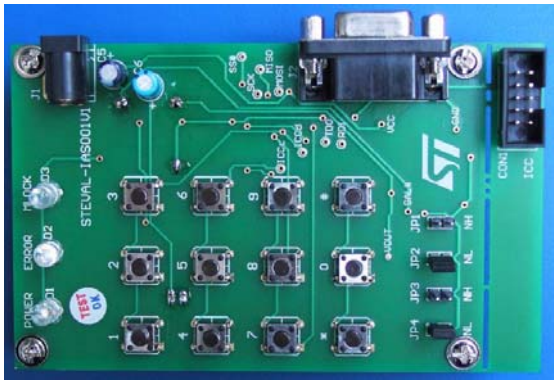
STEVAL-IAS001V1

Security keypad demonstration board based on ST7Lite39F2 and STM1403

Data Brief

Features

- 4 x 3 key matrix
- 3 LEDs (green for power, red for error and yellow for magnetic lock)
- 4 jumpers for physical intrusion detection with battery back-up and buzzer
- On-board SPI EEPROM for event logging
- On-board RS232 driver to interface with the PC
- Power supply adaptor (3.4 V - 19 V)
- Embedded in-circuit programming capability



STEVAL-IAS001V1

Description

This demonstration boards offers the functionality of a keypad controller in security door applications. The aim of this board is to assist in the development of a keypad decoding system and to display associated information through LEDs for all necessary actions such as power on, door open and error. The entire system has been developed to target low-end and low-cost application areas and has been realized with the help of the ST7LITE39F2 microcontroller. A useful additional feature is the support of system protection from physical intrusion, using the STM1403. STEVAL-IAS001V1 aims to display the capabilities of ST's general purpose microcontroller to fit the market segment of home automation and security, keeping the system cost as low as possible. The board can operate in 2 modes:

- User (stand-alone) mode
- Administrator mode
  - through the board
  - through PC graphical user interface

When the board is connected to the power supply the system enters the user configuration mode. Administrator mode can be accessed through the use of a PC, where SCI communication is set up and used between the PC and the board through the RS232. At the time of manufacturing an additional board has been connected to allow in-circuit programming of the microcontroller. The two boards can be easily disconnected so that the keypad controller for the security door evaluation board can be used independently.

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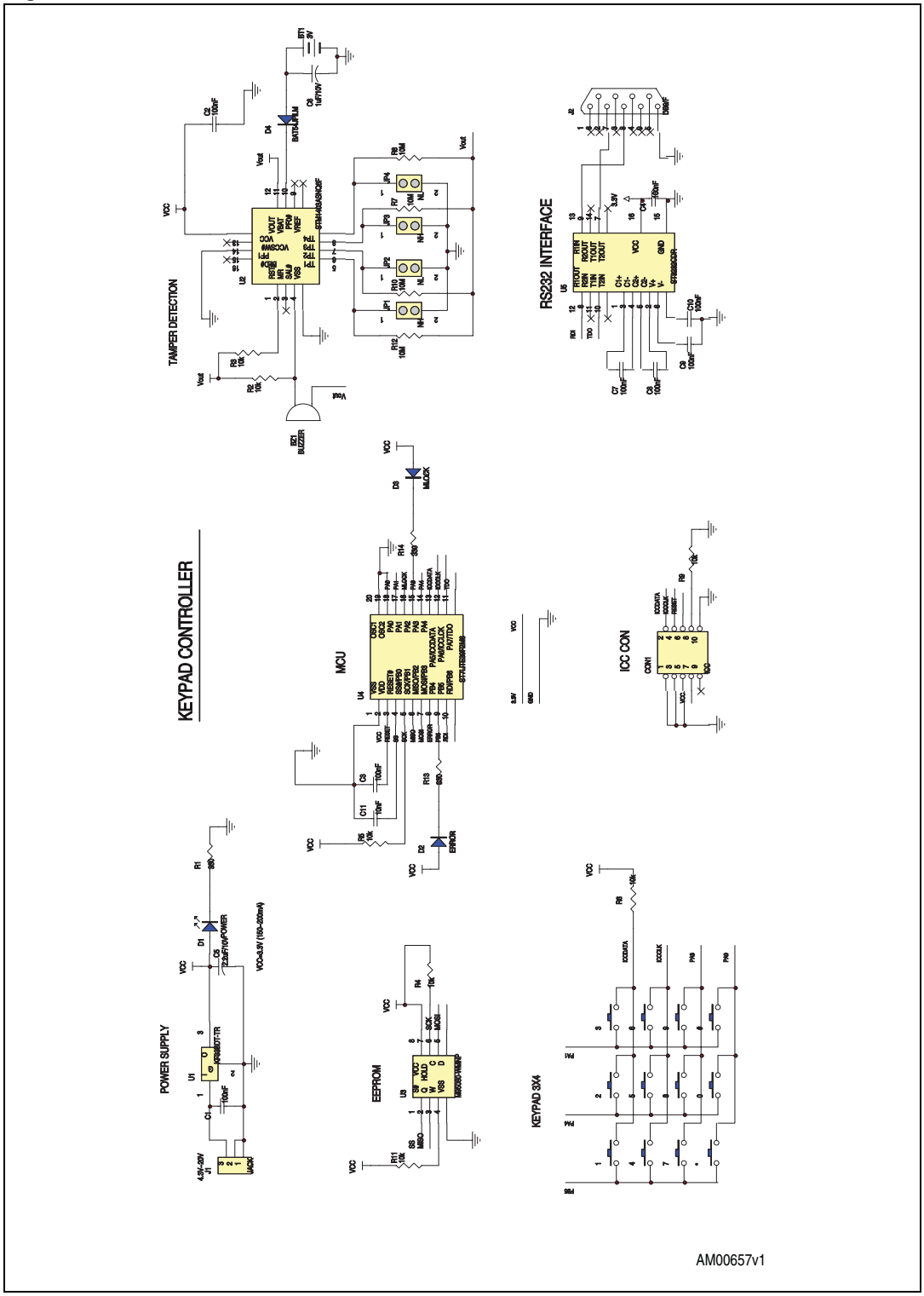
1 Board schematic

Figure 1. Schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
02-Jul-2008	1	Initial release.

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