



JEILIN Technology Co., Ltd.

JL4229A Multimedia Controller

General Description

JL4229A is a highly integrated multimedia controller targeted for Digital Photo Frame with digital LCD panel through LVDS interface. It is capable of reading/playing the photo (JPEG), video (Motion JPEG), and audio (MP3/WMA) from memory cards and internal NAND Flash. All of your favorite digital photos can be played back in slide show or in still display while MP3/WMA music is playing back. There are various slide transition effect are added between each photo slide. All of above playback doesn't need the use of PC. It can read/write the files from/to different kinds of memory card such as USB Pen Drive, CF/Microdrive, SD/SDHC, MMC/MMCplus, MS/MS PRO, XD, and NAND Flash. Besides photo frame function, JL4229A can be used as USB Card Reader thru USB Device port (MassStorage).

Features

- ◆ Embedded 8-bit 8051 MCU
- ◆ Hardware JPEG Codec
- ◆ PCM / ADPCM Audio Decoder
- ◆ MP3 / WMA Audio Decoder
- ◆ Image Process: Gamma Correction, Sharpness Adjustment
- ◆ NOR Flash / NAND Flash Boot
- ◆ Integrated RTC
- ◆ In-system Programming
- ◆ 216-pin LQFP (24x24mm)

Card Reader Interface:

- ◆ CF & Microdrive
- ◆ SD/SDHC/MMC/MMCplus
- ◆ MS (Duo)/MS PRO (Duo)
- ◆ XD
- ◆ SLC/MLC NAND Flash

Display:

- ◆ Integrated TCON
- ◆ Integrated LVDS Transmitter
- ◆ Digital (LVDS) LCD Panel
- ◆ PWM for LED Backlight or Charge Pump

Playback:

- ◆ Photo: JPEG, Progressive JPEG, BMP
- ◆ Audio: MP3 with Lyrics, WMA
- ◆ Video: Motion JPEG
- ◆ Combo Playback: JPEG+MP3/WMA

USB:

- ◆ High-Speed USB 2.0 Host port
- ◆ High-Speed USB 2.0 Device port
- ◆ MassStorage Class

Peripheral:

- ◆ IR Remote Control, Buttons
- ◆ SPI, I²S, I²C Interface
- ◆ ADC for low battery detection

Basic Applications

- ◆ Digital Photo Frame (DPF)
 - Viewing Photos (JPEG/BMP)
 - Viewing Movie (Motion JPEG)
 - Listening to MP3/WMA music
- ◆ USB2.0 Card Reader
- ◆ DPF with Clock/Calendar/Alarm

Functional Diagram

