

# UNIVERSITI MALAYSIA PAHANG

BUCK BOOST CONVERTER FOR PV SOLAR SYSTEM

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## **ABSTRACT**

The Buck Boost Converter for PV solar system is a product used to regulate the PV solar system voltage output to be constant. The PV solar system will be connected to the buck boost converter. In this project, the closed loop system of the buck boost can be produced by controlling the switching through pulse width modulator (PWM) duty cycle. The Arduino microcontroller is suitable for controlling the PWM duty cycle. The developed system using both simulation and prototype and the desired output voltage was gain from both method. A buck boost converter for PV solar system was successfully developed and designed.

## **ABSTRAK**

Penukar buck boost untuk sistem solar pv adalah produk yang digunakan untuk mengawal output voltan sistem solar pv untuk menjadi tetap. Sistem solar pv akan disambungkan kepada penukar rangsangan dolar. Dalam projek ini, sistem gelung tertutup rangsangan buck boleh dihasilkan dengan mengawal pergerakan melalui modulator lebar pulse modulator (pwm). Mikrokontroller arduino sesuai untuk mengawal kitaran tugas pwm. Sistem yang dibangunkan menggunakan kedua-dua simulasi dan prototaip dan voltan keluaran yang dikehendaki adalah keuntungan dari kedua-dua kaedah. Penukar rangsangan buck bagi sistem solar pv berjaya dibangunkan dan direka bentuk.