Winbond Electronics Corp.

MPEG-2 VIDEO DECODER

GENERAL DESCRIPTION

W9922PF is a powerful MPEG-2 video decoder which performs real-time decompression of ISO/IEC 13818-2 MPEG-2 and 11172-2 MPEG-1 video streams. The processor is designed for applications of PC multimedia systems to provide an extensive video processing capabilities and interfaces with PC graphic subsystems. It also supports the decoding capabilities of VCD, CVD, SVCD and DVD.

FEATURES

- Decodes MPEG-2 at MP@ML and MPEG1 video streams
- Fully supports multiple CD formats : Karaoke CD, VCD, CVD, SVCD, CD-I and DVD titles
- Built-in PCI and VMI / VIP bus interfaces
- Directs interface to 1Mx16-bit SDRAM
- Supports Video Scaling
- Automatic frame rate conversion
- Provides RGB and YCbCr video output formats
- Decodes SVCD/DVD compliant sub-picture and highlights
- Supports 16:9 and 4:3 aspect ratio by pan&scan and letter box conversion
- Supports audio/video synchronization
- Fully 3.3V operation
- Standard 160-pin PQFP

PC SVCD / DVD SOLUTION

S/W Audio Decoder

Software audio decoder can real-time decompress MPEG-1 (ISO/IEC 11172) and MPEG-2 (ISO/IEC 13818) audio streams; its inputs can be PCM audio stream, Dolby^ð digital AC-3 2 or 5.1 channel encoded up to 48 Khz sampling rate. As to outputs, it can be Dolby^ð digital AC-3 2 channel stereo or Pro-Logic decoded stream. Software audio decoder supports Multi-Audio , Muti-Language and high quality Dolby Certification.

S/W VCD / SVCD PBC and DVD Navigator

Software provides VCD 2.0 and SVCD PBC (Play Back Control function). Software DVD Navigator provides drivers for MCI, supports DVD decryption and regionalization code, and conforms to the VCD, SVCD and DVD Specifications.

Cost-Effective H/W Configurations

In PCI add-in applications, W9922PF can be direc connected to PCI bus and receives various compress bitstreams and operating commands via the host interfac A typical configuration is shown in Figure 1. Output vid can be displayed on VGA monitor with video DAC or with TV encoder.
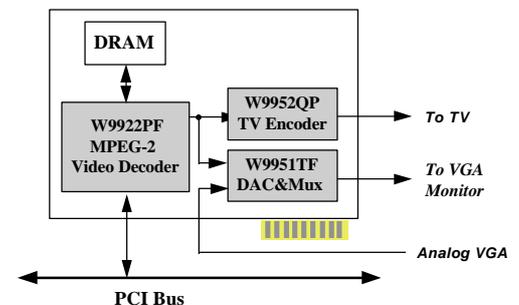

Figure-1 Application Example of W9922PF in Multimedia PCs through PCI

In VMI / VIP daughter-board applications, W9922PF receives various compressed bitstreams via the graphic accelerator which supports the VMI / VIP interface Figure 2 shows a typical configuration of VMI / VIP daughter-board application.
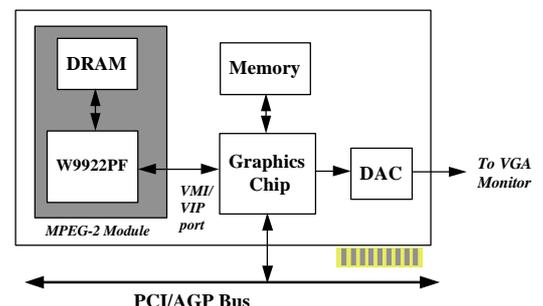

Figure-2 Application Example of W9922PF in Multimedia PCs through VMI / VIP

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