



## Power Management Unit (DC-DC)

### 1 Main features:

- ◆ Integrated 3.3V Buck, 1.1VBuck, 12V Boost, supercapacitor charge management, power failure protection.
- ◆ 3.3V BUCK Operating voltage range: 5V-36V
- ◆ Frequency jitter is conducive to reducing EMI
- ◆ Efficiency up to 90% (boost) and 92%(buck)
- ◆ Output load capacity:
- ◆ 3.3V/450mA
- ◆ 1.1V/1A
- ◆ 12V/500mA (VIN=2.5V)
- ◆ Charging current accuracy 1%
- ◆ Charging current 50mA
- ◆ Automatic control of boost switching and battery discharge switching

### 2 Typical application

- ◆ Smart meter
- ◆ Internet of Things
- ◆ Supercapacitor as backup power system

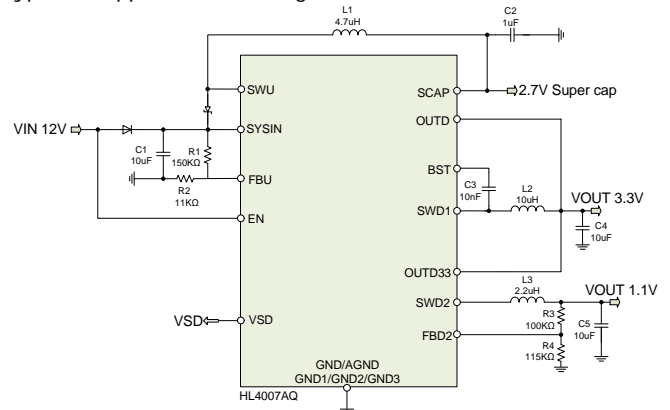
### 3 Product description

The HL4007AQ is a 4-CH power management IC for smart meter power supply solutions. It integrates two synchronous buck regulators, a boost converter and a supercapacitor charger to provide high efficiency at both light and heavy load outputs. The built-in excellent compensation circuit makes the application circuit more simple.

### 5 Parameter list

	Input voltage range	Integrated unit	Charging current	Carrying capacity	Encapsulation form
HL4001	36V/18V/2.7V	2buck+boost+charger	50mA	0.45A/0.5A/0.5A/0.05A	20-pin 4x4 QFN

In addition, the intelligent internal power management circuit eliminates the need for complex external power supply control circuits. Typical application diagram is as follows:



### 4 Product highlights

- ◆ Integrated 3.3V Buck, 1.1VBuck, 12V Boost, supercapacitor charge management
- ◆ Built-in compensation circuit
- ◆ Low static current
- ◆ Overcurrent protection