SC8701Q High Efficiency, Synchronous Buck-Boost Controller

1 Description

The SC8701Q is a synchronous 4-switch buck-boost controller. It can effectively output voltage no matter it is higher, lower or equal to the input voltage.

The SC8701Q supports very wide input and output voltage range. It can support applications from 2.7V to 36V input range and 2V to 36V output range. The driver voltage is set to 10V to fully utilize external MOSFETs for highest efficiency.

The SC8701Q supports input current limit, output current limit and over temperature protections to ensure safety under different abnormal conditions.

The SC8701Q adopts 32 pin QFN 4x4 package.

2 Features

- AEC-Q100 qualified for automotive applications:
  - Temperature grade 1: T_A range: -40°C to +125°C
  - HBM ESD classification level H1C
  - CDM ESD classification level C6
- Highly efficient buck-boost operation
- Dynamic adjustable output voltage
- Dynamic adjustable Input and Output current limit
- Wide input voltage range: 2.7 V to 36 V
- Wide output voltage range: 2V to 36V
- Integrated 10V, 2A gate driver
- Adjustable frequency 200kHz to 600kHz
- Under voltage protection
- QFN-32 Package

3 Applications

- Automotive USB Charging
- Car Charger
- Automotive Wireless Charging

4 Device Information

ORDER NUMBER	PACKAGE	BODY SIZE
SC8701QQDER	32 pin QFN	4mm x 4mm x 0.75mm