Preliminary PT8921

Smart Audio Combo-Station with USB Mini-Host & SD/MMC Host Interface Controller

DESCRIPTION

The PT8921 is a cost-efficient single chip for audio mini-combo play-station application. The chip integrated the USB2.0 FS host controller, SD/MMC host controller, Sigma-Delta Audio-DAC and WAV/MP3/WMA/AAC Audio-Decoder in one chip. Only few external components needed in application circuits makes it suite for the audio play-station system with USB2.0 FS host, SD/MMC host and i-Pod audio control interfaces.

The I/O interfaces are totally following the USB2.0 FS host class interface specification and SD/MMC card specification. The stand alone audio play-station and no special driver software need to install on this system by user in the recent market. The PT8921 is a truly plug and play audio play-station controller with USB2.0 FS host and SD/MMC host interfaces. There are some extended functions for the different audio sources and applications. The embedded 8 pins provide the player function key and other adjustment feature. The 5 GPIO-pins support the other control function for customer application.

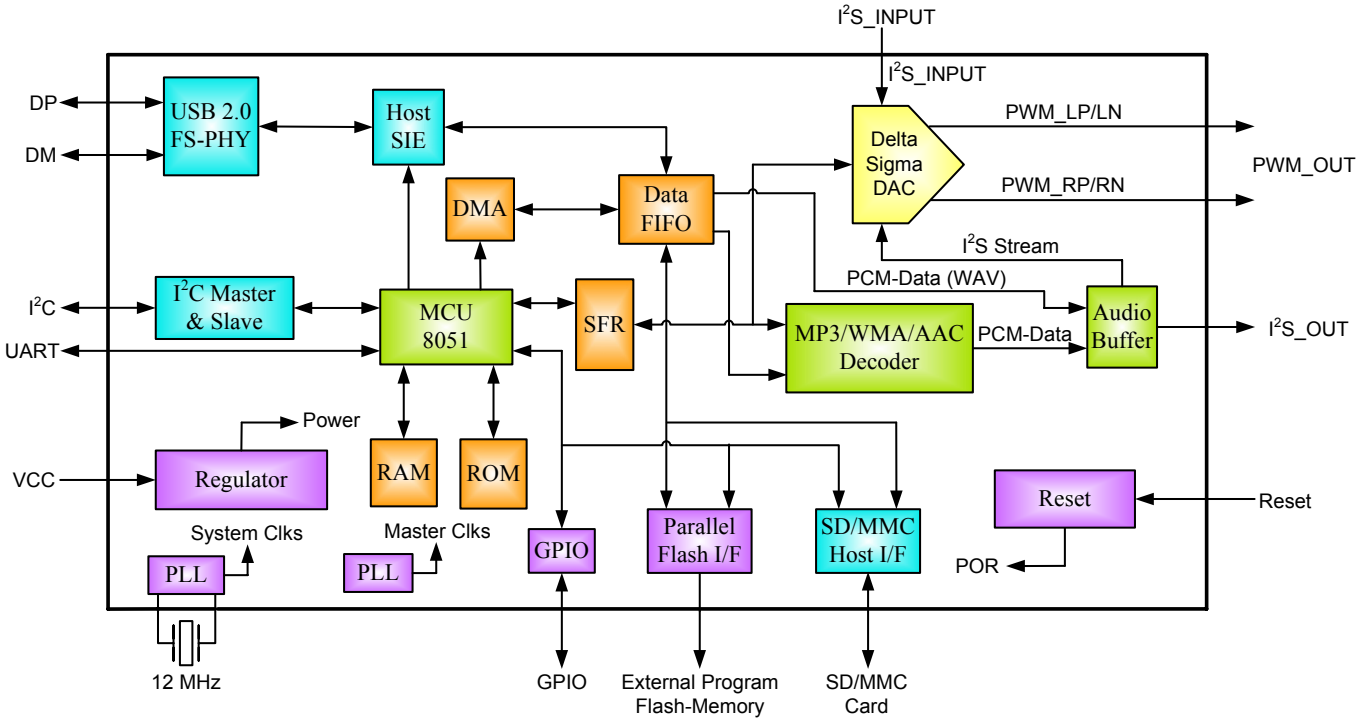
APPLICATIONS

- Portable Audio Play-Station
- Car Audio Combo-Station
- Home Audio Play-Station

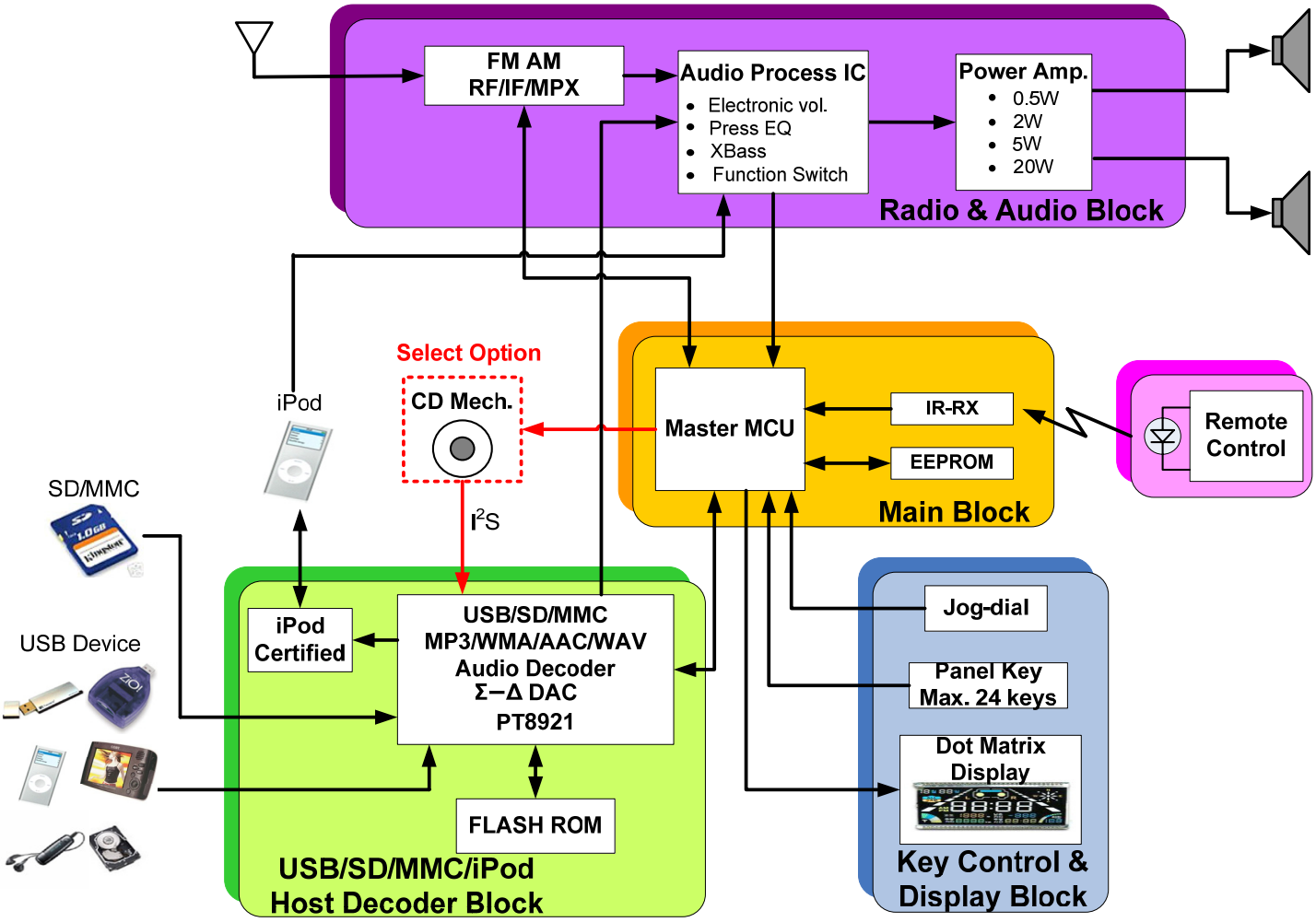
FEATURES

- Built-in USB 2.0 FS Mini-Host interface.
- Compliant with USB Mass-storage class specification.
- Built-in SD/MMC Host interface.
- Compliant with SD/SDIO Card specification Version 2.0.
- Compliant with MMC Card specification Version 4.2.
- Support FAT12, FAT16 and FAT32 file system.
- Built-in 8051 base MCU with 8K ROM.
- Support ISP (In-System-Programmable) Interface for external program Flash-ROM.
- Built-in WAV/MP3 WMA/AAC Format Audio-Decoder.
- Support MPEG1/2/2.5 layer III audio decoding.
- Built-In Flat/Pop/Jazz/Classic/Rock processing function.
- Built-In Digital Volume control function
- Built-in SNR=85dB (A-Weighted) Sigma-Delta DAC, PWM Output.
- Built-in IIC Master/Slave Control Interface.
- Built-in UART Interface to communicate with i-Pod.
- Built-in external IIS input for optional audio input sources, and support one IIS output connecting an external advanced audio controller or stand-alone sigma-delta DAC controller.
- Packages: 100 Pins LQFP

BLOCK DIAGRAM



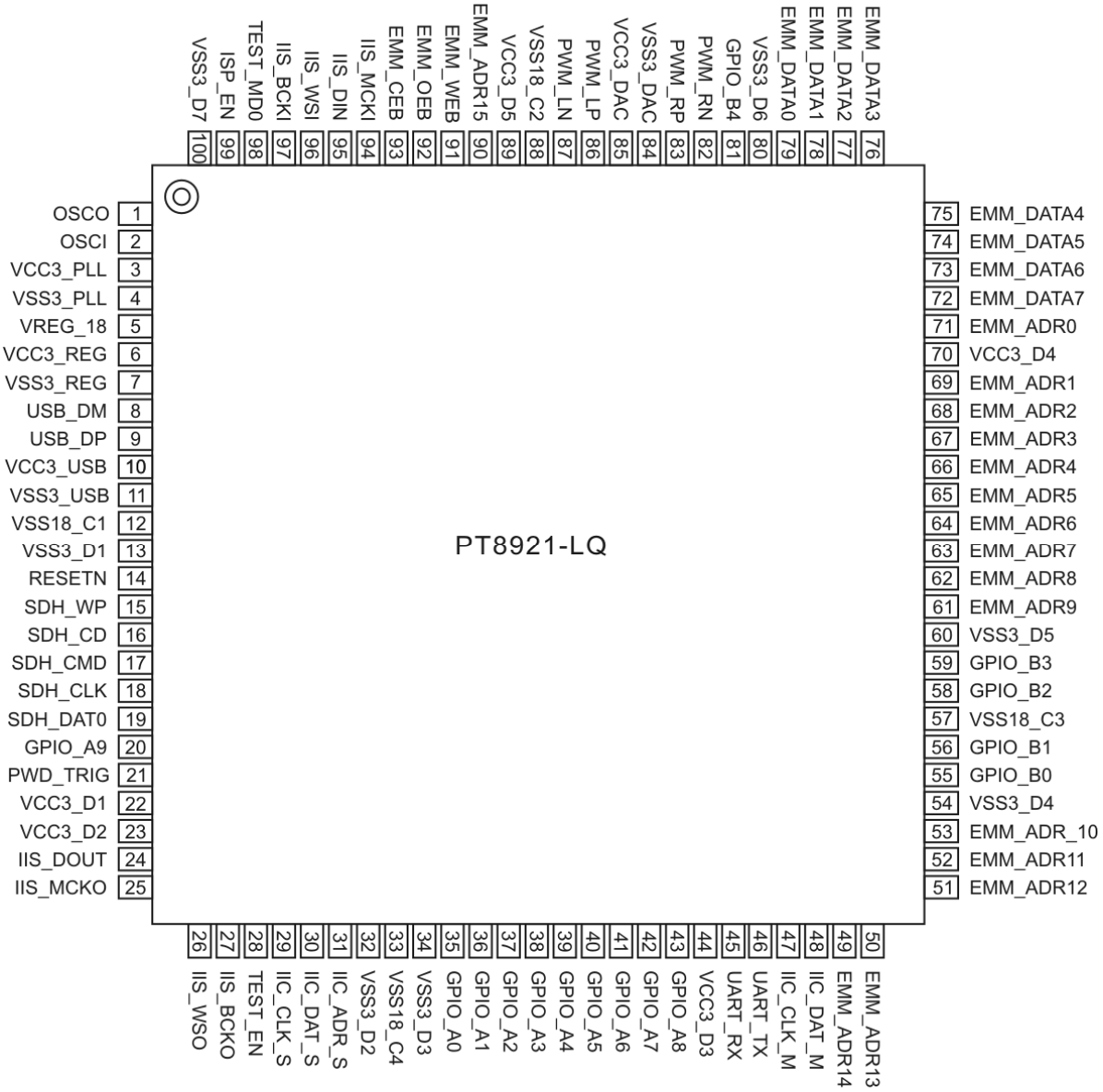
SYSTEM APPLICATION DIAGRAM



ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT8921-LQ	100-PIN LQFP	PT8921-LQ

PIN CONFIGURATION



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