



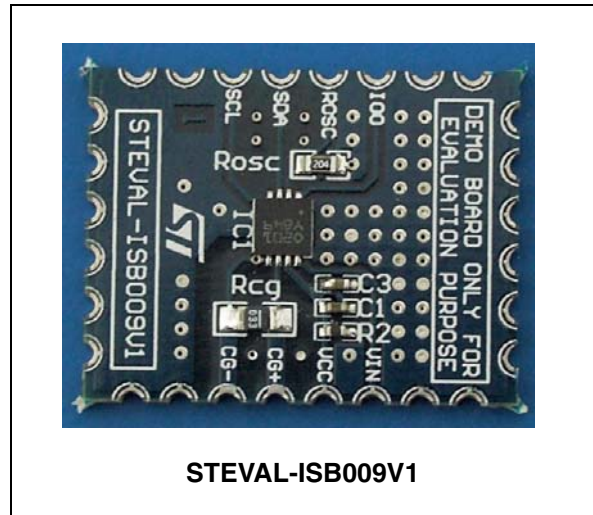
# STEVAL-ISB009V1

## Li-Ion battery monitoring and gas-gauge demonstration board based on the STC3100

Data brief

### Features

- Accurate battery voltage measurement
- Coulomb counter to keep track of the battery's state-of-charge
- Internal temperature sensor
- Internal or external 32 kHz time base
- I<sup>2</sup>C interface for battery monitoring and device control
- 0.5 % battery voltage accuracy
- 1 % Coulomb counter accuracy using an external RTC signal (3.5 % using the internal time base).
- Low power consumption: 100  $\mu$ A in operating conditions, 2  $\mu$ A in stand-by mode
- RoHS compliant



### Description

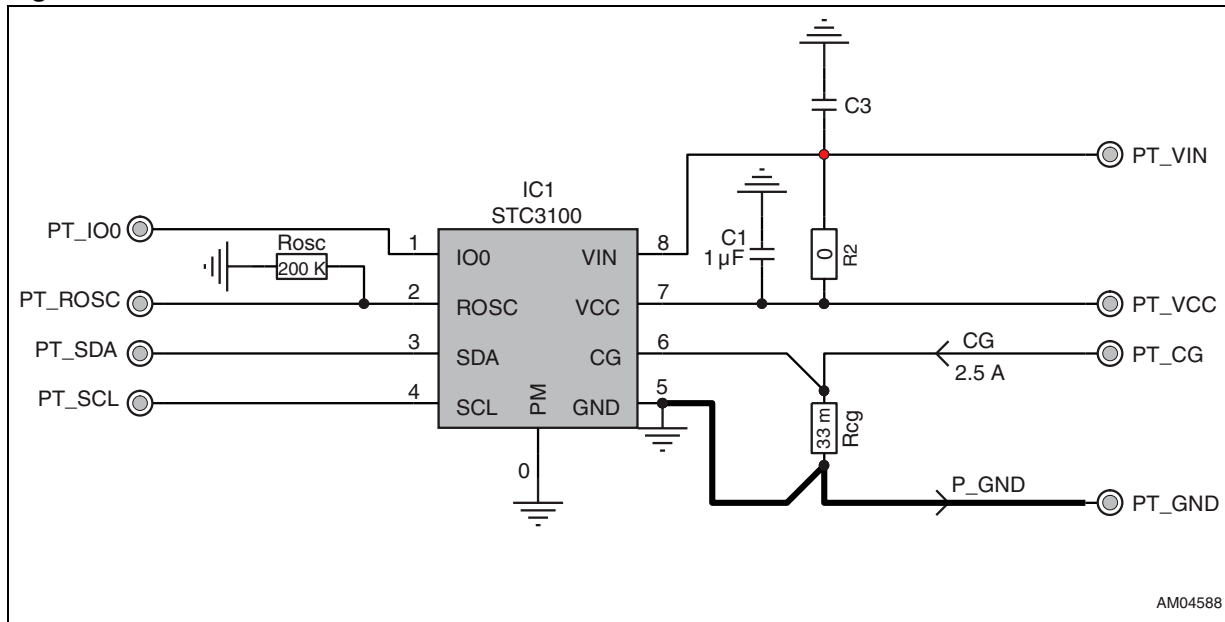
The STEVAL-ISB009V1 demonstration board, based on the STC3100, is able to monitor the critical parameters of a single-cell Li-Ion battery (voltage, temperature, and current) and includes hardware functions to implement a gas-gauge for battery charge monitoring, based on a programmable 12-bit to 14-bit A/D converter.

The battery current can be up to 2.5 A and the accumulator system provides a capacity up to +/- 7000 mAh with a resolution of 0.2 mAh.

The device is programmable through an I<sup>2</sup>C interface.

# 1 Circuit schematic

Figure 1. STEVAL-ISB009V1 demonstration board schematic



## 2 Revision history

**Table 1. Document revision history**

| Date        | Revision | Changes          |
|-------------|----------|------------------|
| 05-Nov-2010 | 1        | Initial release. |

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