



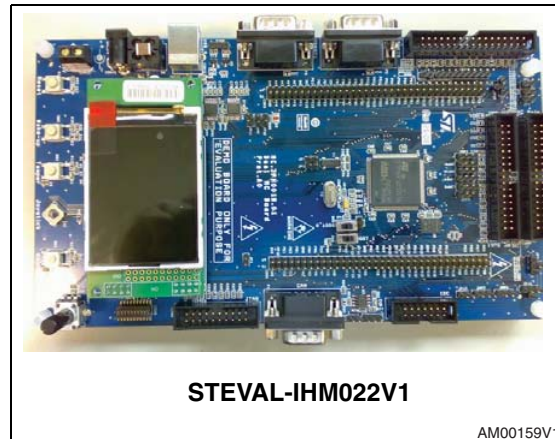
# STEVAL-IHM022V1

## High density dual motor control demonstration board based on the STM32F103ZE microcontroller

Data brief

### Features

- Four 5 V power supply sources: 2-way screw connector, power jack, USB connector or daughterboard
- Boot from system or user Flash
- 64 Mb serial Flash included
- Two RS-232 channels with RTS/CTS handshake support on one channel
- USB 2.0 full speed connection
- CAN 2.0 A/B compliant connection
- Two full featured motor control connectors for field oriented control plus PFC support on one connector
- JTAG, SWD and trace debug support
- 240 x 320 TFT color LCD
- Joystick with 4-direction control and selector
- Reset, wakeup, tamper and user button
- Extension connectors for daughterboard or wrapping board
- RoHS compliant



Extension headers make it easy to connect a daughterboard or wrapping board for specific applications.

### Description

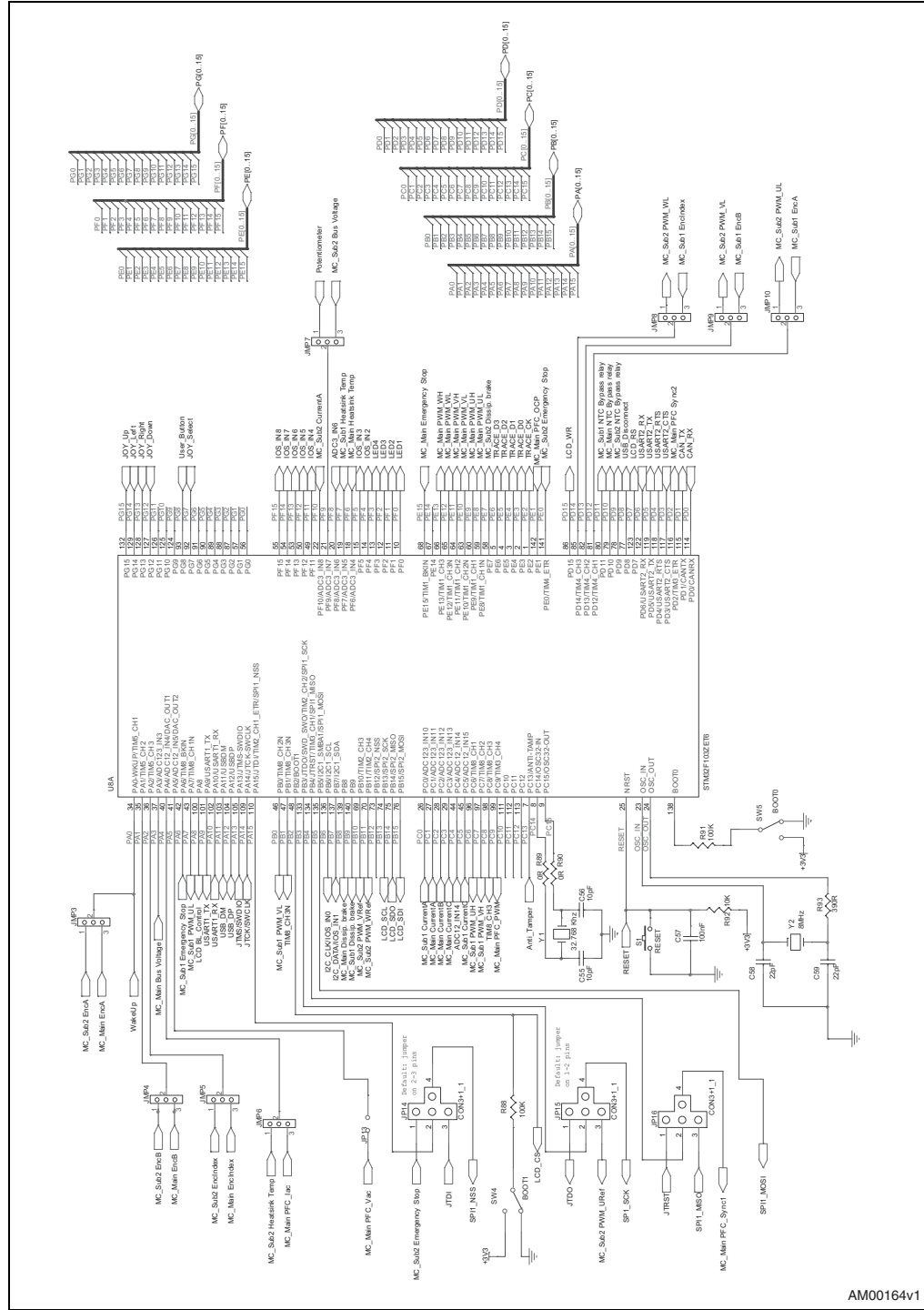
The STEVAL-IHM022V1 demonstration board is designed as a dual motor control development platform for STMicroelectronics' ARM Cortex™-M3 core-based STM32F103ZE microcontroller.

The board features full speed USB 2.0 and CAN 2.0 A/B compliant interfaces, 2 I<sup>2</sup>S channels, 2 I<sup>2</sup>C channels, 5 USART channels, 3 SPI channels, 2 DAC channels, internal 64 Kb SRAM and 512 Kb Flash memory, and JTAG and SWD debugging support.

The board is designed to implement multiple motor control (up to three MC connectors are available) and offers an advanced user I/O interface (LCD QVGA display and joystick key).

# 1 STEVAL-IHM022V1 schematic diagrams

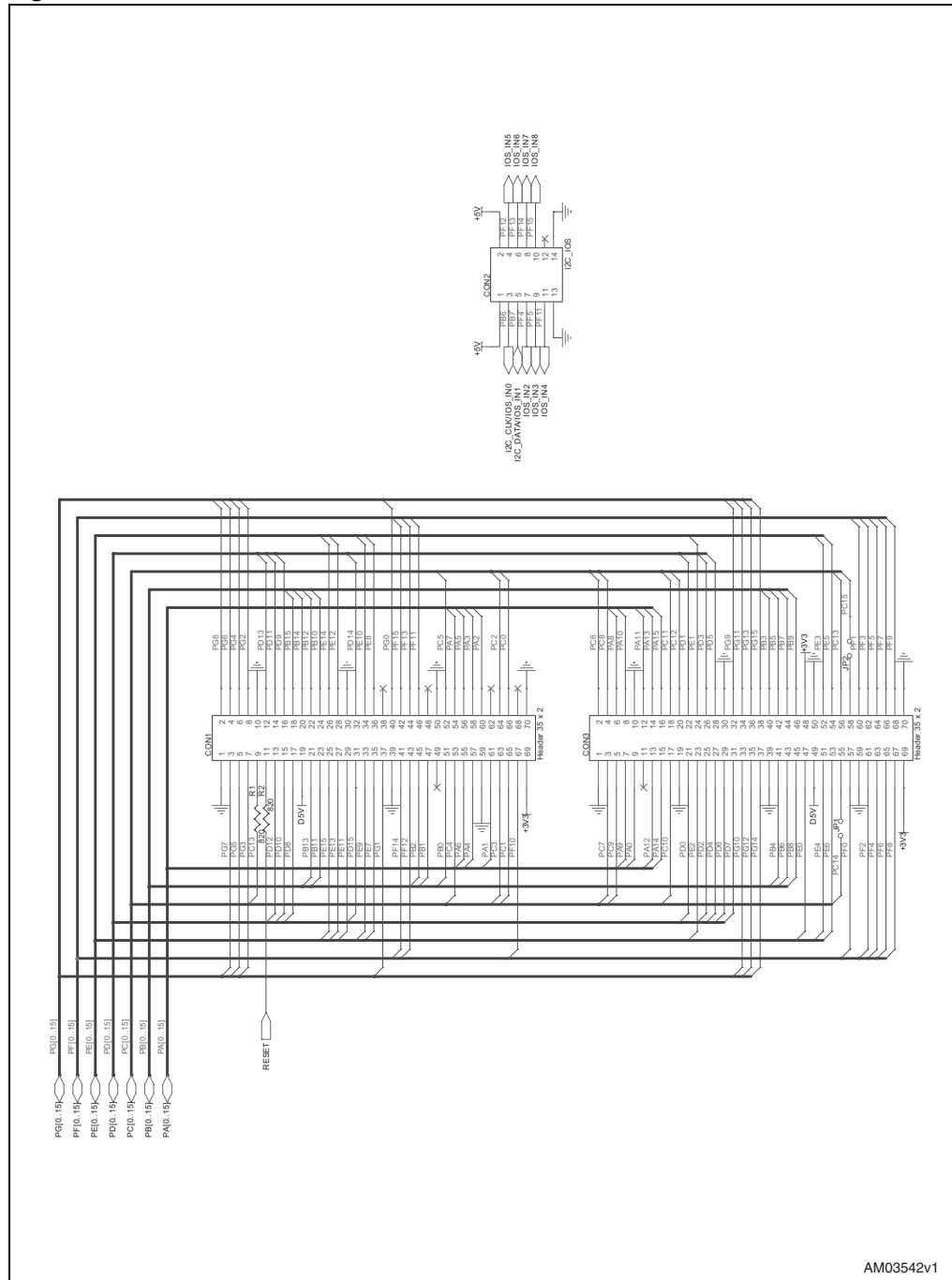
Figure 1. STM32F103ZE microcontroller



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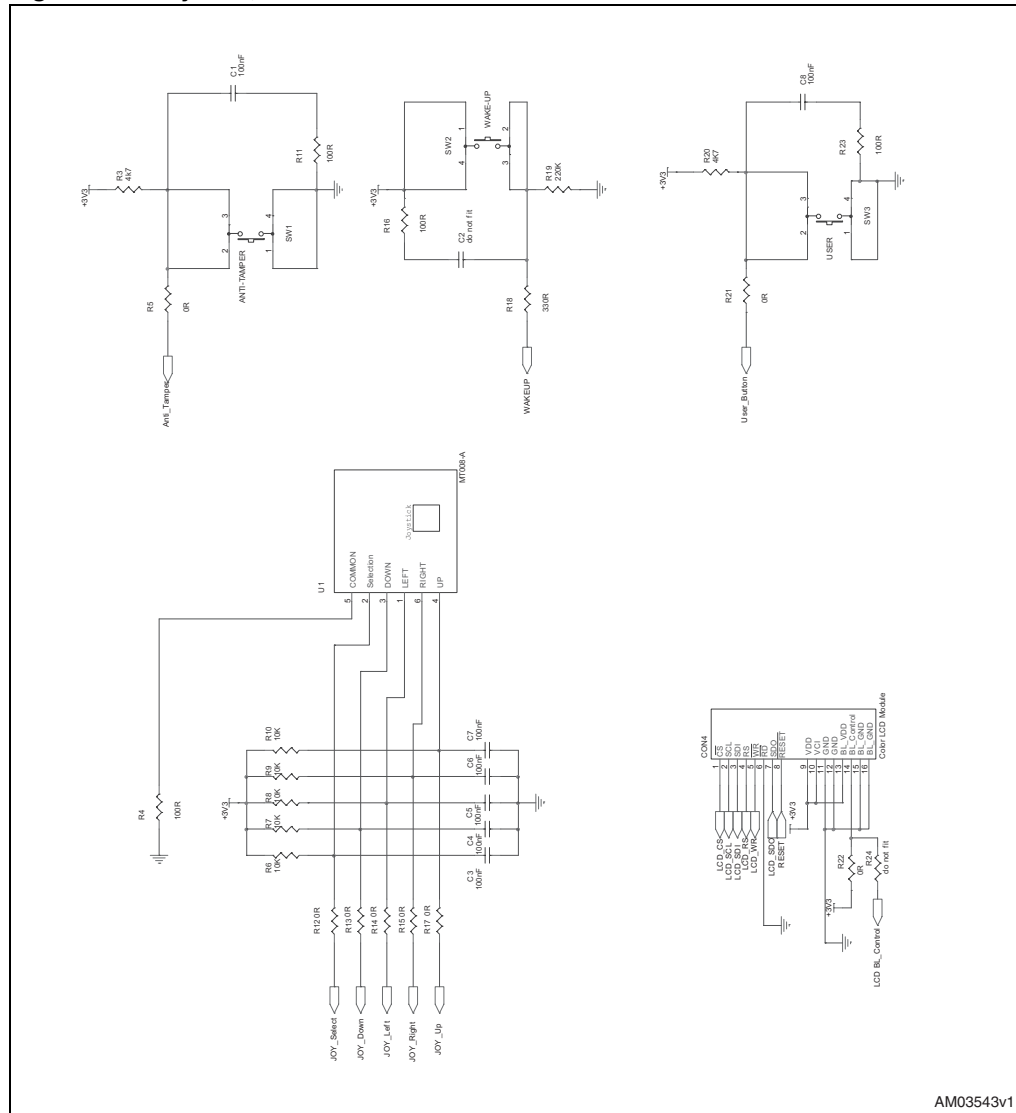


Figure 2. Extension and I<sup>2</sup>C connectors



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Figure 3. Joystick, buttons and LCD connections



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Figure 4. JTAG and trace connectors

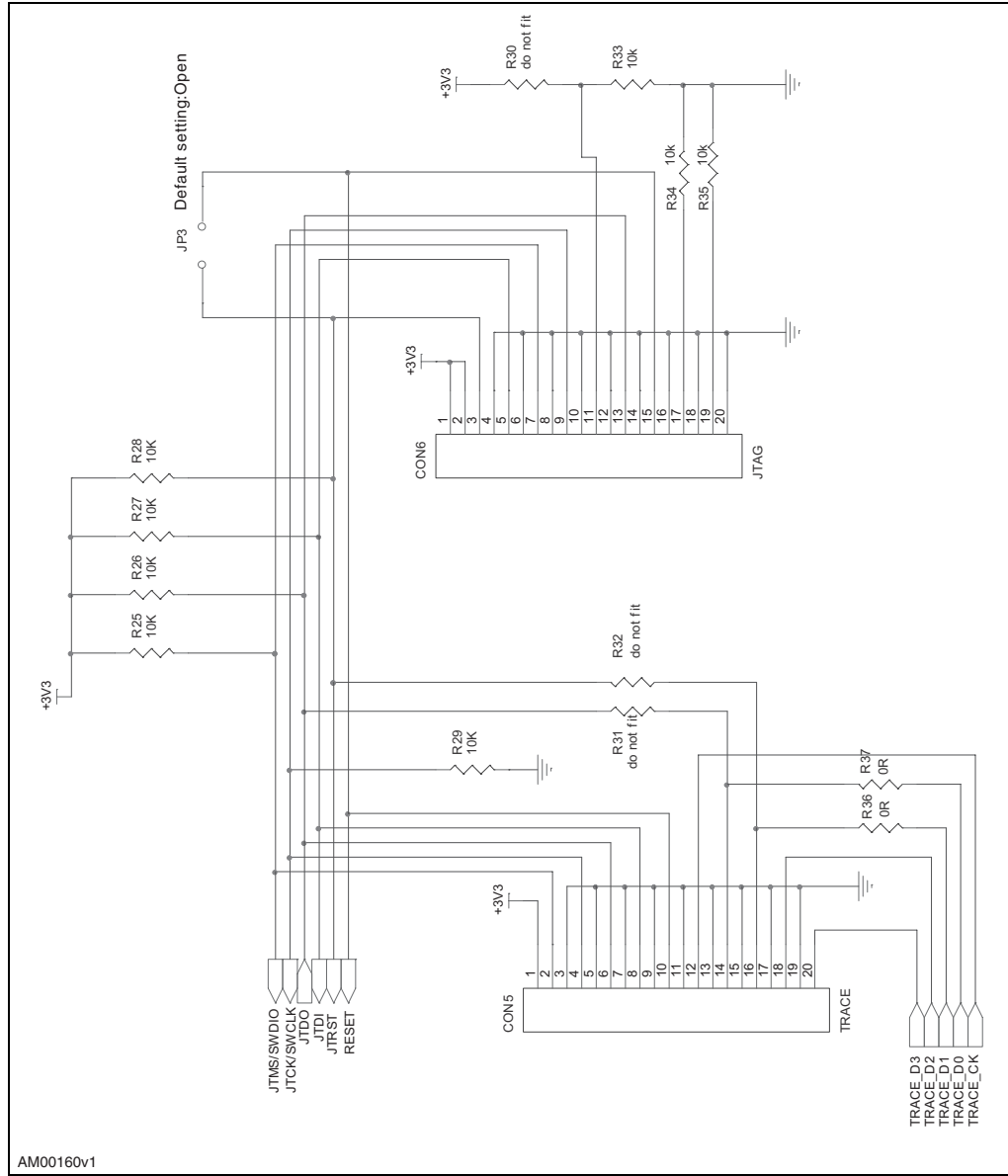
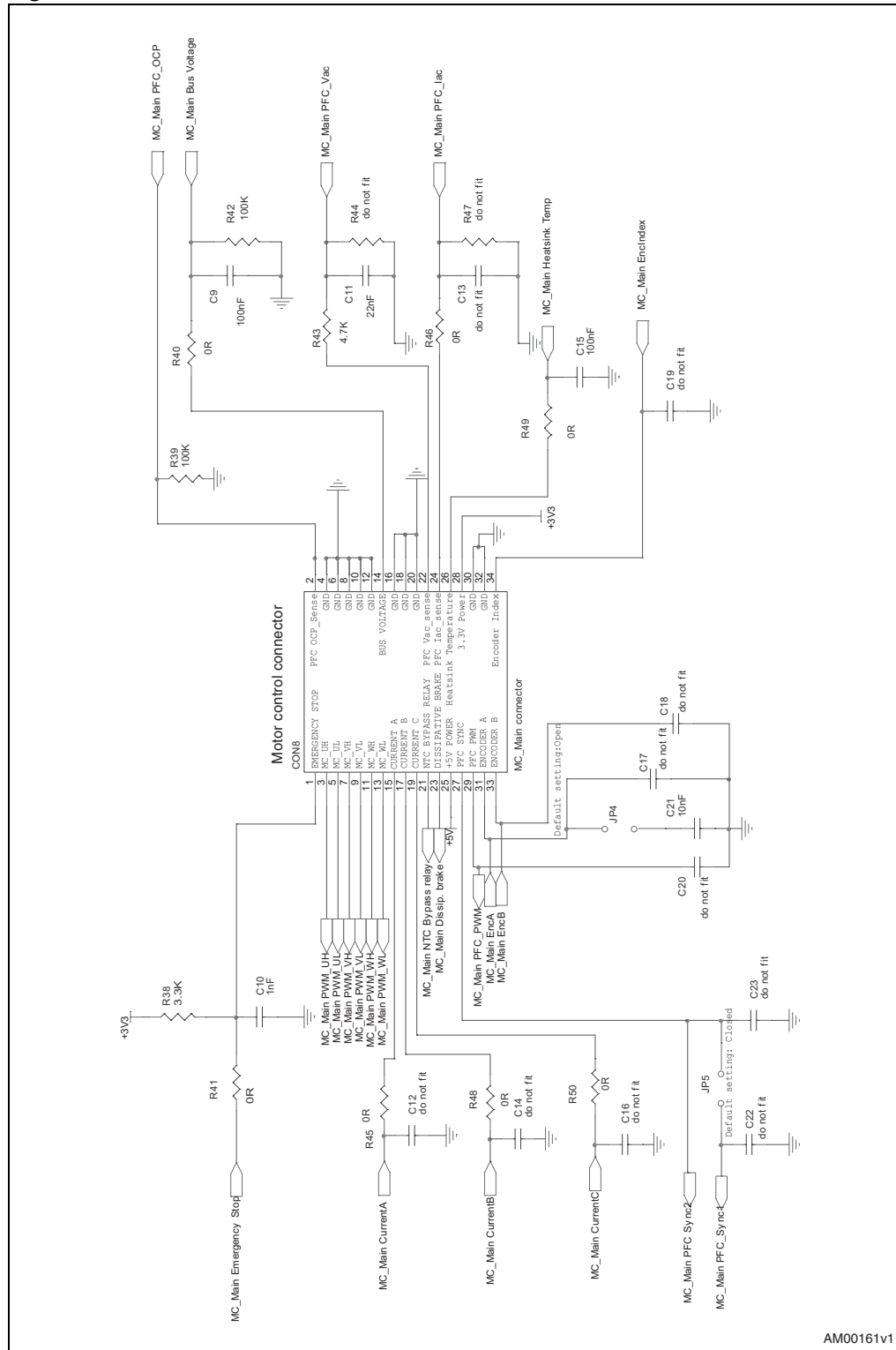


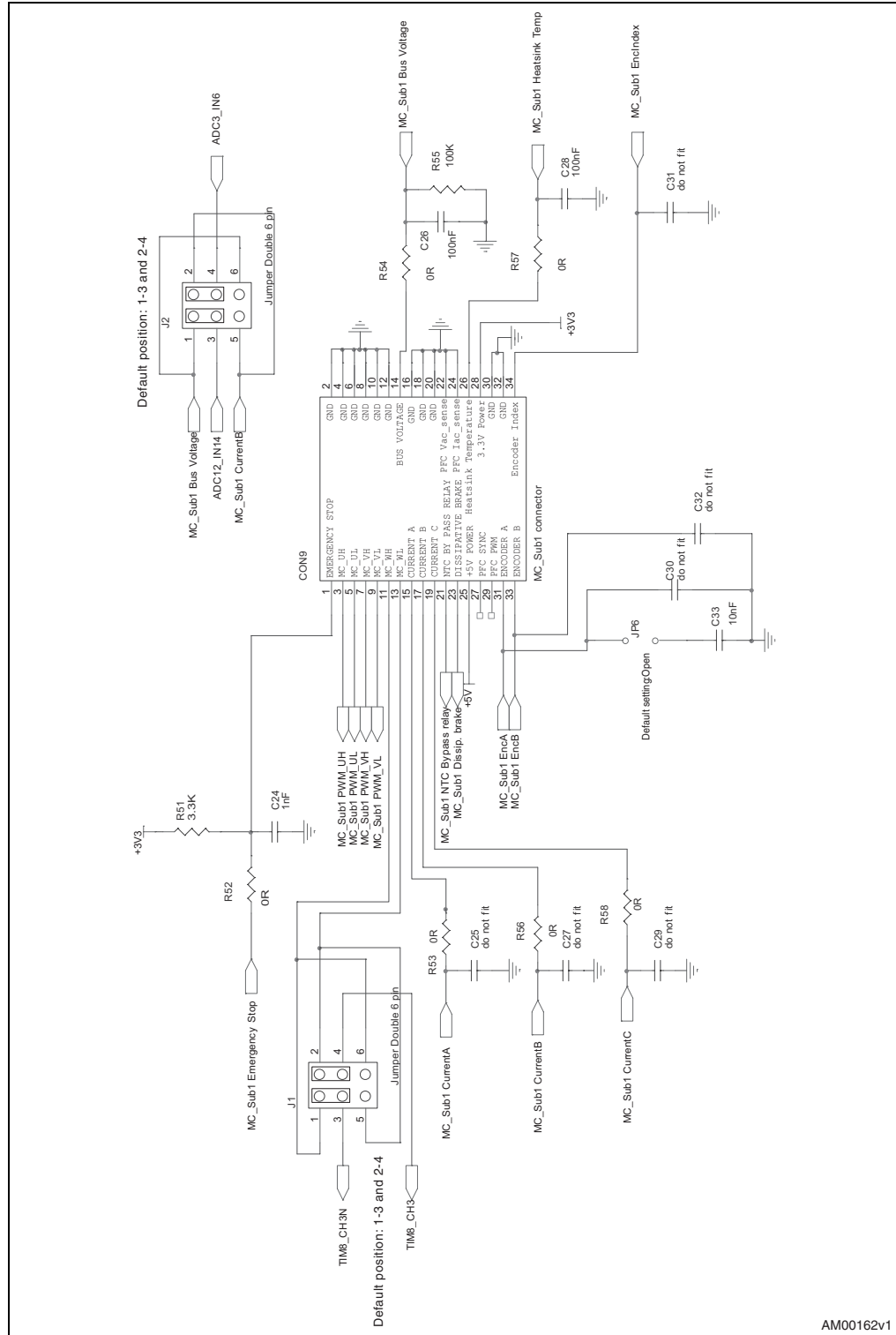
Figure 5. Motor control connector main



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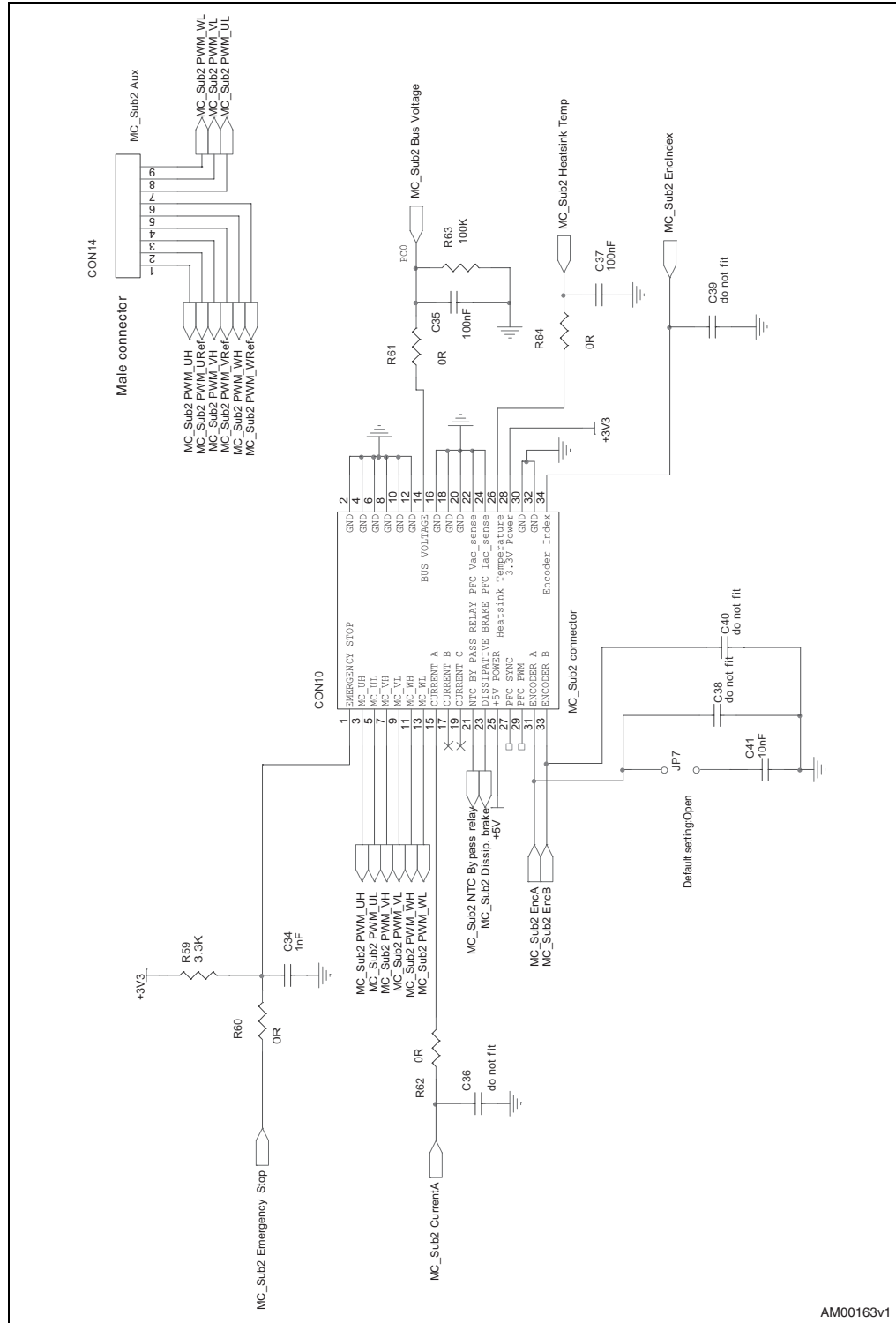


Figure 6. Motor control connector sub1



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Figure 7. Motor control connector sub2



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Figure 8. Peripherals

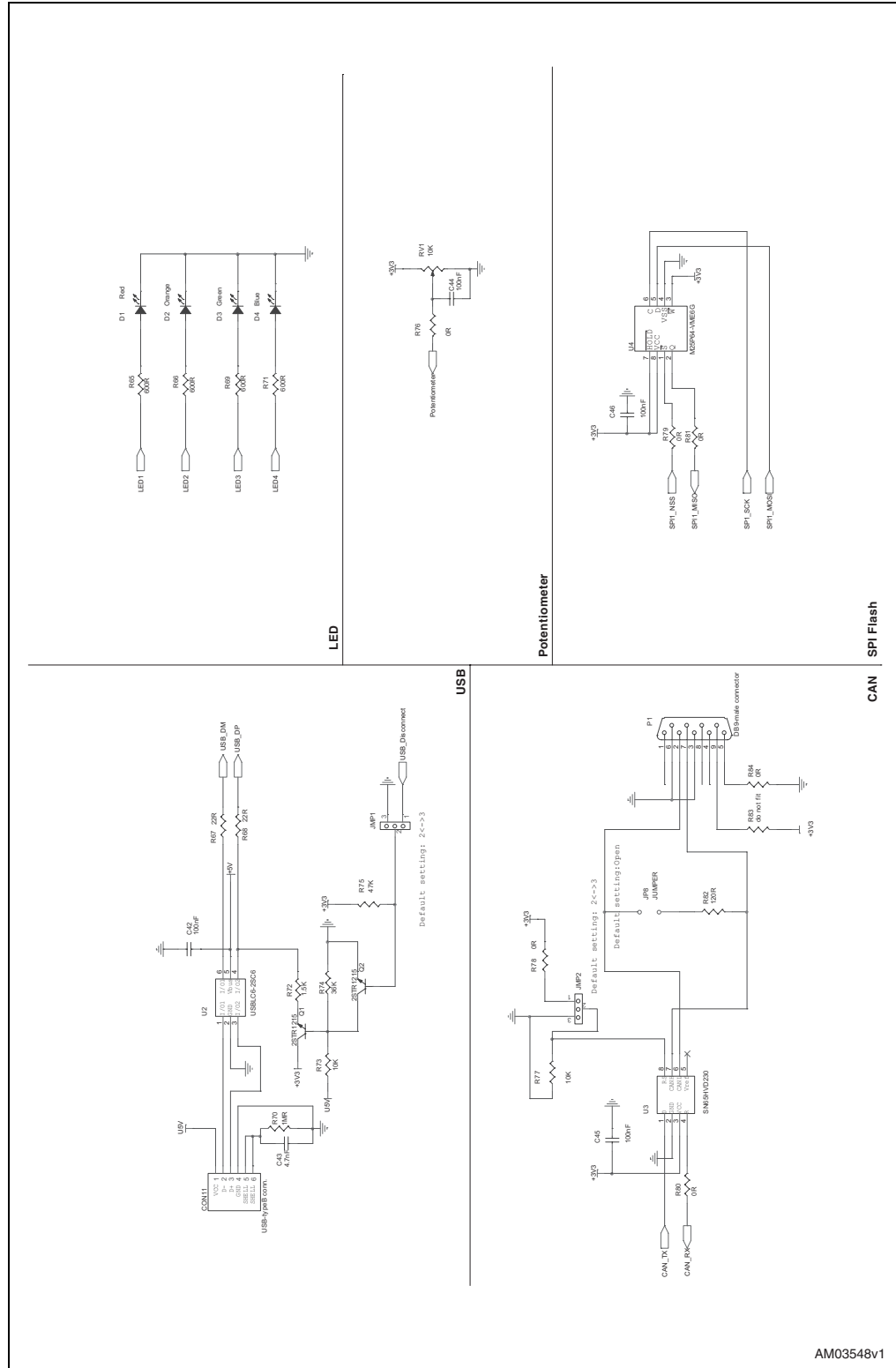
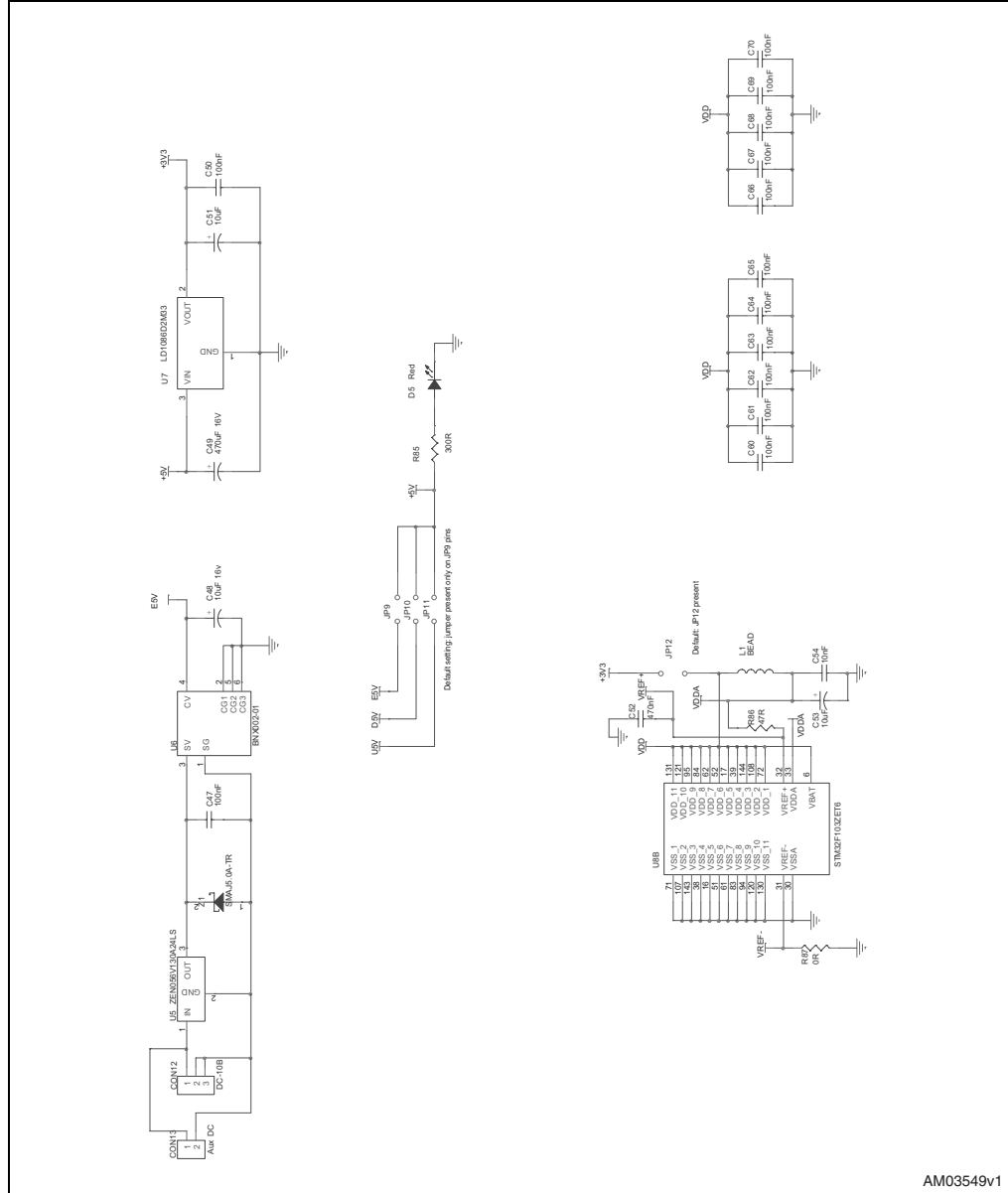
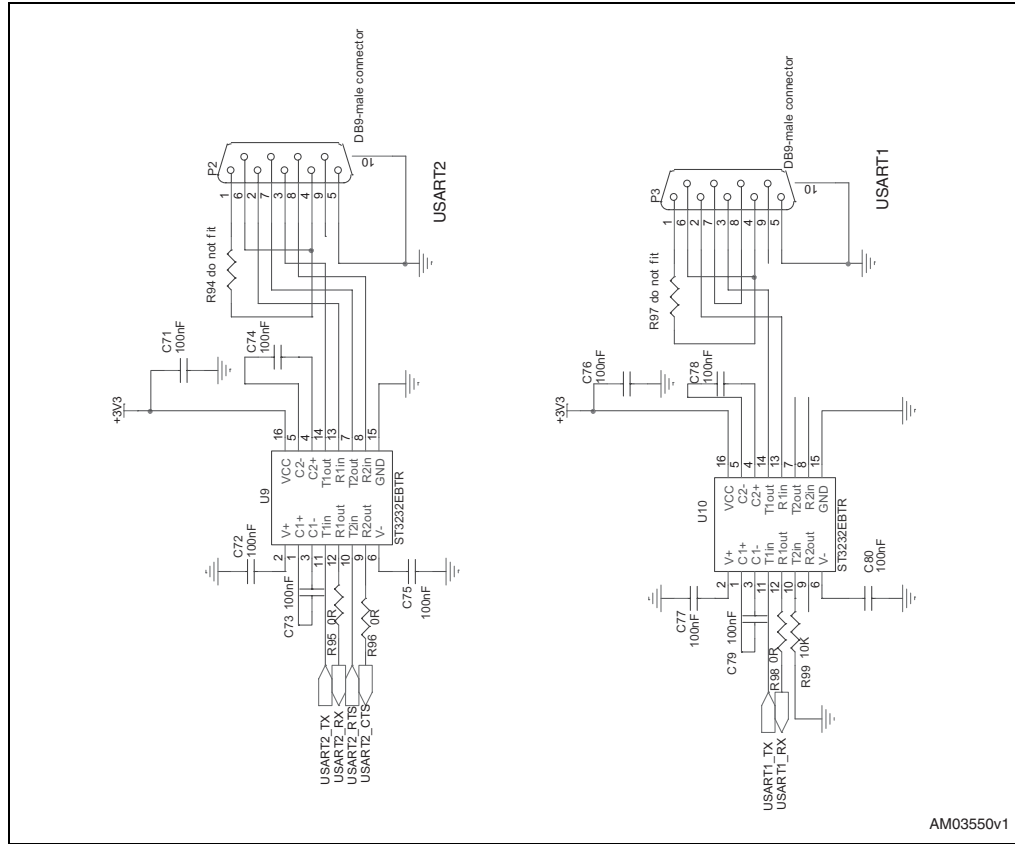


Figure 9. Power supply



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Figure 10. RS-232 connectors



## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
29-Jul-2009	1	Initial release.

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