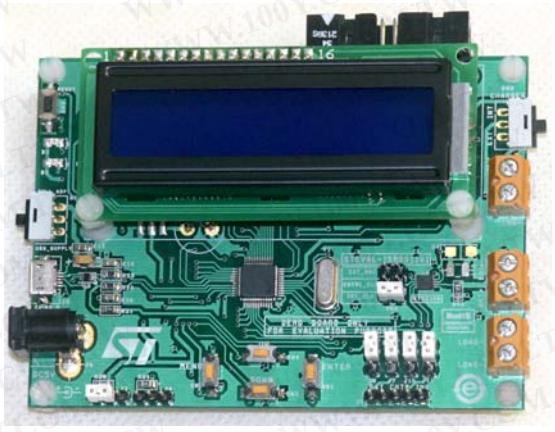
STEVAL-ISB011V1

Li-ion battery monitoring system demonstration board based on the STC3100 and STM32

Data brief

Features

- STC3100 uses Coulomb counter/gas gauge to track the remaining charge in the battery, and can read the charging current, temperature and voltage of the battery
- On-board STM32 microcontroller is interfaced with USB, STC3100, LCD, switches. Battery parameters are sent to PC via virtual COM port
- Charging and discharging status displayed on LCD.
- Gas gauge: battery capacity up to +7300 mAh can be monitored (programmable by user)
- Supports external or internal battery charger allowing evaluation of the STC3100 with the user's own charging system
- On-board charger (STC4054) available to charge the battery
- Four switches for menu scrolling
- Micro-USB B type connector can:
  - communicate battery parameters to the PC
  - provide power to the board
  - charge the battery using internal charger
- Option to interface external microcontroller using jumpers
- STC3100 clock source can be selected from external oscillator, the device's internal clock or from clock generated by an internal/external microcontroller
- RoHS compliant



STEVAL-ISB011V1

Battery charging is performed using the USB port, or using a DC adaptor.

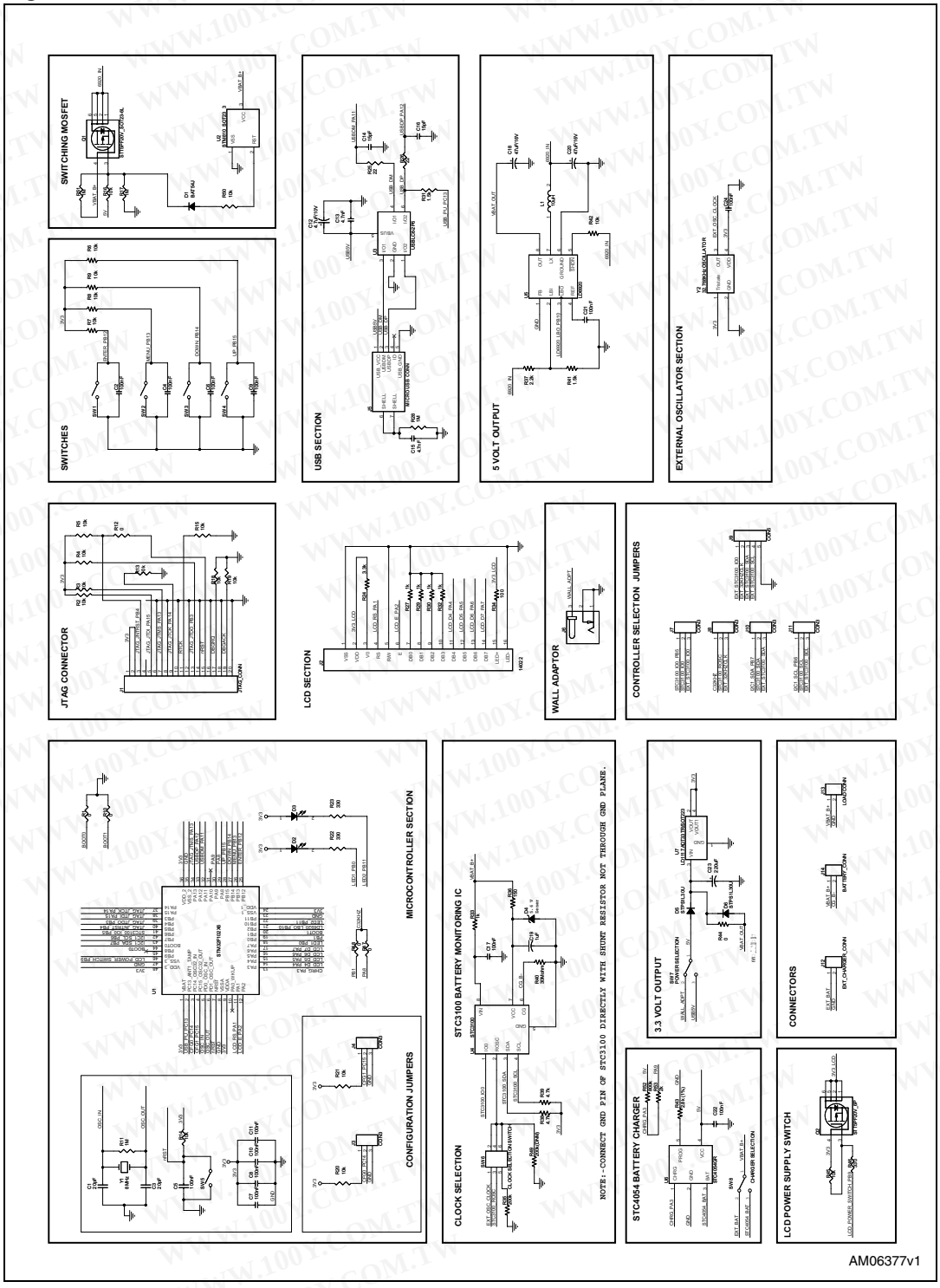
Description

The STEVAL-ISB011V1 demonstration board is based on the STC3100 battery monitoring device and the STM32 microcontroller.

The STM32 microcontroller provides a simple, compact solution to monitor the voltage, temperature, current and capacity of single cell Li-ion batteries utilizing the highly-efficient gas gauge capability of the STC3100.

1 Schematic diagrams

Figure 1. STEVAL-ISB011V1 circuit schematics



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
15-Mar-2010	1	Initial release.