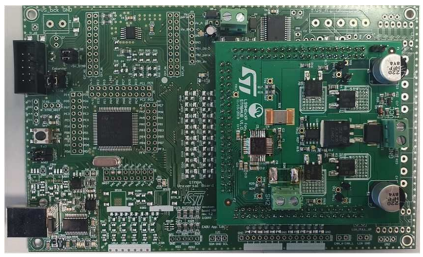
EVAL-L99H02QF

Data brief

L99H02QF evaluation board



Features

- Operating supply voltage from 6 V to 28 V
- Central 2 stage charge pump 100 % duty cycle
- Full R_{DSon} down to 6 V (normal level MOSFETs)
- Control of reverse battery protection MOSFET
- Charge pump current limited
- PWM operation up to 30 kHz
- SPI interface
- Current sense amplifier/free configurable
- Zero adjust for end of line trimming
- Power management: programmable free-wheeling
- Sensing circuitry of external MOSFETs with embedded thermal sensors

Description

EVAL-L99H02QF is an evaluation board designed for DC motor control in automotive applications. It is composed by a motherboard and a daughterboard on which the L99H02QF is pre-assembled.

The motherboard, based on STM8A microcontroller, provides the logic section for monitoring and driving the L99H02QF assembled in the daughterboard.

With the aim to make the board usage and settings simpler, ST provides a dedicated user-friendly software with a Graphic User Interface (GUI). This enables the user to set L99H02QF parameters and registers, simultaneously showing real time device diagnostic information like motor evolution, free-wheeling, board temperature and much more.

Product status link
EVAL-L99H02QF

Product summary	
Order code	EVAL-L99H02QF
Reference	L99H02QF evaluation board

1 Application schematics and layouts

1.1 L99H02QF daughterboard

Figure 1. **L99H02QF daughterboard TOP layout**

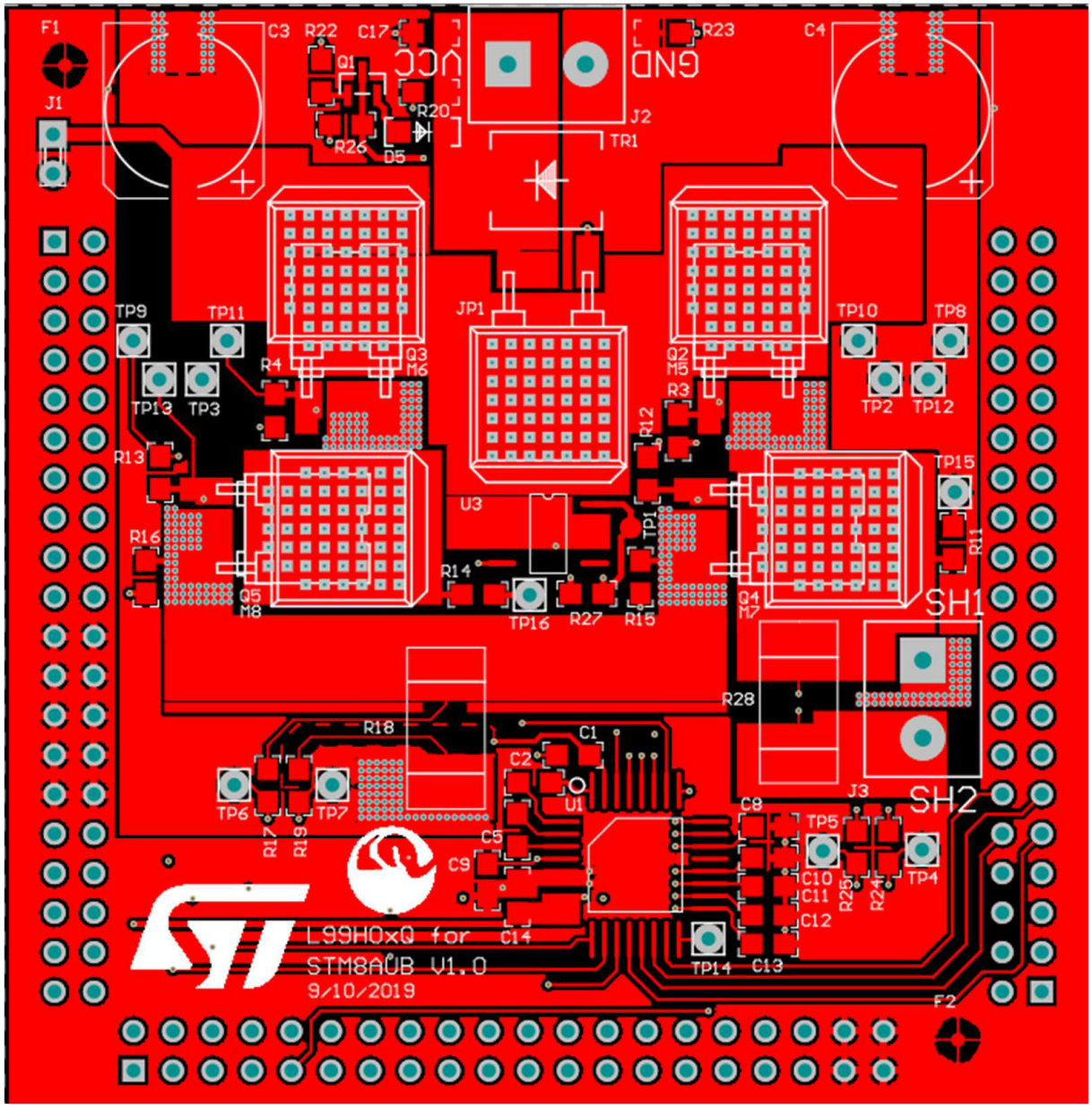


Figure 2. **L99H02QF daughterboard MID1 layer**

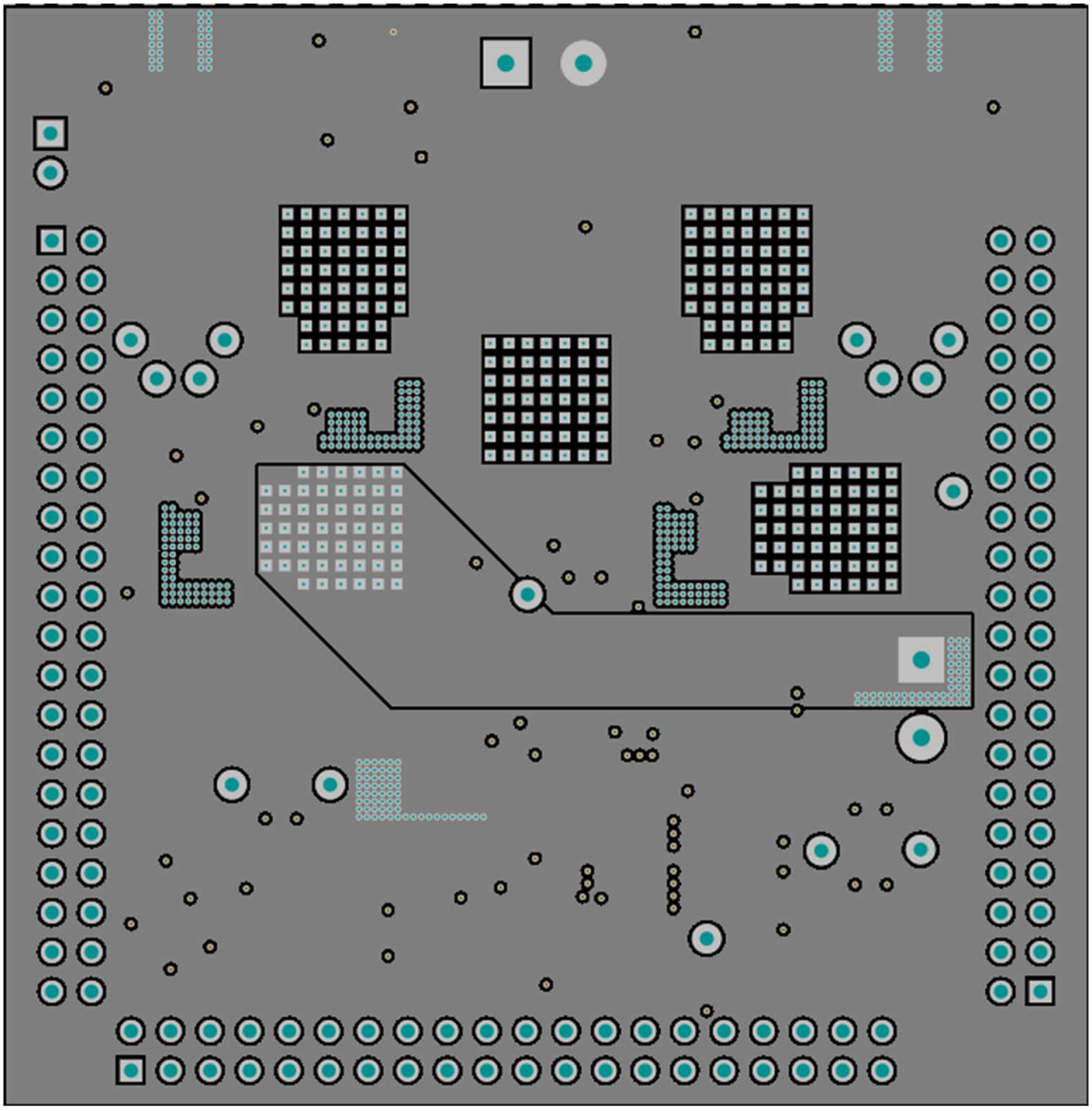


Figure 3. **L99H02QF daughterboard MID2 layer**

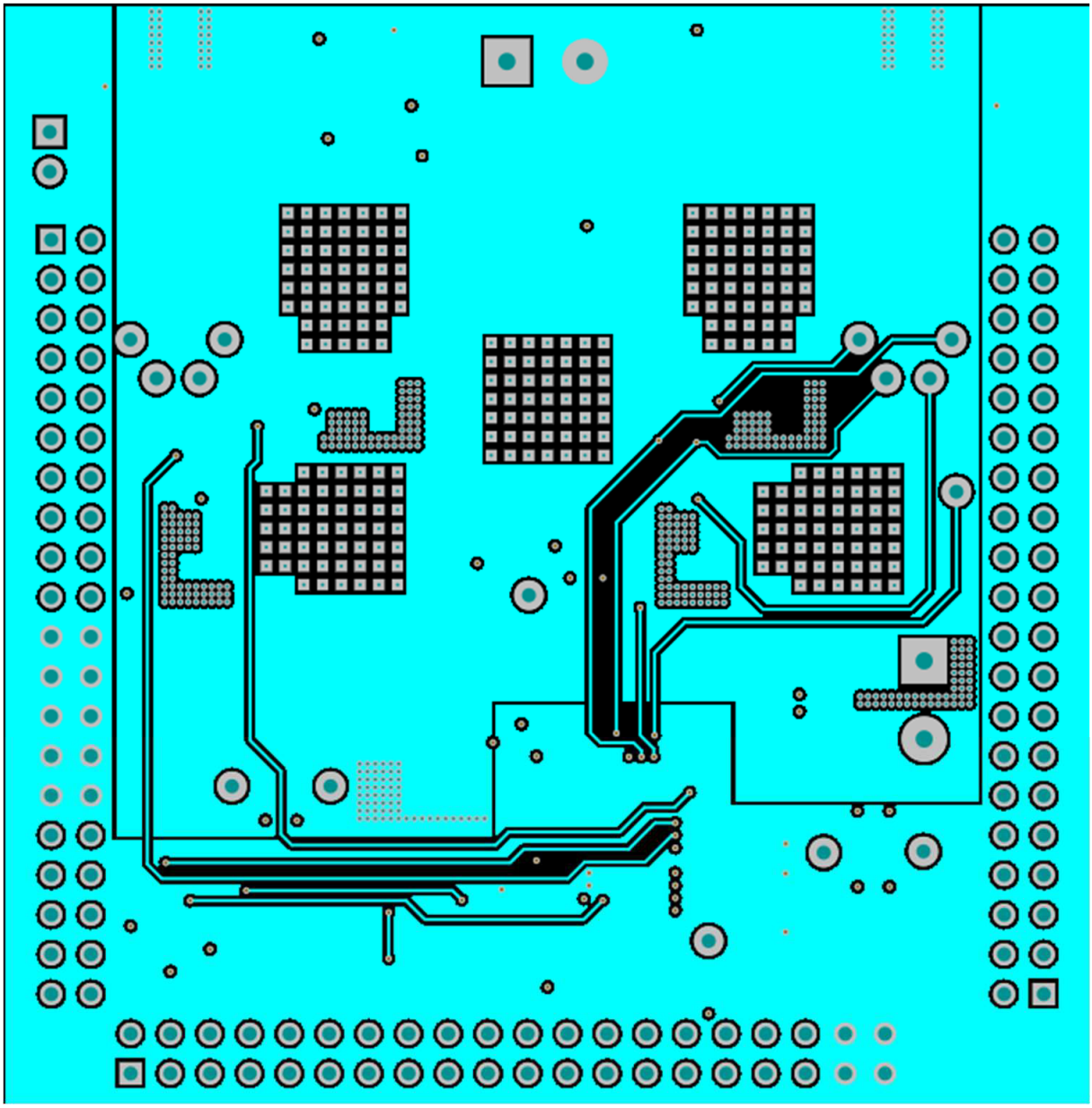


Figure 4. **L99H02QF daughterboard bottom layer**

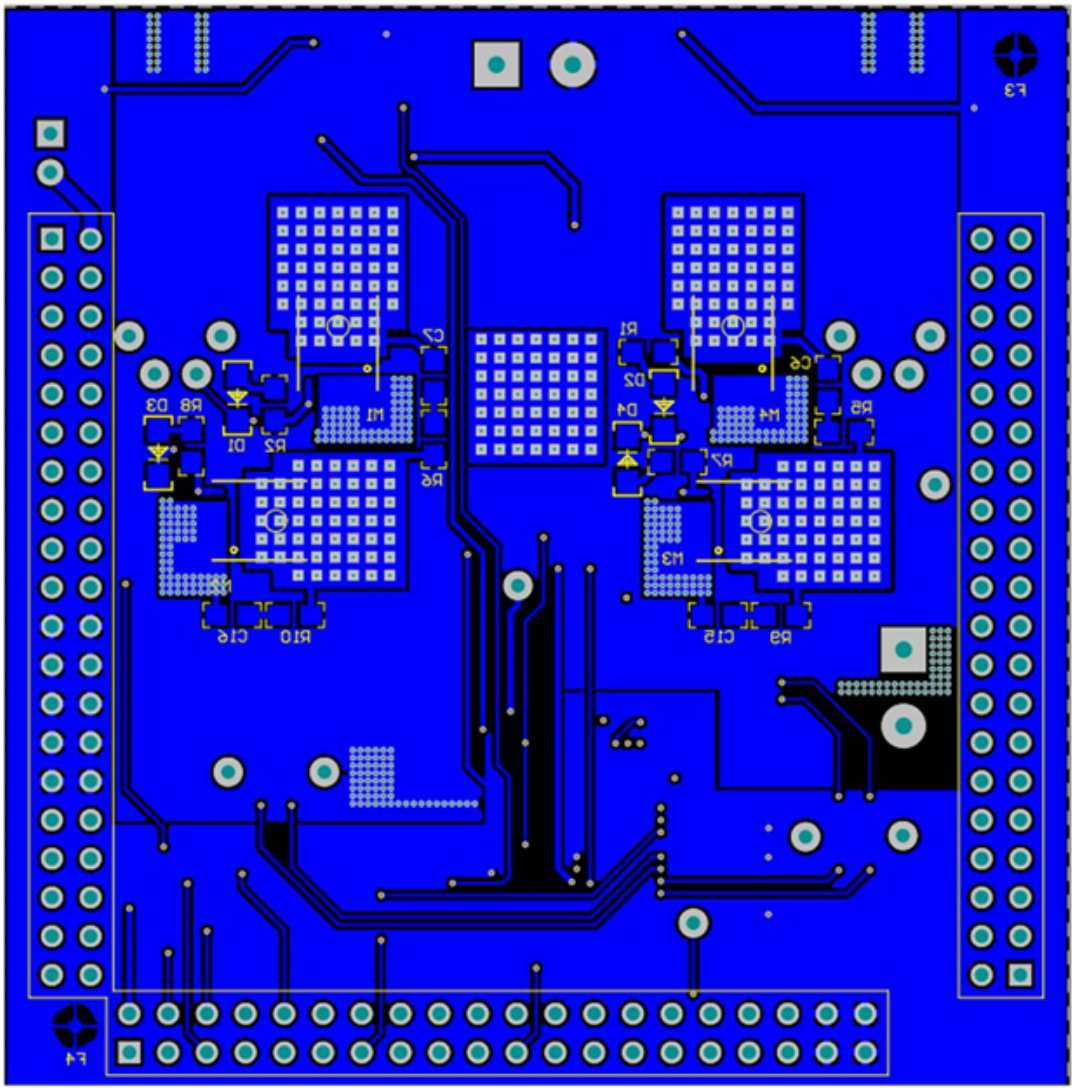
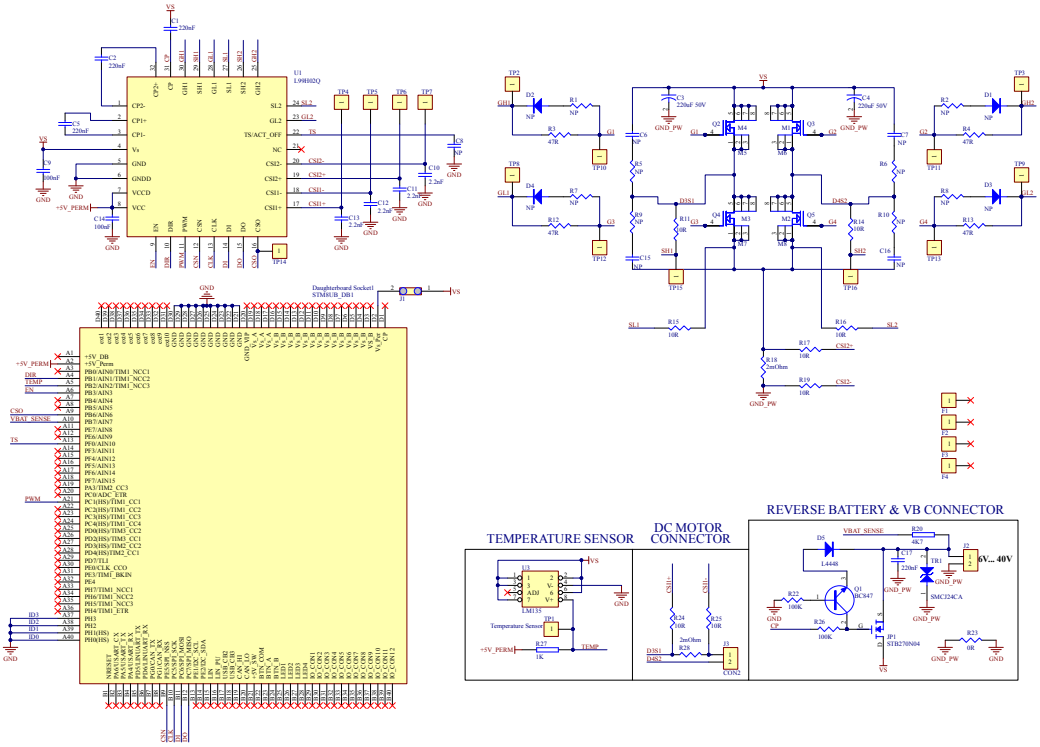


Figure 5. L99H02QF daughterboard application schematic



1.2 STM8 motherboard

Figure 6. **STM8 motherboard TOP layer**

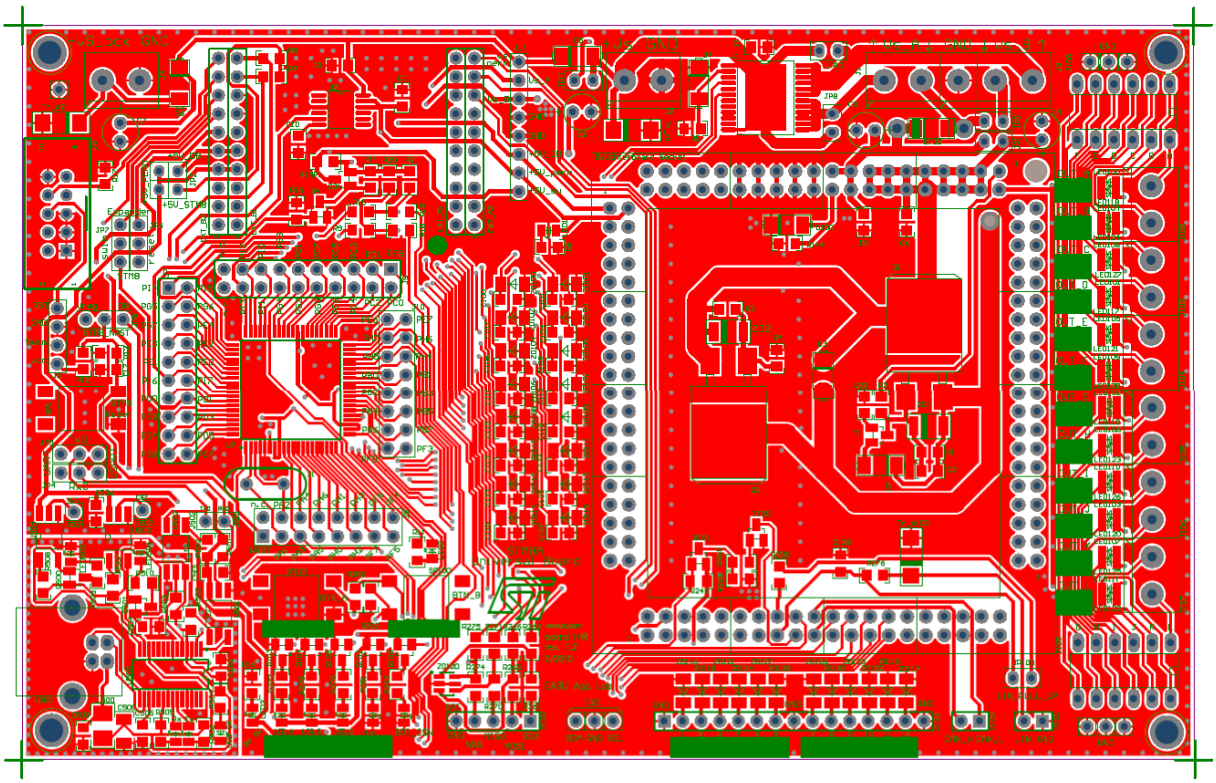


Figure 7. **STM8 motherboard bottom layer**

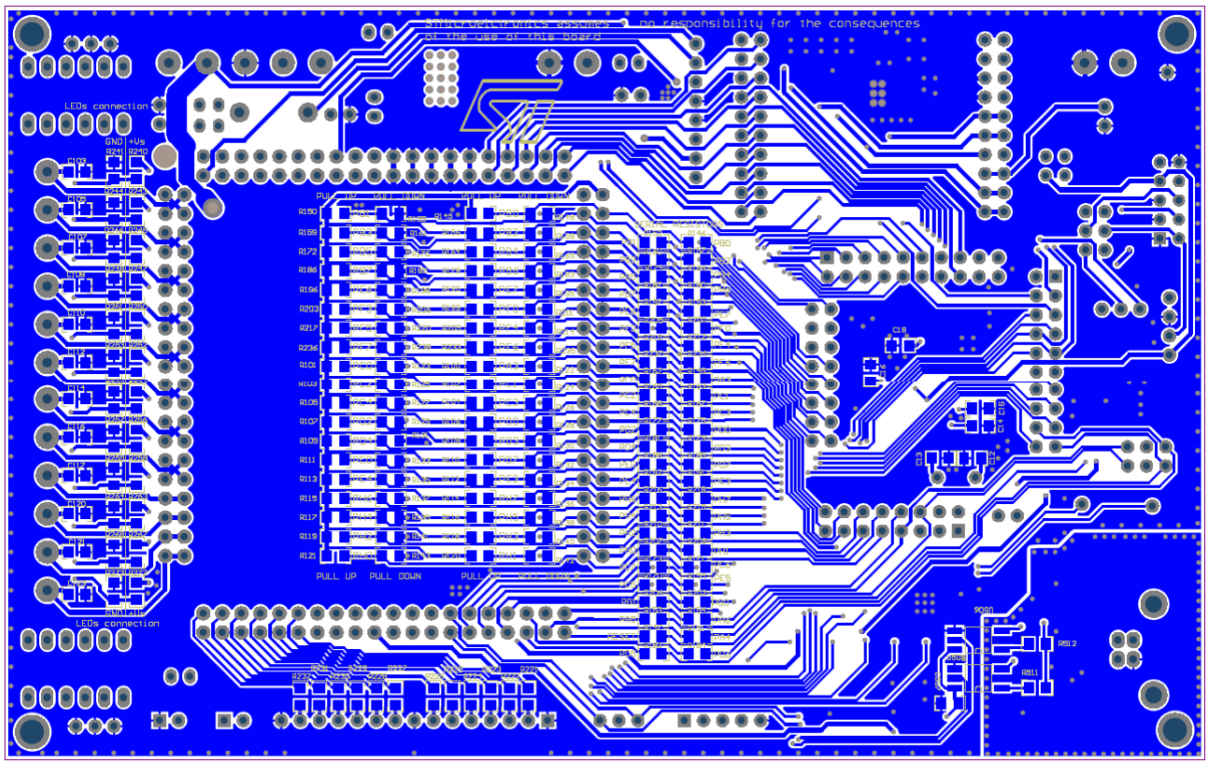


Figure 8. **STM8 motherboard – I/O & body application schematic**

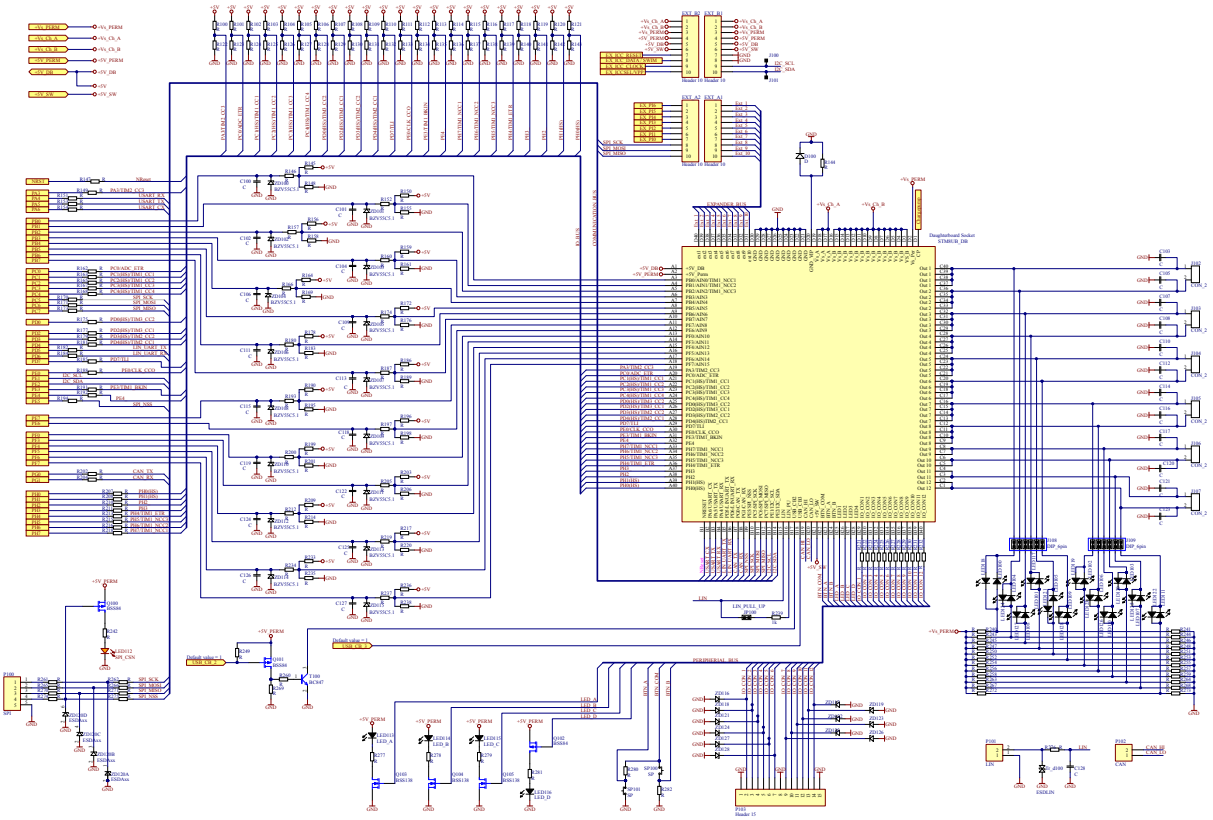


Figure 9. **STM8 motherboard – STM8 & supply application schematic**

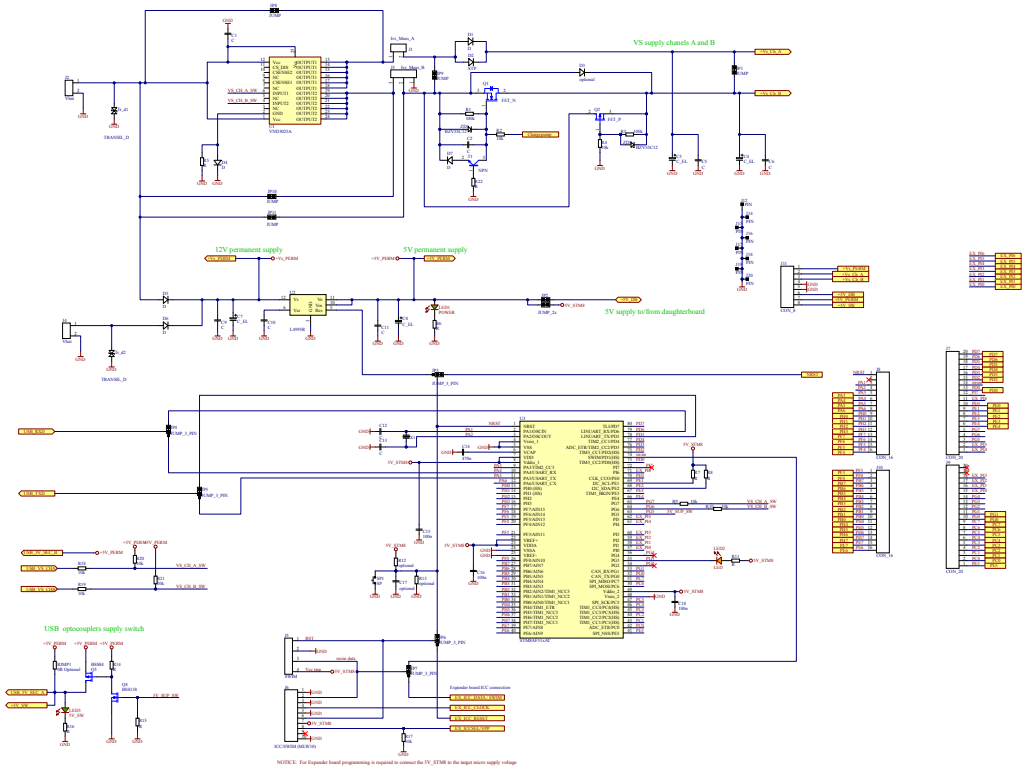
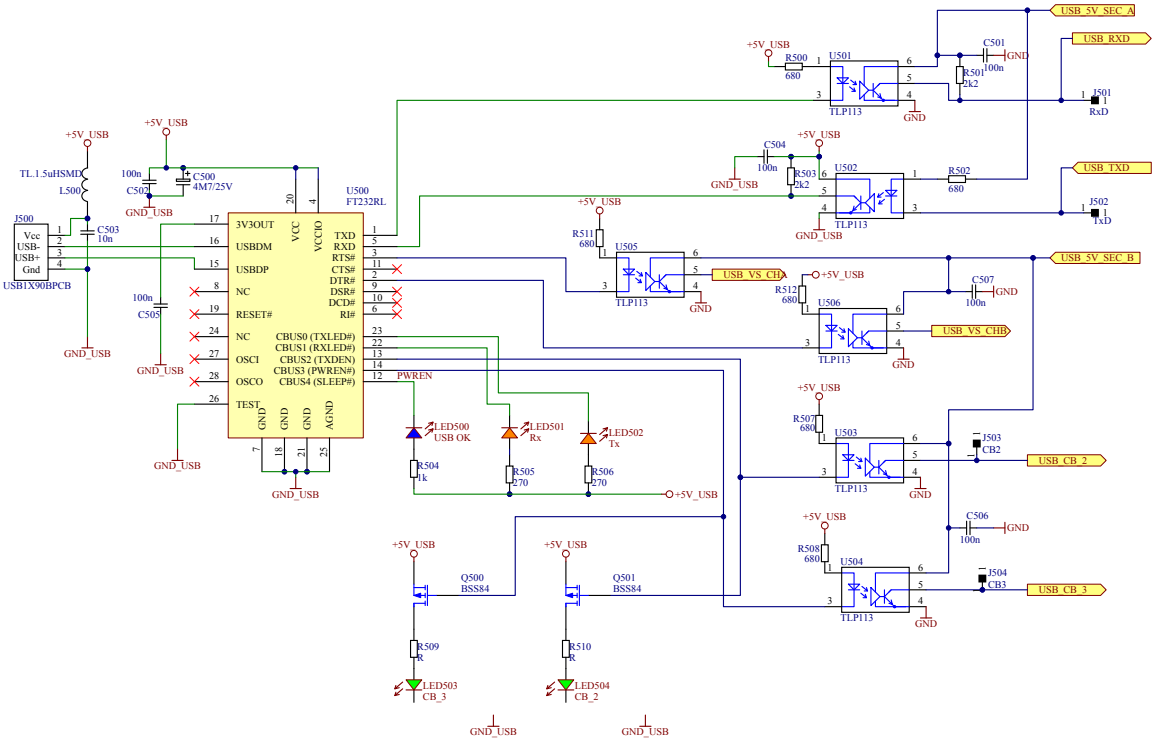


Figure 10. STM8motherboard USB interface application schematic



Revision history

Table 1. **Document revision history**

Date	Revision	Changes
08-Sep-2021	1	Initial release.
04-Nov-2021	2	Updated rpn in cover page.

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