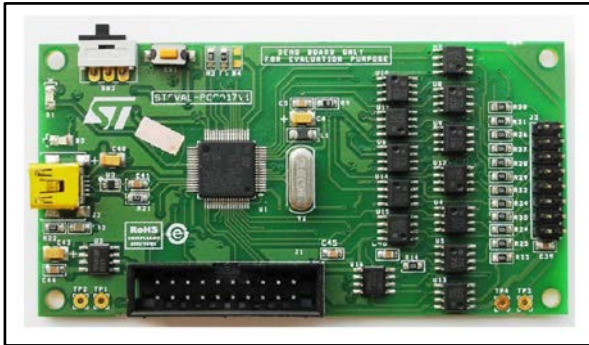


USB to RS-232 isolated bridge

Data brief



Features

- STM32 used as the interface between the PC and motor control systems
- 8-pin interface for SPI/I²C/UART
- 6 GPIOs available
- Powered from USB
- Opto-isolation on SPI, USART and GPIOs
- Magnetic isolation for I²C
- RoHS compliant

Description

The STEVAL-PCC017V1 evaluation board is used as a USB-to-serial communication interface for motor control applications. The STM32

microcontroller is used as the main digital controller to interface with the slave devices. The system utilizes the opto-isolator to isolate the STM32 and slave devices in order to control, configure and monitor them. The STEVAL-PCC017V1 evaluation board has a 16-pin interface which allows connecting a device that can communicate using SPI and UART. This allows the user to connect a serial communication-based device to a PC and also allows the control of some of the GPIOs available in the 16-pin interface, setting them in input/output modes.

Power to the board is provided from the USB Mini-B type connector. In addition, external target VDD_T and GND_T supply is used to power up the opto-isolator output section. The STEVAL-PCC017V1 evaluation board provides an option for the end user to just focus on application development as the complexity of the microcontroller is encompassed by the tool itself, thus increasing efficiency and time to market.

1 Schematics

Figure 1: STEVAL-PCC017V1 - microcontroller section

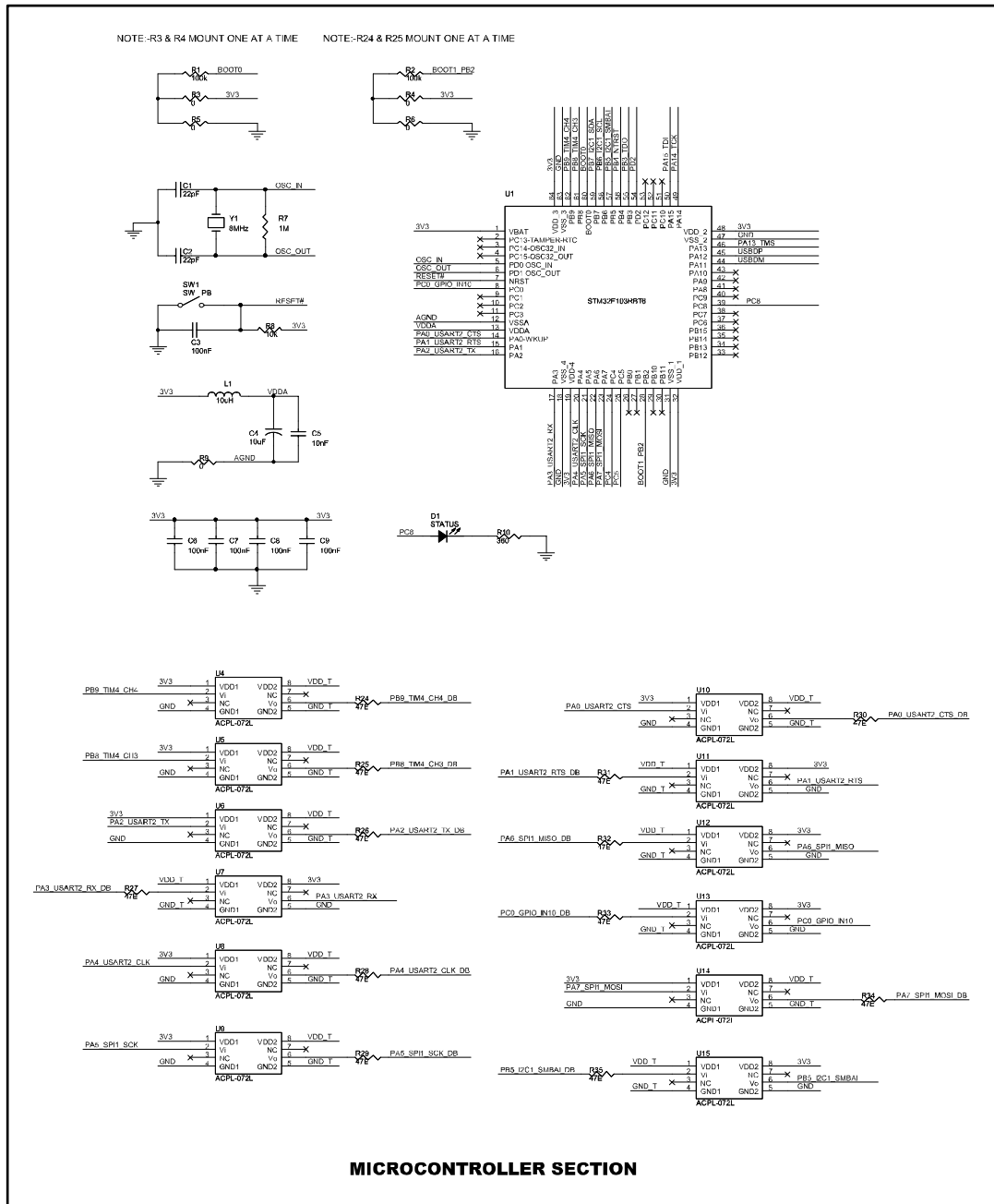
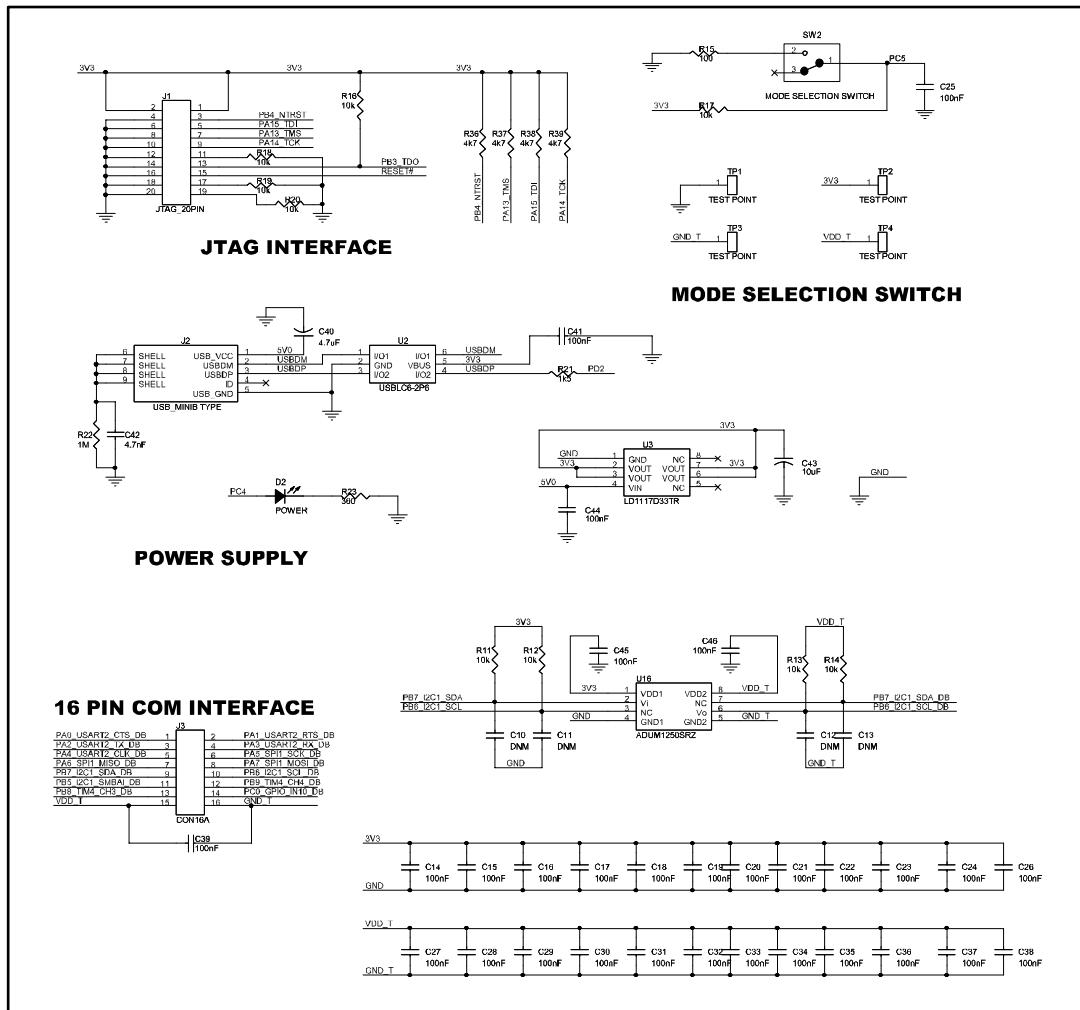


Figure 2: STEVAL-PCC017V1 circuit diagrams



2 Revision history

Table 1: Document revision history

| Date | Revision | Changes |
|-------------|----------|------------------|
| 17-Apr-2014 | 1 | Initial release. |

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