

# CS48DV2/6 Processor with Dolby® Volume

The final solution to inconsistent volume issues

## CS48DV2/6 Processor Overview:

The CS48DV2 and CS48DV6 processors give OEMs a cost effective, fixed-function, simple-to-design Dolby Volume solution

## Dolby Volume Overview:

- Consistent volume across all input sources and all content
- Consistent volume within the same program
- Eliminates need to constantly adjust volume
- Full, rich, and consistent experience at all volume levels
- Improved vocal and surround perception at low volume levels
- No artifacts or audible side effects

## CS48DV2/6 Processor Features:

- 2.0 to 2.1 Channel / 3.0 to 5.1 Channel 32-bit fixed-function Dolby Volume processing (512 FFT Window / 20-Band)
- CS48DV2 supports up to 2.1 channel 32-bit PCM I/O at Fs of 32kHz, 44.1kHz & 48kHz
- CS48DV6 supports up to 5.1 channel 32-bit PCM I/O at Fs of 32kHz, 44.1kHz & 48kHz
- Integrated S/PDIF Transmitter
- 2/6 Channel DSD input support (Rev. B)
- SPI™/I<sup>2</sup>C® serial control port
- Low-power standby: 260µW

## CS48DV2/6 Key Benefits:

- Easy to design – only 10 parameters to control from host microcontroller
- High-performance & low cost
- No external SRAM/SDRAM memory needed
- Dedicated part number simplifies tracking and reporting tasks, reducing liability
- Firmware image can be downloaded from either host microcontroller or from external SPI Flash device at speeds up to 12.288Mhz

## CS48DV2/6 Processor Target Markets:

### Digital Televisions



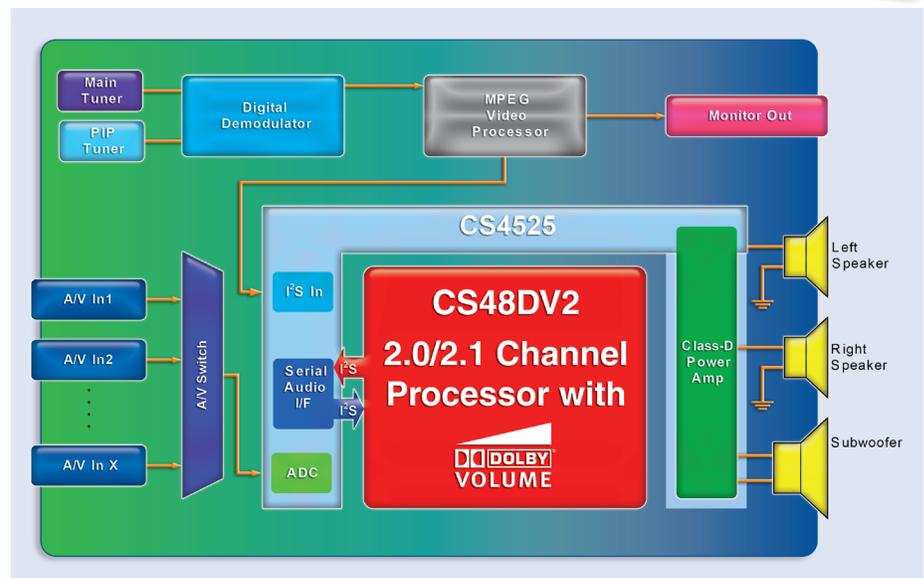
### 5.1 Channel AVRs



### Automotive Entertainment



### 2.1/5.1 Channel Hi-Fi, DVD Receivers and HTiBs



The CS48DV2 Processor with Dolby Volume implemented in a 2.1 channel DTV application



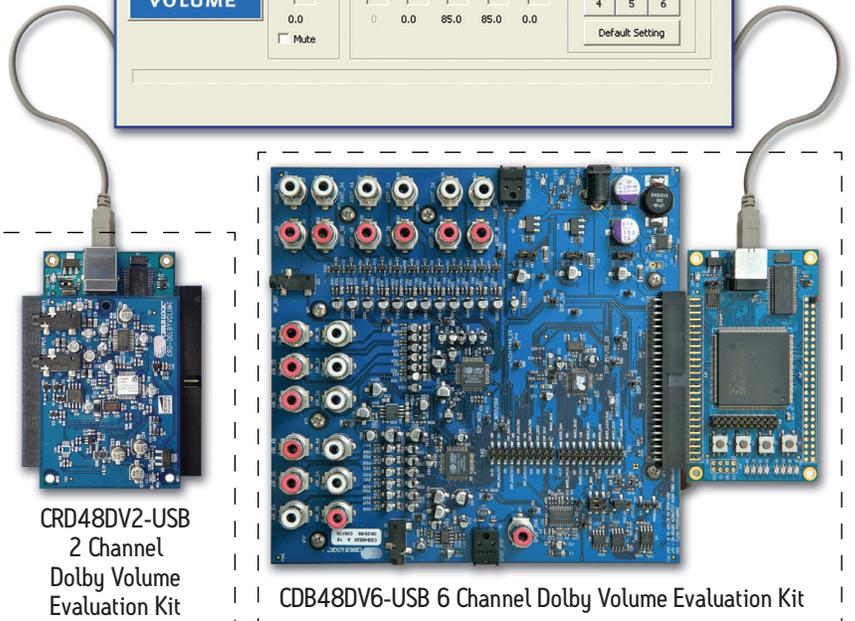
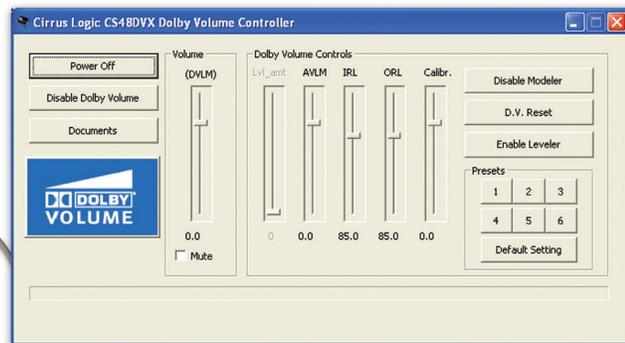
## Using the Cirrus Logic CS48DVx / CS49DV8 Controller GUI for Dolby Volume

### Ordering Information:

#### CS48DV2/6 Processor Family

Device(s)	CS48DV2A-CQZ <i>(Available December '07)</i> CS48DV2B-CQZ <i>(Available April '08)</i> CS48DV6B-CQZ <i>(Available April '08)</i> CS48DV2A-DQZ <i>(Automotive)</i> <i>(Available December '07)</i>
Package	48-Pin LQFP
Eval. Boards	CRD48DV2-USB CDB48DV6-USB
Application Note	AN298PPMN
Tools	<u>Cirrus Logic CS48DVx / CS49DV8 Dolby Volume Controller GUI:</u> software tool offers a simple and quick method during the evaluation & design stage

The CS48DV2/6 ICs are programmed with the latest Dolby Volume firmware using the Cirrus Logic proprietary GUI software development & evaluation tool called Dolby Volume Controller. This same tool then configures the CS48DV2/6 through the SPI™/I²C® serial port via the USB 2.0 cable. The IC can be sent a command to boot itself using firmware loaded from ROM within the CS48DV2/6 (starting with Rev B Silicon - available in April, 2008), or it may be downloaded through the serial control port from either a master host microcontroller or an external I²C EEPROM or SPI Flash device. In all cases, the host microcontroller is responsible for downloading the specific hardware and software configuration commands. All Dolby Volume parameters running on the CS48DV2/6 firmware can be adjusted in real-time as well as allowing 6 different presets to be saved and recalled easily, enabling very simple and quick “A/B” listening tests for the target design.



CRD48DV2-USB  
2 Channel  
Dolby Volume  
Evaluation Kit

CDB48DV6-USB 6 Channel Dolby Volume Evaluation Kit

