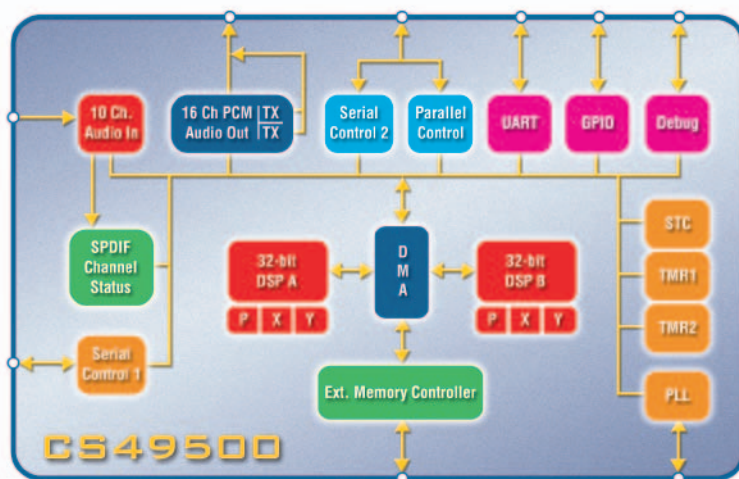# New Audio DSP Delivers High-End Performance
Powerful 32-bit Dual Coyote32™ Core (1440 MOPS)

CS49500/10/20 Features

- Powerful 32-bit, dual-core audio DSP
  - Supports simultaneous dual-decode
- Cirrus® Audio Software Library (3-Overlay)
  - Decoder
    - Dolby® Digital ProLogic® II,™ Dolby Digital-EX,™ DTS-ES™ 96/24,™ DTS-ES Discrete 6.1,™ DTS-ES Matrix 6.1,™ AAC Multichannel 5.1, WMA 9, MP3, MPEG Multichannel Audio
  - Matrix Processor
    - Dolby Digital-EX ProLogic IIx,™ DTS Neo:6,™ SRS Circle Surround,™ Cirrus Extended Surround™
  - Post-Processor
    - Dolby Digital Headphone™ / Dolby Digital Virtual Speaker,™ SRS Tru-Surround,™ THX® Ultra 2 Cinema,™ THX Surround EX,™ DVD Audio/SACD Multichannel Bass Management
- Cirrus Audio Software Development Kit
  - Coyote32 assembler and linker
  - Coyote32 C compiler
  - Hydra™ 2.0 chip simulator and in-circuit emulator
  - Audio OS and plug-in framework
- Customer software security keys
- Large on-chip X, Y & program RAM
- 10-channel, 32-bit serial audio inputs
- 16-channel, 32-bit PCM outputs
- Two master/slave SPI or I2C® format control ports for audio subsystem management
- Supports SDRAM, SRAM, FLASH memories
- Dual 192 kHz S/PDIF transmitters
- Available in 144-pin LQFP
- CS49500 price: $12.95 (10K)

Designed as an ideal silicon solution for audio video receivers and DVD receivers, the new CS49500 family integrates two programmable 32-bit DSP cores and a DMA engine with a full set of audio peripherals. Feature-rich designs can be easily developed using the Cirrus® Audio Software Library, which includes both certified application programs and a modular plug-in environment for easy customization using Coyote32 assembly or C programming. The framework includes certified state-of-the-art audio decoders, virtualizers, surround simulators, and audio-enhancement algorithms.

The CS49500 family is designed to reduce system costs and development time and provide features and flexibility for competitive system-level solutions. Difficult processing tasks that incorporate Dolby Digital Surround EX, AAC multichannel, DTS-ES 96/24, and THX Ultra2 Cinema can now be accomplished without the expense of external logic or memory. Additionally, the CS49500 family meets the needs of today's high-end audio systems with twin DSP cores, I/O intensive designs that support up to 10 input and 16 output channels, and on the CS49520 design, support for simultaneous dual-decode.

Delivering an extensive selection of silicon and software capabilities, the CS49500 family is an excellent Total Entertainment (Total-E™) IC Solution for your next-generation digital home entertainment product.

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