

## عنوان مقاله:

A New Single Switch High-Gain DC-DC Converter based on Coupled-Inductor

## محل انتشار:

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## خلاصه مقاله:

In this paper, a new single switch high-gain DC-DC converter based on three-winding coupled-inductor and switched-capacitor techniques is proposed. This topology has high voltage gain without large duty cycle, high efficiency, low-voltage stress across single power switch using passive clamp circuit and simplicity of control. This proposed converter consists of a tapped-inductor boost and stacked topology with switched-capacitors and coupled-inductor. Additionally, a passive regenerative snubber is used such that the stored energy in leakage inductance of the coupled-inductor is recycled to the output of converter. Thus, the voltage gain is raised. All the operational principles and steady state analysis in continuous conduction mode (CCM) are discussed in details. Finally, the proposed converter analysis is justified using detailed simulation in MATLAB/Simulink.

## کلمات کلیدی:

;high voltage gain; couple inductor; switched capacitor

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/657723>

