



DVD Drive Manager Streamlines Development of DVD-ROM Drives & DVD-Players

Cirrus Logic's high-performance DVD Drive Manager is designed to reduce the cost and design complexity of next-generation DVD-ROM drives and DVD-Players while improving the time to market requirements of customers.

Implemented with advanced mixed-signal design techniques, this powerful single-chip solution delivers an unprecedented level of integration. The new DVD Drive Manager packs on a single chip the DVD-ROM drive functionality previously performed by several chips: an RF Amp, PRML data channel (read channel), servo controller, content scramble system (CSS), DVD Error Correction Code (ECC), and a decoder with an ATAPI interface. In addition, the chip provides a direct interface to MPEG-2 audio and video decoders for DVD-Player applications.

High-Performance Features

In addition to the cost savings that accompany its high level of integration, the DVD Drive Manager delivers exceptional performance. Support for 4.5x

DVD transfer rate allows smooth data streaming, eliminating jagged images that result from dropped frames that occur with high-quality video playback and graphically-intensive multimedia games.

The DVD Drive Manager also supports the Ultra ATA interface, a recommendation of the Microsoft® PC '98 design initiative. This high-speed interface enables the data to be burst from the chip to the host at 33.3 megabytes per second (twice as fast as today's non-Ultra ATA solutions), which eliminates the performance bottleneck associated with video playback and other sequential streaming applications.

Read Channel Architecture with PRML Technology

The DVD Drive Manager features industry-leading read-channel architecture using PRML techniques, which allows data to be read in worst-case signal-to-noise-ratio scenarios. PRML algorithms are used to effectively scoop a signal from the noise

Product Highlights

- A complete ATAPI DVD-ROM solution on a single chip:
 - RF amp
 - Data Channel
 - Servo control processor
 - DVD/CD-ROM ECC
 - CSS (Content Scramble System)
 - ATAPI decoder
- Direct MPEG-2 audio and video interface for DVD-Player applications
- High-performance controller for DVD disc speeds up to 4.5X
- Support for Ultra ATA interface: capable of synchronous DMA transfer rates up to 33.3 megabytes per second
- Firmware compatible with all Cirrus Logic CD-ROM and CD-Recordable/Rewritable devices



Systems In Silicon!



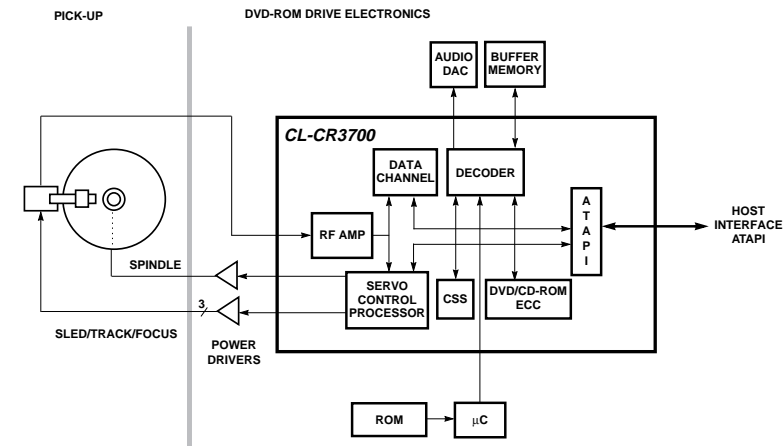
generated by the pickup. This technique significantly improves the drive's overall performance while ensuring reliability of the data passed on to the end user.

Higher Data Integrity Through ECC Technology

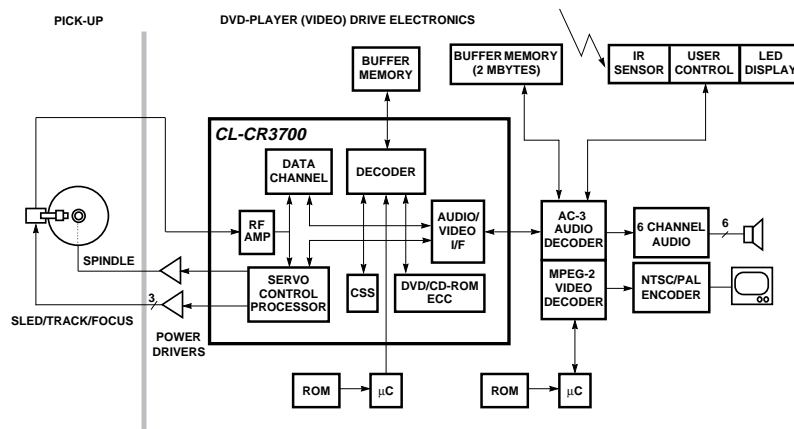
Cirrus Logic's DVD chip solution features advanced ECC technology, which allows it to correct errors on

even poor quality discs without sacrificing performance. Even at the maximum 4.5X DVD disc speed, the integrated ECC technology corrects errors efficiently without stopping disc transfers, ensuring the highest data integrity and fastest data transfer rates.

DVD-ROM SYSTEM BLOCK DIAGRAM



DVD PLAYER SYSTEM BLOCK DIAGRAM



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