New Highly-Integrated Processor for Tomorrow's DVD Players and DVD Receivers Available Today

CS98200 Features

- DVD-Video, VCD, VCD 2.0, SVCD, CD, and other popular standards
- DVD-Audio including CPPM and Verance™ watermark protection
- MPEG1, MPEG2, and leading edge MPEG4 decoding
- Kodak Picture CD
- Flexible ATAPI or AV bus DVD loader support with no additional logic
- Dual 32-bit RISC processors, supported by RTOS, C/C++ compilers, and source level debuggers
- 32-bit DSP capable of AC-3, MPEG, DTS, MP3, WMA and AAC audio decode algorithms
- High quality integrated video encoder with six 10-bit video D/A converters
- Component (RGB or YUV) or composite & S-Video output
- Interlaced (PAL/NTSC) or progressive (480p) output, with Macrovision™ copy protection
- CCIR656 video I/O for video capture, PVR and DVR type applications, picture-in-picture support
- IEC-958 (S/PDIF) & simultaneous PCM output
- 5.1 downmix, karaoke echo mix, pitch shift, and many other effects
- PAL / NTSC transcoding
- Dual 16550 compatible UARTs
- Hard disk drive interface for audio server and PVR functionality
- AC '97 serial interface with V.90 soft modem support
- 240-pin MQFP package

The CS98200 is a highly-integrated processor that provides all of the audio and video processing functions needed for the next generation of feature-rich **DVD players**, **DVD receivers** and **Internet DVD** applications. Tomorrow's features available today in a single chip solution are DVD-Audio, MP3/WMA, AAC, Kodak Picture CD, Dolby AC-3®, Dolby ProLogic II®, and DTS decoding. It supports CD formats, DVD navigation, disk control, video decoding and up to eight channels of audio output. An extension of Cirrus' CS98000 DVD product line, the CS98200 integrates six 10-bit video digital-to-analog converters (DACs) and TV encoding with progressive scan functionality. Progressive scan video provides high resolution and eliminates the "flickering" effect present in traditional video playback. Other features enabled by this integrated chip include karaoke functionality and video special effects. Its extended feature set make it ideal for your next innovative DVD application … today.

Need to get your product to market quickly? Cirrus' Total Entertainment platform solutions include DVD front-end controllers, MPEG encoders, audio DSPs, and digital power amplifiers … everything you need to launch your product before the competition.

The CS98200 is a Cirrus Total-E ™ IC solution specifically designed for consumer entertainment electronics.

System Characteristics

- Dual 32-bit (150 MHz) RISC processors
- 32-bit DSP processor ~ 150 MIPS
- 240-pin MQFP package
- All I/O pins are 3 V with 5 V tolerance
- Advanced 0.18 µ CMOS technology
- Low power modes and clock shutoff

Memory Controller

- Up to 120 MHz SDRAM from 4 MB to 32 MB
- FLASH databus isolated from SDRAM bus to allow faster SDRAM access
- 32-bit data bus for DRAM, 8-bit data bus for ROM data flow engine
- Two DMA controllers — local memory based and direct memory-to-memory
- DMA to/from main RAM into local SRAM

MPEG Video Decoder

- DVD, VCD, VCD 2.0 and SVCD
- MPEG-1, MPEG-2, and MPEG-4 simple profile
- Anti-tearing logic controls picture decode and presentation
- Advanced error concealment hardware

Audio Interface

- 8 channels PCM output at 24-bits/192 kHz output rate
- 2 channels I^2S input at 24-bits/96 kHz
- IEC 60958/61937 capabilities

External Interface

- Serial master/slave ports for controlling DVD device
- ATAPI/IDE interface can also control hard disk drives for PVR features
- Programmable bidirectional I/O pins
- All pins not used for other functions can be reassigned as general purpose I/O pins
- Hardware assisted support for infrared remote devices, such as remote control, infrared keyboard, mouse, printer, and more
- Programmable parallel host master interface supports formats including ATAPI, ISA, and more
- I/O channel interface supports all DVD loader protocols

Video Processor

- OSD module with multiple regions and transparencies
- Full screen graphics module, with 16 bit true-color graphics plane
- High quality video scaling using multi-tap programmable vertical and horizontal filters

Video Encoder

- Six 10-bit video DAC's, drives 37.5 Ohm load directly
- Progressive (480p) or interlaced PAL(B,D,G,H,I,N,M,60) & NTSC mode output
- Component (RBG or YUV) or composite + S-Video output
- Macrovision™ 7.1 support (interlaced) and Macrovision™ 1.03 support (progressive)
- Wide-screen signaling support (interlaced and progressive) and CGMS
- Closed captioning support

Cirrus Logic, Inc.
Corporate Headquarters

2901 Via Fortuna
Austin, Texas 78746
USA
T: (800) 888-5016
T: (512) 851-4000
F: (512) 851-4977
www.cirrus.com

WORLDWIDE SALES OFFICES

United States
Cirrus Logic, Inc.

2901 Via Fortuna
Austin, Texas 78746
USA
T: (800) 888-5016
T: (512) 851-4000
F: (512) 851-4977

Japan
Cirrus Logic K.K.

Cirrus Logic KK
Aioi Sonpo, Bldg. 6F
5-6 Niban-cho, Chiyoda-ku
Tokyo, Japan 102-0084
T 81-3-5226-7390
F 81-3-5226-7677

Asia
Cirrus Logic Intl. Ltd.

20F., Ocean Building
80 Shanghai Street
Kowloon, Hong Kong, China
T 852-2376-0801
T 852-2314-9920
F 852-2375-1202

Europe
Cirrus Logic UK

Girdler House
Quebec Road
Henley-on-Thames,
Oxfordshire RG9 1EY
United Kingdom
T: 44-1491-414-030
F: 44-1491-410-976

WORLDWIDE DISTRIBUTION

Please access our website, **www.cirrus.com/contacts**, for your nearest local distributor.

For more information, visit us at www.cirrus.com

0051-0902-PB