

To: ELEC 4523/5523 Project Group
From: Dr. David Waldo
CC:
Date: August 23, 2016
Re: Audio File Player

Memo

Your team is tasked with developing an Audio File Player (AFP). This project is to use the STM32F4-Discovery board as the main processing board. This memo describes the key features that I want the system to have. However, I am leaving the specification of detailed requirements to the Project Group, subject to my review.

AFP Functions

Audio I/O

The AFP shall play audio files of the WAV format. The files shall be stored on a USB thumb drive connected to the STM32F4-Discovery board. The audio output shall be through the CS43L22 audio DAC.

User Interface

The user interface shall be on a PC connected to the STM32F4-Discovery board. A GUI interface shall be used.

Operating Modes

The AFP shall allow indexing through the files on the thumb drive and displaying the name of the file on the user interface.

The AFP shall allow playing the displayed audio file. The AFP shall allow pausing playback and resuming playback.

LEDs can be used in the system to indicate operating modes.

5523 Project Groups

Your project shall allow switching the audio source from the thumb drive to the MP45DT02 ST MEMS audio sensor. Or, you may choose to add MP3 file capability to your system.