CS485xx Family Audio DSP
Better Sound Made Simple

Overview:
The CS48520, CS48540 and CS48560 ICs give OEMs a cost effective and simple-to-design audio post-processing solution that provides an extensive selection of enhanced audio features to maximize the end user’s listening experience.

CS485xx Family Features:
- Multichannel 32-bit audio post processing at 150 MHz with dual MACs (300 M MACs/Sec)
- CS48520 supports 4 channel 32-bit PCM I/O
- CS48540 supports 8 channel 32-bit PCM I/O
- CS48560 supports 12 channel 32-bit PCM I/O
- 192 kHz S/PDIF Tx
- SPI™/I²C® serial control port
- Low-power standby: 260µW
- Large on-chip RAM & ROM
- Programmable GUI software tool
- Licensed third party audio processing algorithms in ROM, plus extensive library of Cirrus proprietary downloadable and customizable firmware - see back for complete list of algorithms

CS485xx Family Key Benefits:
- Easy to design – most standard processing features & some 3rd party algorithms in ROM
- DSP Composer GUI simplifies programming
- High performance-to-cost ratio
- No external memory needed
- Complete PCM processor in a single IC:
  - Matrix decoders
  - Automatic volume leveling/modeling
  - Speaker and headphone virtualizers
  - Bass management
  - Speaker and cabinet tuning
  - Automatic speaker/room EQ
  - Lip-sync delay

CS485xx Family Target Markets:
Digital Televisions/Soundbars
Accessories Products
Automotive
Blu-ray®/DVD™ Receivers & HTiB Systems

Cirrus Logic’s CS48520 & CS4525 as used in a 2.1 channel DTV application

www.cirrus.com
The CS48520/40/60 is programmed using the Cirrus Logic proprietary GUI software development tool called DSP Composer™. An audio processing chain is designed using a drag and drop interface. The tool then configures the CS48520/40/60 through the SPI™/I2C® serial port. The firmware may be loaded from the ROM within the CS48520/40/60 or it may be downloaded through the serial control port.