

# 1MHz High Output current High Efficiency Synchronous Step-Up Converter

## General Description

iD8610 is a high efficiency, high frequency synchronous Step-Up converter, capable of delivering output current up to 3A at a 5V output voltage from 3.6V input voltage. With a very low resistance Power MOS and built-in synchronous rectifier, its efficiency can be as high as 93% at 5V/2.1A output. This greatly minimizes power dissipation and reduces heat on the IC, making it ideal for applications that require small board space and have stringent temperature constraints, such as power banks and mobile devices. The iD8610 also includes a variety of protection such as over load current and short circuit conditions. All of these features are integrated in a tiny QFN3x3-16 package. With 1MHz operation frequency, mini external input and output capacitors and inductor can be used.

## Applications

- Power Bank
- 3G / 4G PCI-e module
- Mobile 3G / 4G Wi-Fi

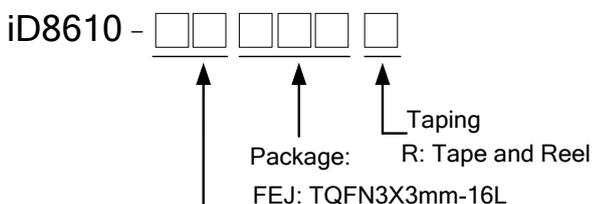
## Features

- Up to 3A Output Current at 3.6V Step-up to 5V
- Adjustable Switching Jitter mode
- Adjustable Inductor peak-current
- Adjustable UVLO
- Short Circuit Protection
- Over Temperature Protection
- Internal Compensation
- RoHS Compliant and Halogen Free
- Tiny QFN3X3-16L Package

## Marking Information

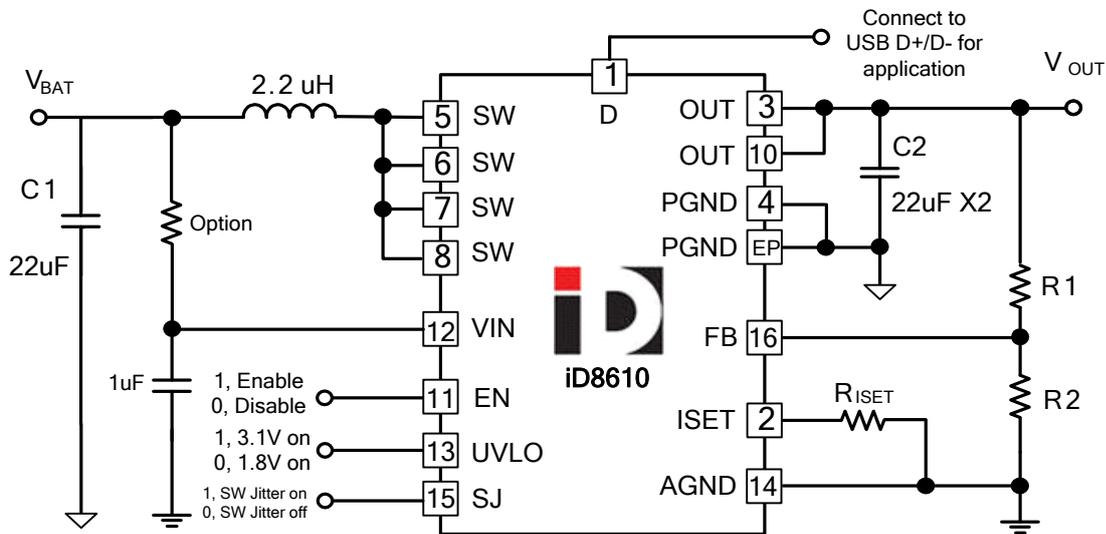
For marking information, please contact our sales representative directly or through distributor around your location.

## Ordering Information



Output Voltage	Voltage Code
Adjustable	AD

## Typical Application Circuit (Adjustable Operation)



### Absolute Maximum Ratings (Note 1)

All Pins Voltage	-0.3V to 5.5 V
Power Dissipation, $P_D$ @ $T_A=25^\circ\text{C}$	
TQFN3X3-16	1.47W
Thermal Resistance, $\theta_{JA}$	
TQFN3X3-16	68°C/W
Lead Temperature	260°C
Storage Temperature	-65°C to 150°C
Thermal Resistance, $\theta_{JC}$	
TQFN3X3-16	10°C/W
ESD Susceptibility	
HBM (Human Body Mode)	2KV
MM (Machine Mode)	200V

### Recommended Operating Conditions

Input Voltage $V_{IN}$	1.8V to 5.5V
Junction Temperature	-40°C to 125°C
Ambient Operating Temperature	-40°C to 85°C

**Note 1:** Stresses listed as the above "Absolute Maximum Ratings" may cause permanent damage to the device. These are for stress ratings. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may remain possibility to affect device reliability.