

Leading the Digital Entertainment Revolution[™]

CS49500/10/20

PRODUCT BULLETIN

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)

ID Ch. 16 Ch PCM IX Audio Ia 16 Ch PCM IX Serial Parallel Control 2 Control SPDIF 32-bit Status BSP A P X Y P X Y Serial P X Y

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^{m}) IC Solution for your next-generation digital home entertainment product.

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