CONEXANT

Digital Photo Frame SoC

STDC7100

Conexant's portfolio includes a comprehensive suite of semiconductor solutions for communications and consumer applications.

Conexant's portfolio of communication peripheral devices and system-on-chip (SoC) solutions is the most complete product line of highly integrated imaging solutions in the industry. The STDC7100 Digital Photo Frame SoC is part of Conexant's SigmaTel® product line, which offers complete SoC solutions for the Imaging market.

Conexant's SigmaTel product line is a leading system-on-chip solution for the digital photo frame market. The STDC7100 is a highly integrated multi-processor solution combining a high performance RISC CPU with a custom hardware JPEG and imaging engines to deliver industry leading image quality and performance. The device combines support for high-speed USB 2.0 host and device ports, a fully programmable LCD interface, NAND flash controller, and a direct memory card interface.

The STDC7100 is a flexible digital photo frame solution that supports industry leading image playback, high-resolution photos, and a variety of connectivity options. The device can read and render any image size from a USB connected digital camera, memory card, or from an onboard NAND flash. It can also improve photo image quality on cost-effective LCD's by using its image processing pipeline during rendering. The high level of imaging expertise is a fundamental differentiator in the digital photo frame reference design.

An industry standard development environment supports fast time to market development. Complete turnkey reference design packages are available which includes support for popular LCD displays, and photo frame application firmware.

Benefits

- Integrated SoC solution with industry leading photo playback quality
- Image processing hardware to support next generation digital cameras
- USB 2.0 host and device ports for system flexibility, upgradeability
- Field-proven proprietary image enhancement algorithms
- Reference design package and firmware to speed time to market.
- Robust memory card interface, supporting design option flexibility

Distinguishing Features

- Integrated SoC Design
- Hardware JPEG codec
- Hardware image processing engine
- Supports all size JPEG files
- Variety of connectivity options
- Proprietary image enhancement pipeline
- Integrated peripherals,
- Flexible LCD controller,
- Integrated memory card, NAND control

Part Number STDC7100
Description Digital Photo Frame SoC

Features

Processor
- 32-bit RISC architecture
- Digital signal processor (DSP) extensions

External Memory Support
- SDRAM
- Serial Flash
- NAND Flash
- Removable Flash Memory Cards (MS, SM, ST, MMC, xD, CF)

Connectivity/Interfaces
- USB 2.0 High Speed Device
- USB 2.0 High Speed Hosts (2)
- UART

Image Processor
- JPEG Codec
- Hardware Rotate/Scale
- Color Space/Image Filter/Error Diffusion

Display Support
- Flexible Thin Film Transistor (TFT) LCD controller (Digital RGB)
- CCIR656
- Programmable LCD timing controller
- QVGA / WQVGA / VGA support

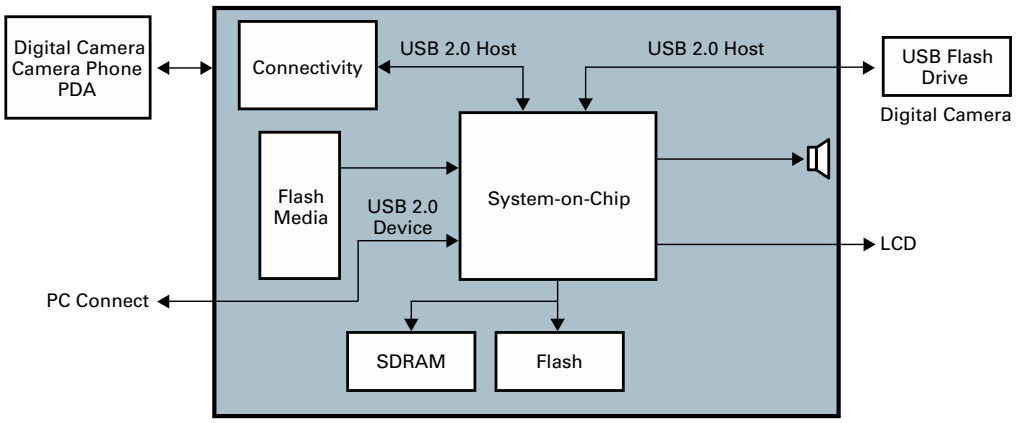
Digital Camera Support
- Mass storage class
- Picture transfer protocol (PTP)

Timers
- Real-time clock

A/D and PWM Control
- Four pulse width modulators (PWMs) with firmware control
- PWM backlight control circuitry

Package
- 200pin µBGA (Ball Grid Array)

Development Environment
- C/C++ compiler/Assembler/Linker
- JTAG In-Circuit Emulator
- PC Command Line Debugger/Profiler
- Conexant's Product Line Development Environment



STDC7100 Block Diagram

Conexant Product Portfolio

Conexant's comprehensive product portfolio includes solutions for imaging, audio, and video applications, and analog modems that enable cost-effective Internet access. The company's broadband access products include end-to-end solutions for xDSL networks, and PON solutions for fiber optic applications.

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