

Blue Mojo Reference Design

Hardware/Software Architecture

1) Introduction

The Blue Mojo Bluetooth reference design uses two QF1D512 filter ICs (the layout can accept QF1Da512's) attached in series to the PCM port of a CSR BC05-MM processor. The audio data flows from the PCM port as an I2S audio stream, is filtered by the two 1D's, and returns to the PCM port, after which it is processed by the codec implemented in the CSR digital signal processor. On power-up, the BC05-MM initializes the 1D's via a 5-wire PIO interface (implementing an SPI bus) and then proceeds with its normal power up processing sequence.

2) Functional Description

The Basic structure of the Hardware/Software Architecture is illustrated here:

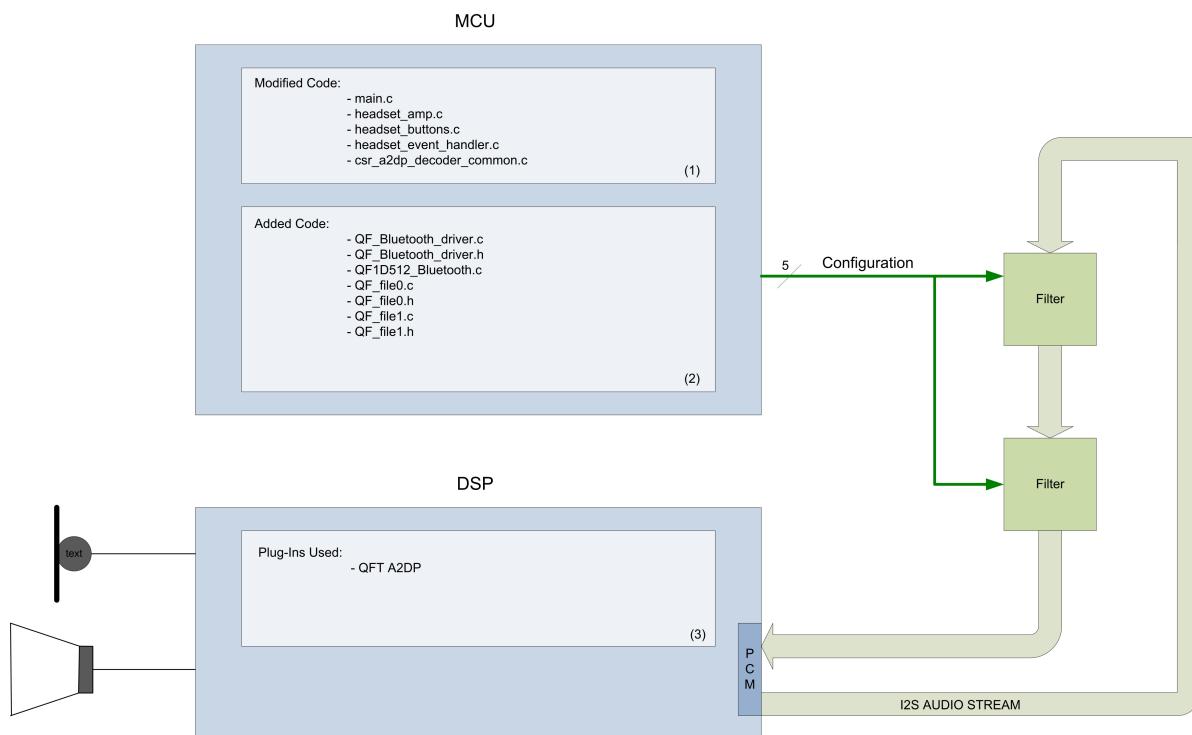


Figure 1, Blue Mojo Software Architectural Modifications to CSR Stereo Headset Application.

3) Notes

Note 1:

The standard Stereo Headset application (Stereo-Headset-SDK-2008.R1, based on v4 of BlueLab) was modified. The modifications are limited to four application files and one library file. For a detailed description, see "Description of modifications made to the CSR headset application for the Blue Mojo.rtf".

Note 2:

Seven files specifically associated with the QF1D512's were added.

Note 3:

The changes to csr_a2dp_decoder_common.c, rerouting the audio data through the PCM port, created a custom version of CSR's csr_a2dp_decoder_common_plugin for A2DP stereo audio.

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