

# SC8001Q High Efficiency, Synchronous Buck Controller

## 1 Description

The SC8001Q is a synchronous buck controller. It 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 output voltage can be dynamic adjusted through PWM signal. The driver voltage is set to 10V to fully utilize external MOSFETs for highest efficiency.

The SC8001Q supports input current limit, output current limit and over temperature protections to ensure safety under different abnormal conditions. The switching frequency and current limits can be programmed through resistors freely.

The SC8001Q adopts 32 pin QFN 4x4 package.

## 3 Applications

- Automotive Head Unit
- ADAS Camera ECU
- Automotive Instrument Clusters

## 2 Features

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

## 4 Device Information

ORDER NUMBER	PACKAGE	BODY SIZE
SC8001QQDER	32 pin QFN	4mm x 4mm x 0.75mm