

# A Modular Approach to Analog Signal Conditioning Circuit Design for Real-Time DSP Systems

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**Abstract:** *This paper delineates the design of a flexible analog signal conditioning circuit (SCC) that can be reconfigured in accordance with the needs of the user. It is feasible to implement the SCC with systems that are based on DSPs. The design is intended for use in power electronics applications that involve a diverse array of signal types. The design is composed of interconnected phases that can be activated in accordance with the characteristics of the input signal to ensure reconfiguration. The proposed circuit is a cost-effective and straightforward solution that utilizes commercially available components.*

**Keywords:** Analog-to-Digital Conversion, Digital Signal Processing