



# STEVAL-TCS004V1

## 16-bit port expander demonstration board with keypad and PWM controller based on the STMPE1601

Data brief

### Features

- Provides a user-friendly environment for use in:
  - Standalone mode
  - PC GUI mode
- Board powered through USB Mini-B connector
- PC GUI supports various power saving modes
- RoHS compliant

### Description

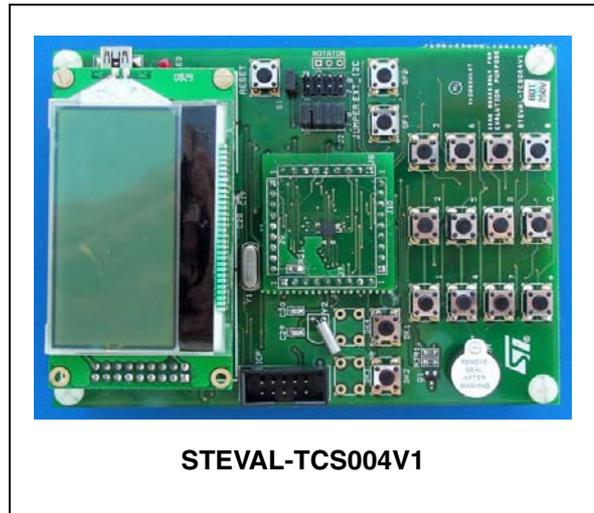
The STEVAL-TCS004V1 demonstration board is based on the STMPE1601 port expander and the ST7263BK6 microcontroller.

The objective of the board is to demonstrate the features and capabilities of the STMPE1601 port expander chip using a Windows®-based host software application and one of ST's several USB low-speed microcontrollers (the ST7263BK6 is used in this demonstration board) acting as a control device.

In the STEVAL-TCS004V1, the ST7263BK6 microcontroller acts as the I<sup>2</sup>C master and controls one STMPE1601 device, which functions as an I<sup>2</sup>C slave. The STMPE1601 is used to interface the matrix keypad, dedicated keys, special function keys and PWM controllers.

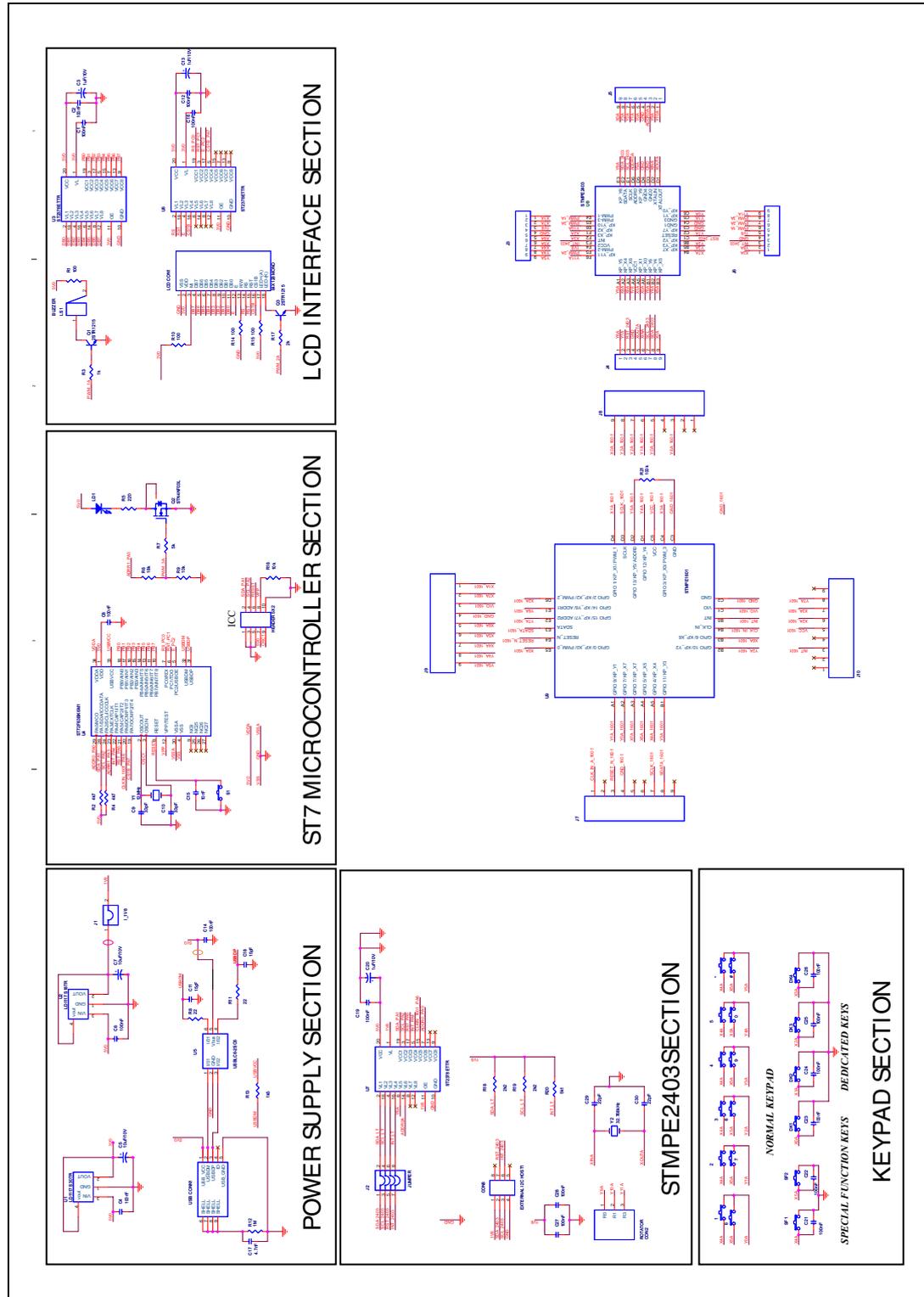
In run mode, events such as key press (matrix, special function or dedicated keys), rotator controller, power mode, etc. are captured and displayed on the LCD screen and in the scan window of the PC GUI.

For interfacing with the PC GUI, the application layer is built above the USB core library, making the USB interface hardware control transparent for developers.



# 1 Schematic diagrams

Figure 1. STEVAL-TCS004V1 schematic diagrams



## 2 Revision history

**Table 1. Document revision history**

Date	Revision	Changes
11-Nov-2009	1	Initial release.

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