



## **MPEG-1 A/V SYSTEM DECODER**

### **GENERAL DESCRIPTION**

The W9925PF is a high-performance single-chip MPEG-1 decoder. It performs real-time decompression of ISO/IEC-11172 MPEG (Moving Picture Experts Group) streams, including system layer, audio and video data. This chip incorporates an 8-bit host interface and a CD interface that make it an easy use in standalone applications.

### **FEATURES**

- High integration of MPEG system, audio and video decoding, video scan timing generation, and CD-ROM decoding functions
- Applicable to ISO/IEC 11172 system streams, CD-DA data, and CD-ROM data
- Fully supports Karaoke CD, Video CD 1.1, Video CD 2.0 and CD-I FMV specifications
- Real-time decompression and synchronization of MPEG bitstreams with SIF resolution video and two channels of Layer 1 or Layer 2 audio
- Automatic frame rate conversion during A/V playback
- Decompression of high resolution still pictures(704x480(NTSC) or 704x576(PAL))
- Optional horizontal and vertical interpolation for image quality enhancement
- Automatic IO address setup
- Fade in/out control and brightness adjustment
- RGB(24-bit) and YCbCr(24-bit, 16-bit, 8-bit) video output formats
- Support NTSC/PAL interlace/non-interlace and VGA progressive display with programmable video timing source
- Input/Output mode for HSYNC, VSYNC, pixel clock
- Audio serial PCM output with 16-bit resolution and sampling rate of 32, 44.1, and 48 KHz
- Programmable audio L/R channel output mode with individual L/R channel mute control and volume adjustment
- Read/Write pictures through host processor
- On-chip macro commands such as fast forward, slow motion, scan, etc.
- Minimum 4M-bit DRAM required even for high resolution still pictures
- 16-bit ISA bus interface and 8-bit interface for 8051 series
- 4-pin CD interface
- Built-in power down mode
- 0.6um triple-layer metal CMOS technology
- Fully 5V operation
- 160-pin plastic QFP

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