

SC8014 High Efficiency, Synchronous, Buck Controller with I2C Interface

1 Description

SC8014 is a synchronous buck controller with I2C Interface. It can support up to 36V Input voltage, so can be used to effectively generate a wide output voltage. SC8014 can also support pass-through mode.

Through its I2C interface, user can control SC8014 easily, and program the output voltage, current limits, switching frequency and other parameters flexibly. Besides that, SC8014 integrates 10-bit ADC, so user can read the VIN / VOUT voltage and current in real time, simplifying the system design.

SC8014 supports internal current limit, over voltage protection, output short protection and over temperature protections to ensure safety under different abnormal conditions.

The SC8014 is in a 32 pin 4x4 QFN package.

3 Applications

- Multi-port Adapter
- USB Power Delivery
- Type C Hub
- Industrial Power Supplies

2 Features

- Wide V_{IN} Range: 2.7 V to 36 V, 40V sustainable
- Wide V_{OUT} Range: 2.7 V to V_{IN} , 40V sustainable
- Pass-through Mode
- I2C Programmable Output Voltage
- I2C Programmable Input / Output Current Limit
- I2C Programmable Switching Frequency
- High Efficiency Conversion
- 10-bit ADC resources
- Event Detections, including Automatic Load Insert Detection
- Power Path Control
- Under Voltage Protection, Over Voltage Protection, Over Current Protection, Short Circuit Protection and Thermal Shutdown Protection
- QFN-32 Package

4 Device Information

Part Number	Package	Dimension
SC8014QDER	32 pin QFN	4.0mm x 4.0mm x 0.75mm