<http://www.blog.richersounds.com/whats-up-dac-an-introduction-to-digital-to-analogue-converters/>

<http://www.funkschau.de/fileadmin/media/whitepaper/files/NSC_DAC_Tutorial_01.pdf>

<https://ece.umaine.edu/ece/files/2012/05/ECE547_RaghuTumati.pdf>

<http://www.ti.com/lit/an/slaa013/slaa013.pdf>

Introduction

The signals in our real world are come with analogue form. It differ from digital signals. Digital signals are made of logical highs and lows, or zeros and ones. Analogue signals use continuous range of values while digital signals are using discrete or discontinuous value to represent information.

The main purpose of Digital to Analogue Converter (DAC) is to convert the digital signals into analogue signals. It is the interface between the abstract digital world and the real world. The DAC block has several uses including audio generation, waveform generation, etc.

The main features of DAC in STM32F4 is included:

Two DAC converters: one output channel each

Left or right data alignment in 12-bit mode

Synchronized update capability

Noise-wave generation

Triangular-wave generation

Dual DAC channel for independent or simultaneous conversions

DMA capability for each channel

DMA underrun error detection

External triggers for conversion

Input voltage reference, VREF+