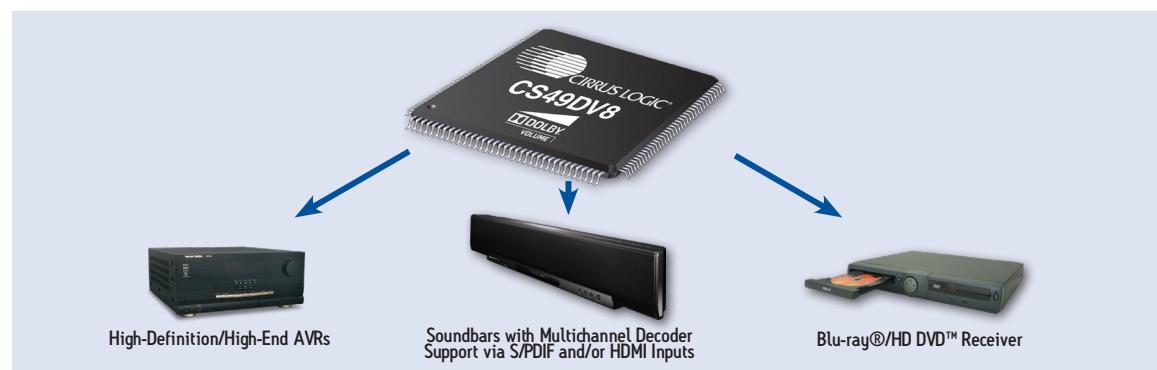




CIRRUS LOGIC®

CS49DV8 Processor with Dolby® Volume

The final solution to inconsistent volume issues



CS49DV8 FEATURES

- World's first cost-effective, dedicated functionality audio DSP that delivers Dolby Volume processing capable of supporting up to 7.1 channels as well as audio streams with sampling frequencies higher than 48kHz without decimation
- Enables Dolby Volume post-processing in support of all of the latest high-bit-rate HD Audio algorithms including: Dolby® Digital Plus, Dolby® TrueHD, DTS-HD High Resolution Audio™ and DTS-HD Master Audio™ which are available on the CS49700
- Supports the maximum profile as defined in the latest release of the Dolby Volume IDK:
 - 1024-point FFT Window for 1Fs
 - 2048-point FFT Window for 2Fs
 - 4096-point FFT Window for 4Fs
 - 40-bands/channel - regardless of incoming Fs or processing rate
- Up to 2.1 channels of Dolby Volume processing at the native input rate up to 4F (176.4kHz and 192kHz) without decimation
- Up to 5.1 channels of Dolby Volume processing at the native input rate up to 2F (88.2kHz and 96kHz) without decimation
- Up to 7.1 channels of Dolby Volume processing at the native input rate up to 1F (32kHz, 44.1kHz and 48kHz) without decimation
- Optional 4:1 and 2:1 Fs input decimation support for higher channel count streams that have higher Fs than 48kHz
- Up to 8 channels of 32-bit serial audio input
- 6-channel DSD decimation enables SACD support
- 8 Ch x 32-bit LPCM Out with Dual 192kHz S/PDIF Tx
- Two SPI™/I2C® ports
- SDRAM and serial flash memory support

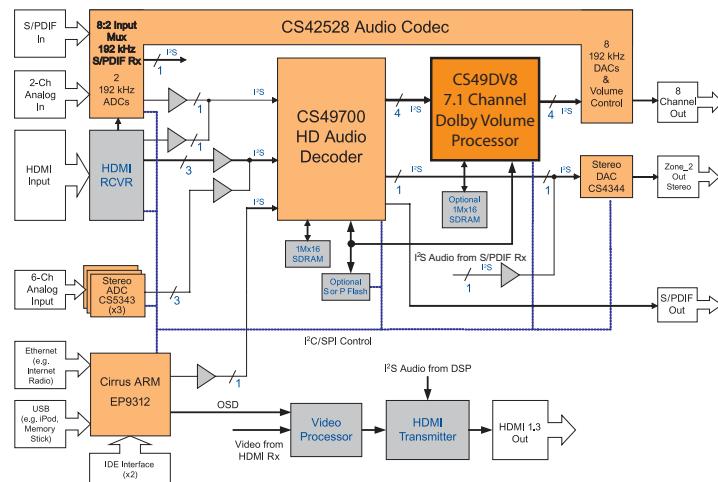
Dual-engine 32-bit Audio DSP for Dolby Volume-enabled next-generation consumer electronics

The advent of next-generation high-definition disc players, based on the Blu-ray® and HD DVD™ disc formats, presents significant design complexities for original equipment manufacturers (OEMs). While most of the attention has been placed on high-definition video, the emergence of new audio formats utilized in high-definition disc standards poses even greater challenges for OEMs seeking to penetrate this quickly evolving consumer market.

The key feature requirement for the new generation disc formats is not only the ability to decode a wide variety of audio algorithms, including Dolby Digital® Plus,

Dolby® True HD, DTS, DTS-HD High Resolution Audio, DTS-HD Master Audio and DTS Express (LBR) enabled by the Cirrus Logic CS49700, but Dolby Volume as well.

All of these types of audio sources are capable of delivering both high sampling frequency information, high channel counts (up to 7.1 channels) and incredibly high dynamic ranges, which may not be desirable at all listening locations or at all times by the consumer, yet, decimation of this high performance audio may simply not be acceptable. This is where CS49DV8 comes into play.



Block diagram of a Dolby® Volume-enabled 7.1 Channel HD A/V Receiver



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CS49DV8

CRD49DV8-USB DEVELOPMENT PLATFORM

The CRD49DV8-USB Evaluation Kit is composed of the CRD49DV8 Customer Reference Design as well as the CRD-USBMMASTER-DC-Z USB Host Control / Audio Playback / Capture Board. The later board can be used to spool standard and uncompressed Linear PCM stereo and multichannel audio to the CS49DV8 device to undergo Dolby Volume processing using provided command-line based tools such as USBPLAY.

Separately, the CRD-HDMI-DC-Z Evaluation Board is available for designs which feature HDMI® inputs and features a dual input Silicon Image™ Si9135 HDMI Receiver as well as a single Si9134 HDMI Transmitter.

The CRD49DV8 Evaluation Board provides a practical platform for emulating a typical HD Audio multichannel audio system application and is a powerful aid to system designers during the design and development of their platforms.

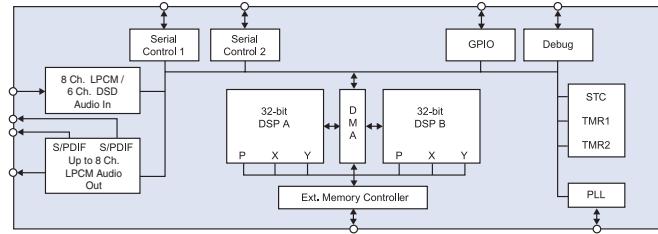
DOLBY VOLUME EVALUATION GUI

The CS49DV8 is controlled and evaluated using the Cirrus Logic proprietary GUI software development tool. Due to the fixed-function nature of the CS49DV8, there is no need for any sort of programming interface. The tool configures the CS49DV8 through the SPI™ / I²C® serial port. In the end-system design, the firmware may be loaded from ROM or microcontroller downloaded through the serial control port.

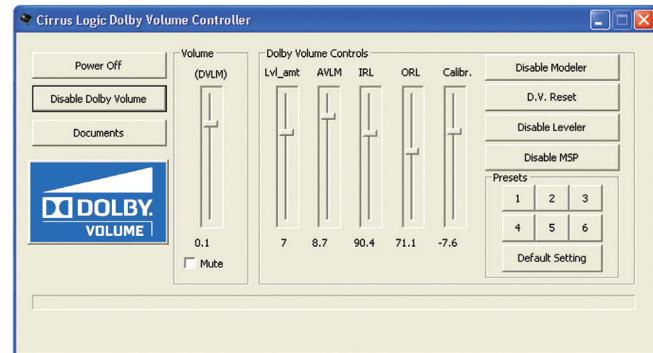
ORDERING INFORMATION:

Device:	CS49DV8C-CQZ (Sampling in April, 2008)
Package:	128-pin LQFP
Evaluation Board:	CRD49DV8-USB
Optional Board:	CRD-HDMI-DC-Z
Documentation:	CS49DV8 Data Sheet and CS49DV8 System Designers Guide
Tools:	Dolby Volume Controller GUI Evaluation Tool

CS49DV8 Architecture



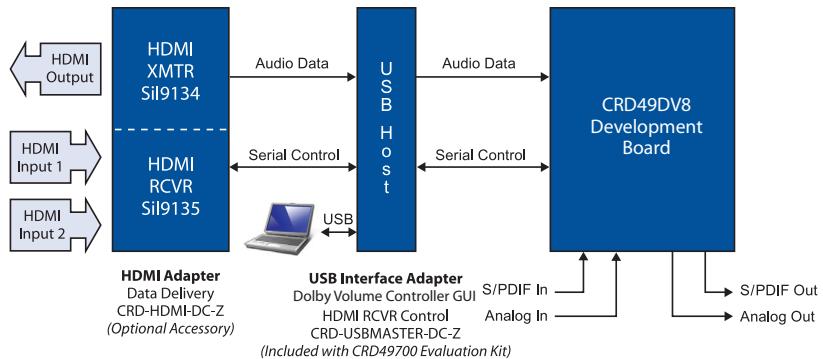
Dolby Volume Controller GUI interface



CS49DV8 Dolby Volume
development board



CRD49DV8 Development Platform



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