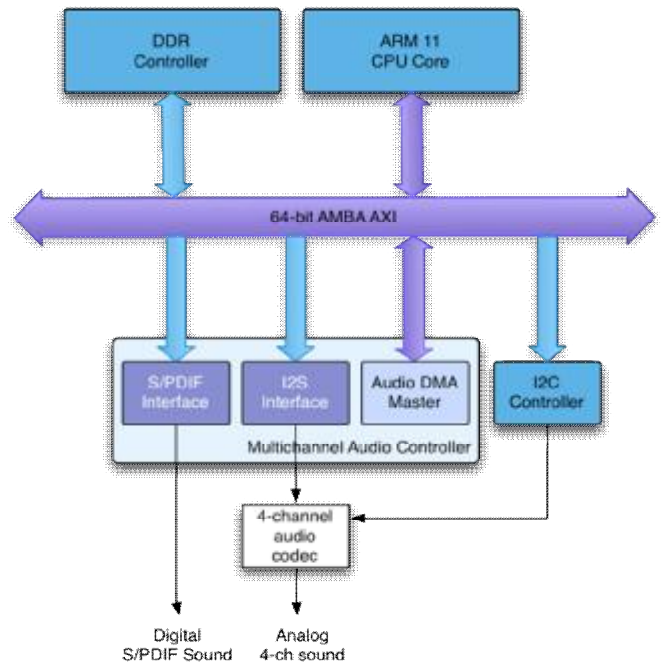


IP Core Multichannel Sound Controller

Key Features

- Multichannel sound controller for consumer electronics applications
- Support S/PDIF and 4-channel I2S interfaces
- Sound buffers of arbitrary size in external memory
- Relaxed requirements for interrupt handling
- ALSA & OSS drivers



Technical characteristics

- S/PDIF (IEC 60958-3) Capabilities:
 - Multichannel compressed audio: AC-3, DTS, MPEG-2 AAC, MPEG-4 AAC
 - Mono & stereo PCM audio: 24 kHz-192 kHz frequency, 16, 20, 24 bit samples. Both big- and little-endian formats supported
- I2S Capabilities:
 - Up to 4 stereo channels
 - 16 and 24 bit PCM input buffers
 - Up to 44 kHz output frequency

Configuration options

- System could be configured to use internal or external memory buffers for sound
- S/PDIF and I2S can be used independently of each other

Interfaces

- 4-channel I2S interface
- digital S/PDIF interface
- AMBA AXI Master
- APB Slave for configuration
- Linux drivers are available

List of Deliverables

- Verilog source code
- Verilog test bench and Verification environment
- Software driver for Linux OS
- Example synthesis scripts
- Documentation

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