

**DESIGN AND IMPLEMENTATION OF ENERGY EFFICIENT, RECONFIGURABLE
FIR FILTER USING MODIFIED BOOTH AND C.S.A**

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ABSTRACT

Power consumption and area optimization are the key requirements of finite impulse response(FIR) filters that are widely used in multi standard wireless communication systems. FIR filter is used to find the response of periodical system under any circumstances. In this project implementation of FIR filter is presented which possesses low power consumption and low area occupancy by using modified booth algorithm, gated driver tree techniques respectively. FIR filter involves multiplications, additions, shifting operations, along with storing of yielded outputs. These methods include low power array multiplier and parallel adder. So, dynamically reconfigurable filters can be efficiently implemented by using proposed algorithms for various DSP applications.

KEYWORDS: FIR Filter, Power Consumption, Area Optimization, DSP Applications.