

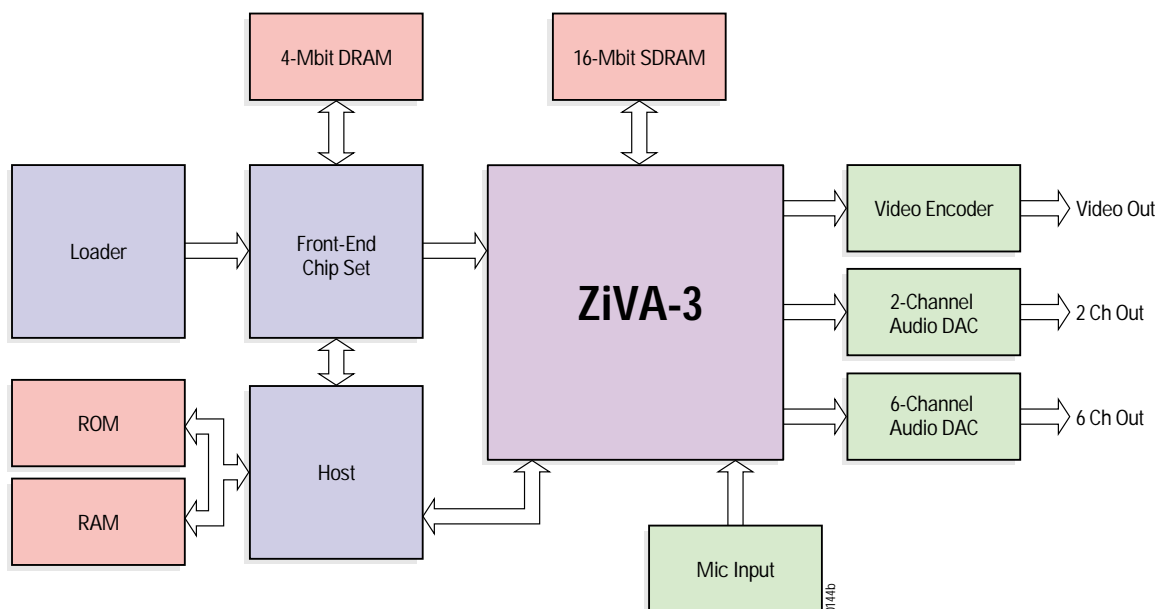
ZiVA-3 Decoder

ADVANCED DVD DECODER WITH INTEGRATED AUDIO DSP

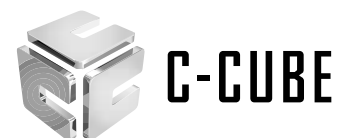
With the release of the ZiVA-3 DVD decoder with integrated audio DSP, C-Cube again adds to its long list of technology innovations. The ZiVA-3 decoder is the 3rd generation of C-Cube's best-selling ZiVA™ product family, and with its *dedicated* 50-MIPS audio DSP, it is *the* choice for implementing 3D audio, karaoke functions, and DVD-Audio in a cost-effective consumer DVD player. The ZiVA-3 significantly enriches the consumer's home theater and karaoke experience with its breakthrough RealSonic™ audio technology.

In addition, the ZiVA-3 decoder provides full NTSC and PAL decoding in a 16-Mbit SDRAM environment. Fully compatible with previous ZiVA products, the ZiVA-3 decoder supports full disc playback compatibility with DVD, Chaoji VCD, VCD, and CD-DA formats.

With its high-level API implementation, the ZiVA-3 decoder simplifies system code development for DVD player design. OEMs realize shorter design cycles and faster time to market. In addition, OEMs can get comprehensive design support from C-Cube in the form of the ZiVA-Kit 3, a manufacturing kit ideally positioned for the design of low-cost, full-featured consumer DVD players.



ZiVA-3 Based DVD Player Architecture

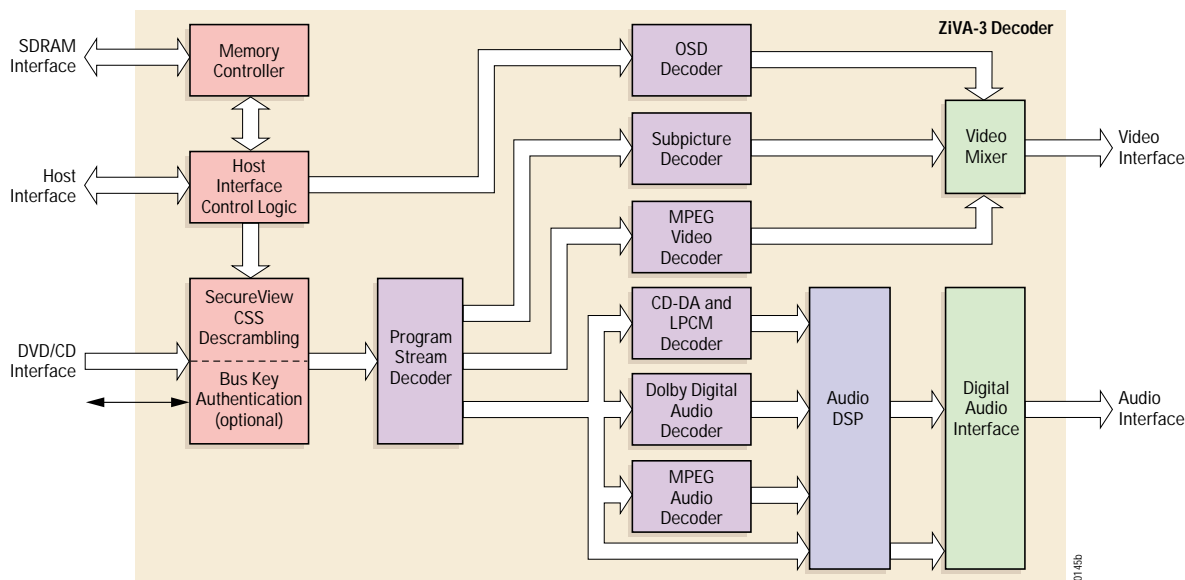


ADVANCED FEATURES

- Full, disc playback compatibility: DVD, Chaoji VCD, VCD, and CD-DA
- Full NTSC and PAL 16-Mbit SDRAM operation
- **Dedicated 50-MIPS audio DSP delivering: 3D audio, (including Spatializer™ N-2-2), DVD audio, Pro Logic decoding, RealSonic audio technology**
- C-Cube's RealSonic audio technology allows royalty-free high-quality home-theater audio effects including:
- Basic karaoke functions (mic echo, key control, stereo vocal cancel and voice detect)
- Professional karaoke functions such as vocal harmony, chorus, scoring, flange, reverb, and simulated stereo
- Home theater effects, including: WideSound™, RealSonic concert hall, RealSonic dynamic range compression, and graphic equalizer
- Dedicated Dolby Digital 5.1-channel decoder
- DTS digital out
- 2/4/8-bits per pixel OSD
- Zoom and fade-in/fade-out functions for still and motion pictures
- ClearView™, DiscView™, FlexView™ technologies.

SPECIFICATIONS

Video	
Decoding Standards	MPEG-1, MPEG-2
Compressed Resolutions	720 x 480 @ 30 Hz, 720 x 576 @ 25 Hz; 480 x 576 @ 25 Hz; 352 x 480 @ 30 Hz, 352 x 576 @ 25 Hz; 352 x 240 @ 30 Hz, 352 x 288 @ 25 Hz
Formats	NTSC, PAL, CCIR 601, CCIR 656
Compatibility	DVD, Chaoji VCD, VideoCD
Copy Protection	CSS Decryption (Content Scrambling System)
Audio	
Decoding Standards	Dolby Digital, 2 channels (downmixed) and 5.1 channels; MPEG-1 and MPEG2, Layers I and II, 2 channels (downmixed) and 5.1 channels; DVD-Audio and CD-DA
Output Channels	Dolby Digital or MPEG-2: 2-channel (downmixed) and 6-channel LPCM and IEC-1937/958 (SPDIF)
Sample Rates	44.1, 48, 88.2, 96, 176.4, 192 kHz
System	
Compressed Data Input	8-bit DVD, serial CD, or 8-bit host interface
Compressed Data Rate	16 Mbits/s (sustained, DVD interface); 80 Mbits/s (burst, host interface); 100+ Mbits/s (burst, DVD interface)
Memory	16-Mbit SDRAM
Physical	
Input Voltage	3.3 V ffl 5% (tolerates 5-V inputs, except SDRAM)
Packaging	Economical, low-profile 208-pin PQFP



ZIVA-3 Chip Architecture

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