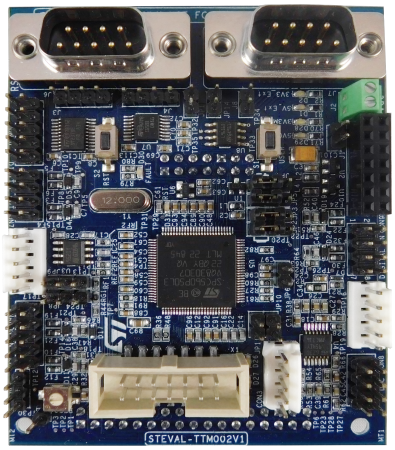
STEVAL-TTM002V1

Data brief

Control board for automotive motor control applications



Features

- Based on SPC560P50L3 32-bit system-on-chip (SoC) automotive microcontroller compatible with ST motor control library with ST-FOC algorithm (sensored and sensorless mode)
- 34-pin motor control connector
- User push buttons (for additional custom functionality)
- 14-pin JTAG connector compatible with SPC5-UDESTK interface
- SPI connector for gate driver configuration
- Hall/Encoder sensor connector
- RS232 DB9 male connector
- CAN DB9 male connector
- Analog/digital input/output interface
- Compatible with the STEVAL-TTM001V1 automotive low voltage kit
- Compatible with all the motor control platforms, thanks to the motor control connector
- RoHS and WEEE compliant

Description

The STEVAL-TTM002V1 control board is based on the high performance SPC560P50L3 automotive microcontroller with dedicated peripherals for motor control, such as 10-bit analog-to-digital converters (ADC) and high resolution timers (FlexPWM) with complementary or independent outputs and ADC synchronization signals.

This standalone control board includes a standard 34-pin motor control interface, so it can be connected to any driving stage of a motor control application, ensuring maximum flexibility.

Product summary	
Control board for automotive motor control applications	STEVAL-TTM002V1
32-bit power architecture MCU for automotive chassis and safety applications	SPC560P50L3
USB/JTAG debugger for SPC5 MCUs	SPC5-UDESTK
Application	Automotive BLDC Motor

1 Schematic diagrams

Figure 1. **STEVAL-TTM002V1 control board - main block**

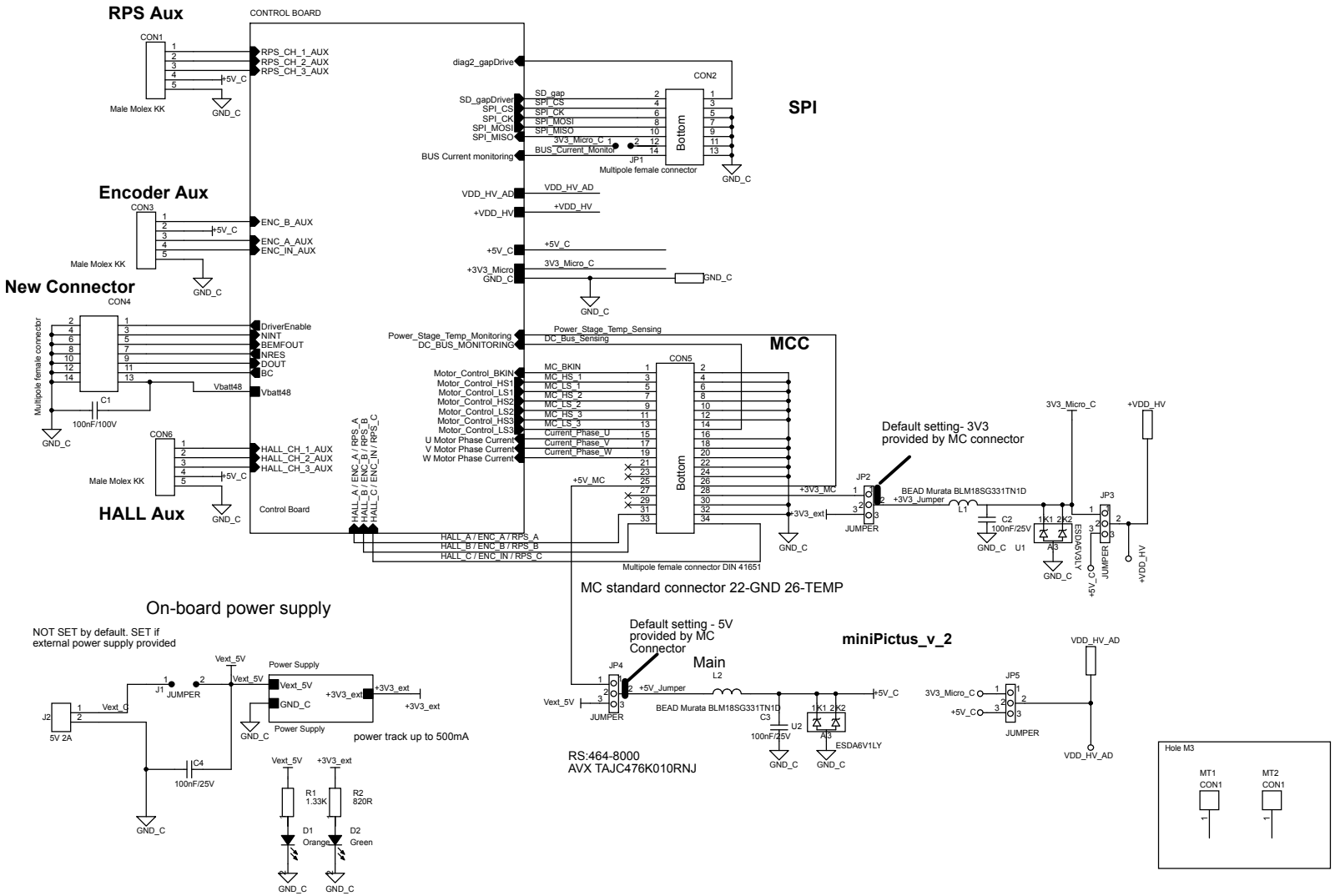


Figure 2. STEVAL-TTM002V1 control board - control stage

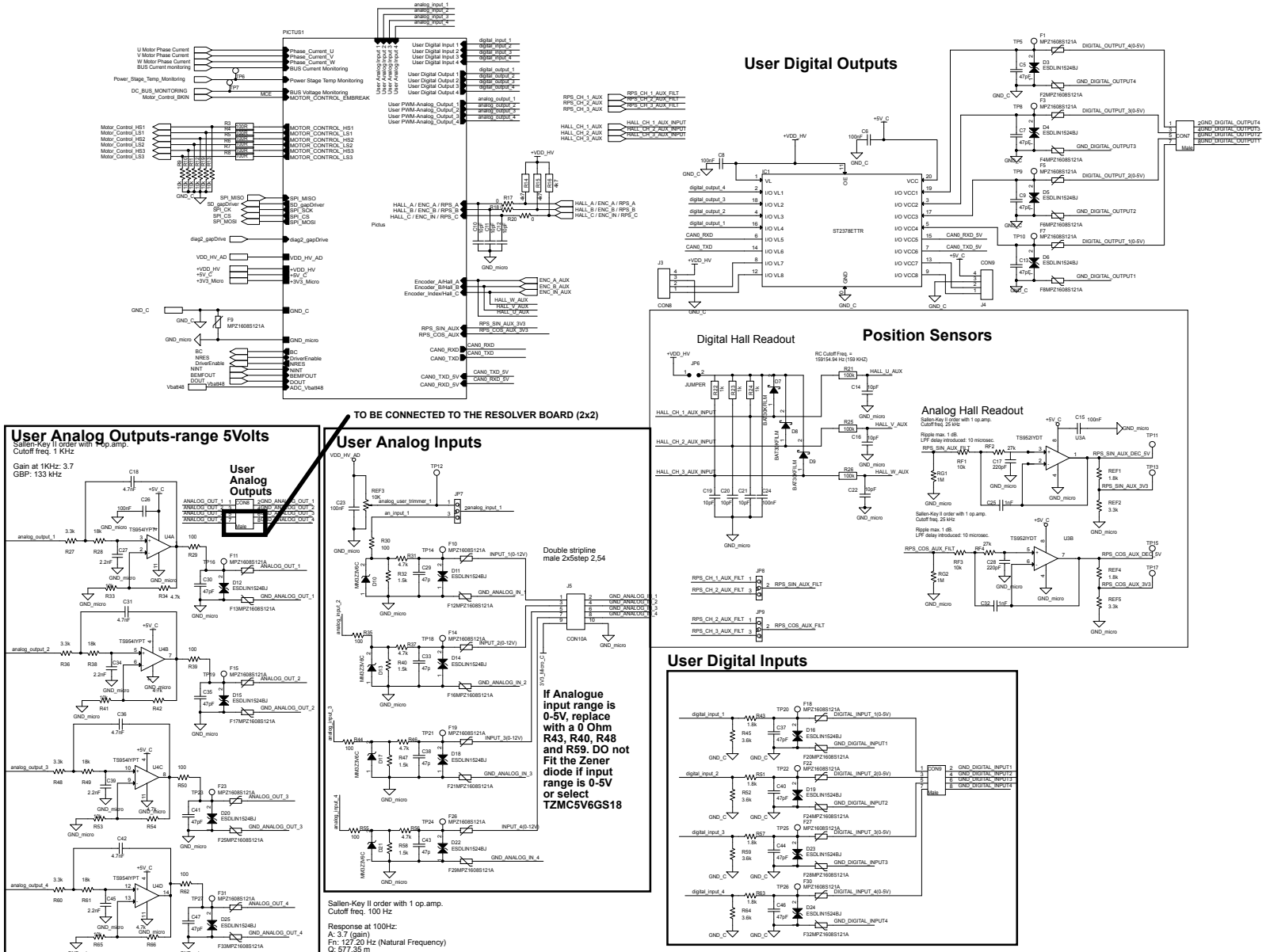


Figure 3. STEVAL-TTM002V1 control board - SPC560P50L3 microcontroller

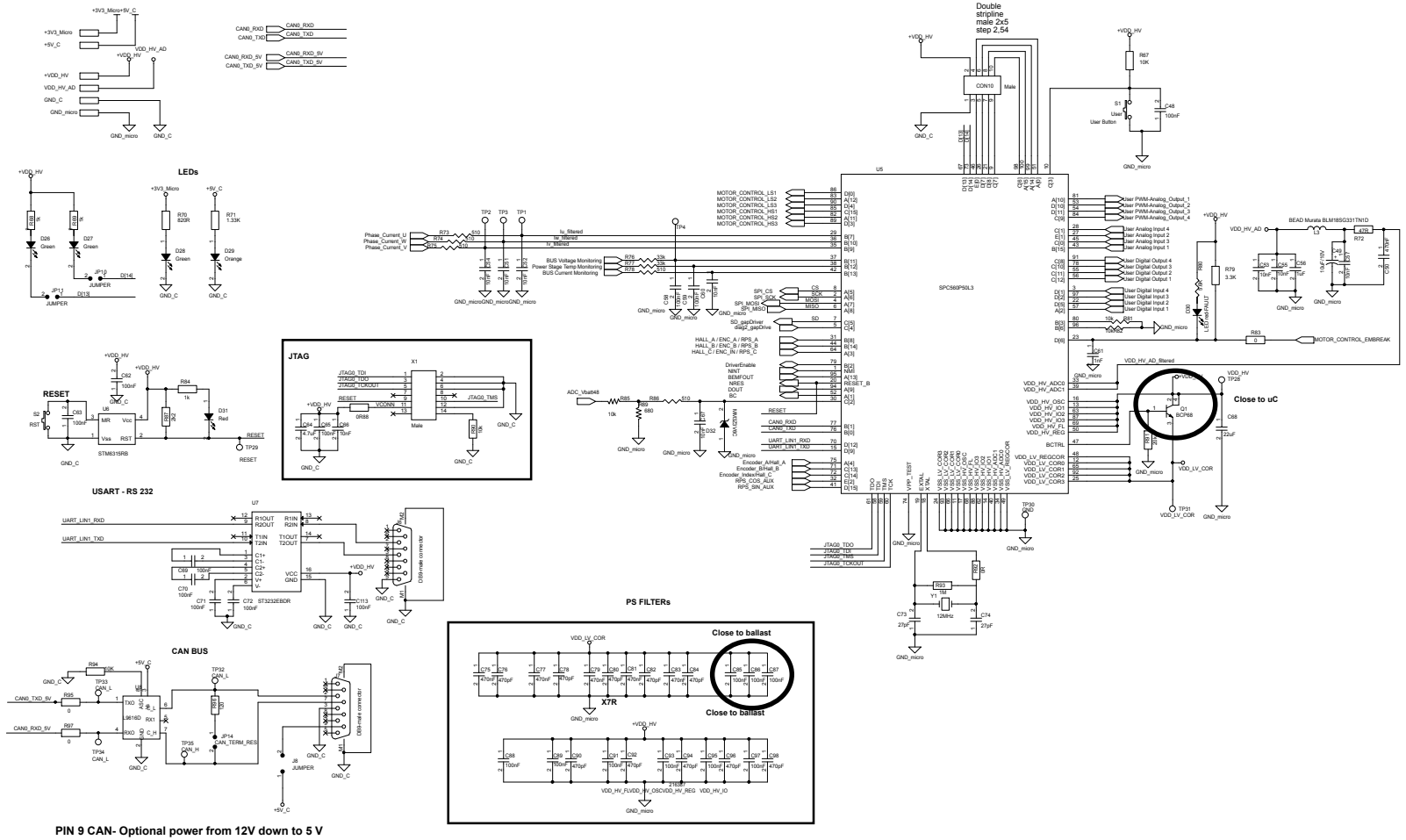
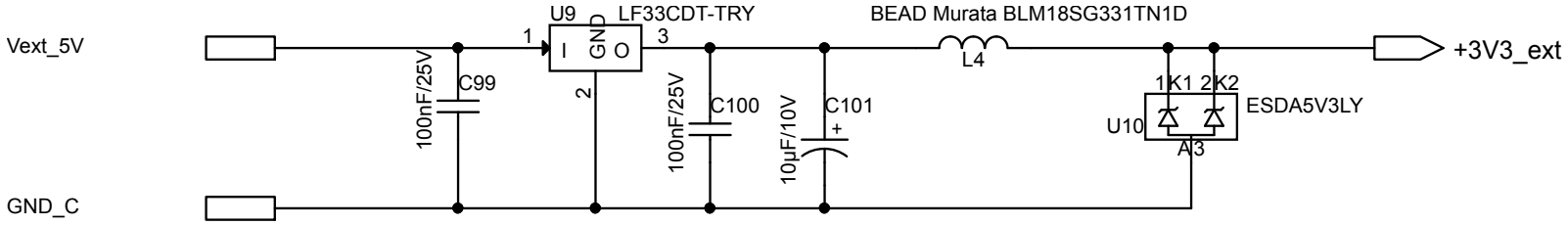


Figure 4. STEVAL-TTM002V1 control board - power supply block



Revision history

Table 1. **Document revision history**

Date	Version	Changes
25-Oct-2019	1	Initial release.