

Music Media Player

Overview

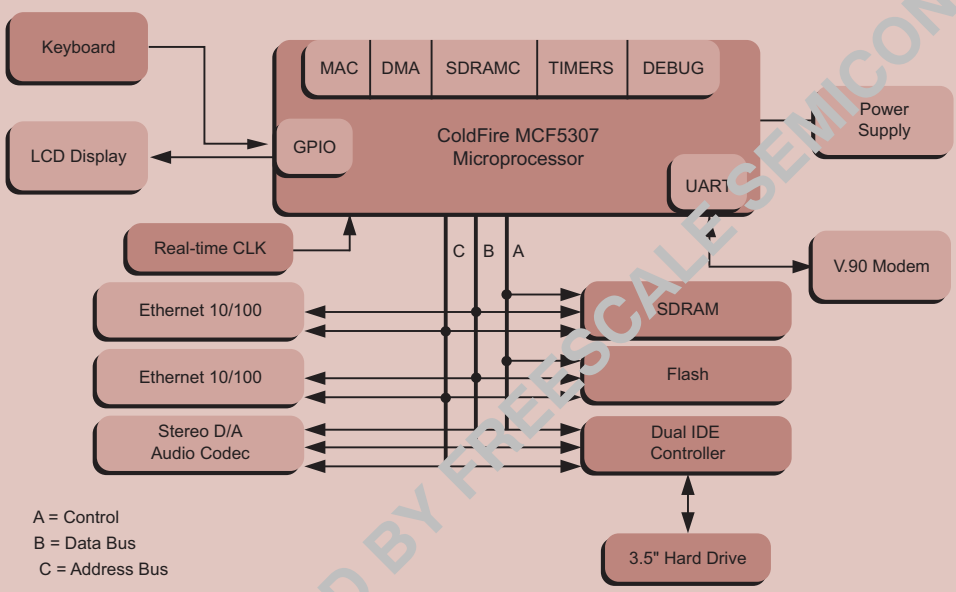
The business music media player (BMMP) is a hardware component responsible for the delivery of play lists scheduled through the Music Manager software application. The BMMP essentially acts as a virtual jukebox where music schedules are

downloaded and stored. The server's plug-and-play design requires minimal installation time and very little maintenance. MP3.com provides necessary technical support, ensuring the player is installed and functions properly.

Key Benefits

- > Acts as a virtual jukebox for downloading and storage of music schedules
- > Requires minimal installation time and little-to-no maintenance
- > Offers an ideal architecture for embedded applications like MP3
- > Delivers 72 (Dhrystone 2.1) MIPS at 90 MHz at a low cost
- > Provides ideal commercial opportunity for embedded applications

MP3 MUSIC SERVER BLOCK DIAGRAM



Freescale Ordering Information

Part Number	Product Highlights	Additional Information
MCF5307	<ul style="list-style-type: none"> > Version 3 ColdFire® processor core > High performance > Low cost > Highly integrated microprocessor > Multiply-Accumulate unit > DRAM controller > DMA controller > Timers > Parallel and serial interfaces 	www.freescale.com ^{Note}

Note: Search on the listed part number.

Design Challenges

The design challenge was to create a platform to handle the complex integration of hardware and software while maintaining a reduced materials requirement. SnapGear's SecureEdge Internet appliance platform runs their implementation of a uCLinux operating system, their version of a Linux® operating system, for processors without memory management units. This application requires a microprocessor at a competitive price. But with the performance integration and debugging capabilities, the application had to meet the consumer's end requirements as well as provide rapid time-to-market demands. The Freescale Semiconductor ColdFire® MCF5307 microprocessor met all of these requirements. The BMMP generates two channels of monaural

sound fed to an external amplifier, thereby supporting two independent music zones simultaneously. The BMMP also allows the capability to provide background audio for a business phone system while customers are on hold.

Freescale Semiconductor Solution

Freescale Semiconductor's ColdFire microprocessors offer an ideal architecture for embedded applications like MP3. Specifically, the MCF5307 ColdFire microprocessor is a great solution. This device has a version 3 ColdFire Core with performance of 72 (Dhrystone 2.1) MIPS at 90 MHz, along with the following peripherals:

- > 4K-byte SRAM, Multiply-Accumulate (MAC) unit and Divide unit, 8K-byte unified cache

- > 4-channel DMA controller, DRAM controller supports SDRAM, EDO, and page mode DRAM
- > Two Universal Synchronous/Asynchronous Receiver/Transmitters (UART) dual 16-bit general purpose multimode timers, Philips Semiconductor I2C™-compatible bus, system interface
- > System debug support, clock multiplied PLL, 16-bit general purpose parallel I/O port

Development Tools

Tool Type	Product Name	Vendor	Description
Hardware	M5206eC3, M5249C3, M5272C3, M5407C3	Freescale Semiconductor	Evaluation Board
Software	IDE-Code Warrior 3.0, Compiler-C/C++, Source Level Debugger	Metrowerks	Development and Debugging for MCF5206e; MCF5249; MCF5272; MCF5307; MCF5407
Software	IDE; RTOS-VxWorks; Compiler-Diab-C/C++; Simulator; Analysis Tool; H/W Debugger-Vision Probe; S/W Debugger-Singlestep/Vision Click	Wind River Systems	Development and Debugging for MCF5206e; MCF5249; MCF5272; MCF5307; MCF5407
Software	IDE-Multi; Compiler-C/C++/EC++; RTOS-ThreadX; Simulator; Source Level Debugger	Green Hills Software	Development and Debugging for MCF5206e; MCF5249; MCF5272; MCF5307; MCF5407
Software	OS-uCLinux; Compiler-C/C++; Source Level Debugger	SnapGear	Development and Debugging for MCF5206e; MCF5249; MCF5272; MCF5307; MCF5407
Software	IDE; RTOS-Nucleus+; Compiler-C/C++; Source Level Debugger	Accelerated Technology	Development and Debugging for MCF5206e; MCF5249; MCF5272; MCF5307; MCF5407
Software	Network Development Kit; IDE, Compiler-C/C++; Source Level Debugger; RTOS	Netburner	Development and Debugging for MCF5206e; MCF5249; MCF5272
Software	Compiler-C, Simulator; Debugger	Crossware	Development and Debugging for MCF5206e; MCF5272; MCF5307; MCF5407
Software	GDB, Compiler-C (free software)	Gnu Tools	Development and Debugging for MCF5206e; MCF5249; MCF5272; MCF5307; MCF5407
Software	uCLinux	Gnu Tools	Development for MCF5206e; MCF5272; MCF5307; MCF5407
Software	Emulator-Flex	Noral	Development for MCF5206e; MCF5307

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