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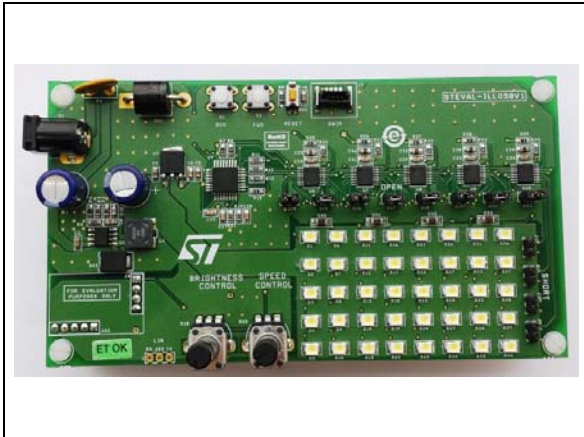


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**High brightness LED array driver with diagnostics for automotive applications based on the STAP08DP05 and STM8A**

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Data brief

**Description**

The STEVAL-ILL058V1 evaluation board is a high brightness LED array driver application with diagnostics based on the automotive grade, low voltage, 8-bit constant current LED sink driver STAP08DP05 from STMicroelectronics.

The LED driver is configured and controlled through an 8-bit automotive grade STM8A microcontroller via SPI interface.

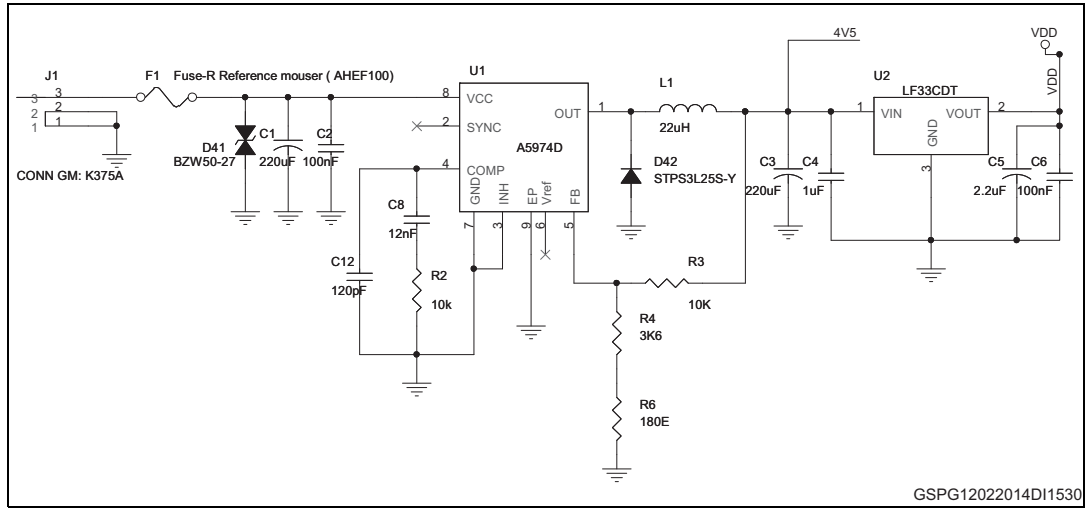
An automotive grade A5974D DC-DC converter provides the voltages and power for the overall functioning of the board.

**Features**

- 6 - 24 V DC power supply with reverse voltage protection, short-circuit protection and standard DC jack input
- Backward/forward transition switch and reset switch
- SWIM connector to program microcontroller and for debugging purposes
- Connector for LIN development and evaluation
- Brightness control potentiometer
- Speed control potentiometer
- 40 white LEDs (PLCC 4)
- 8 jumpers to simulate open-circuit errors
- 4 jumpers to simulate short-circuit errors
- Slot for USB-to-UART daughterboard
- Demonstrates pre-configured patterns (dot-sequence, backlighting, alphanumeric text etc.) in stand-alone mode
- Demonstrates basic mode or frame programming mode with GUI SW
- RoHS compliant

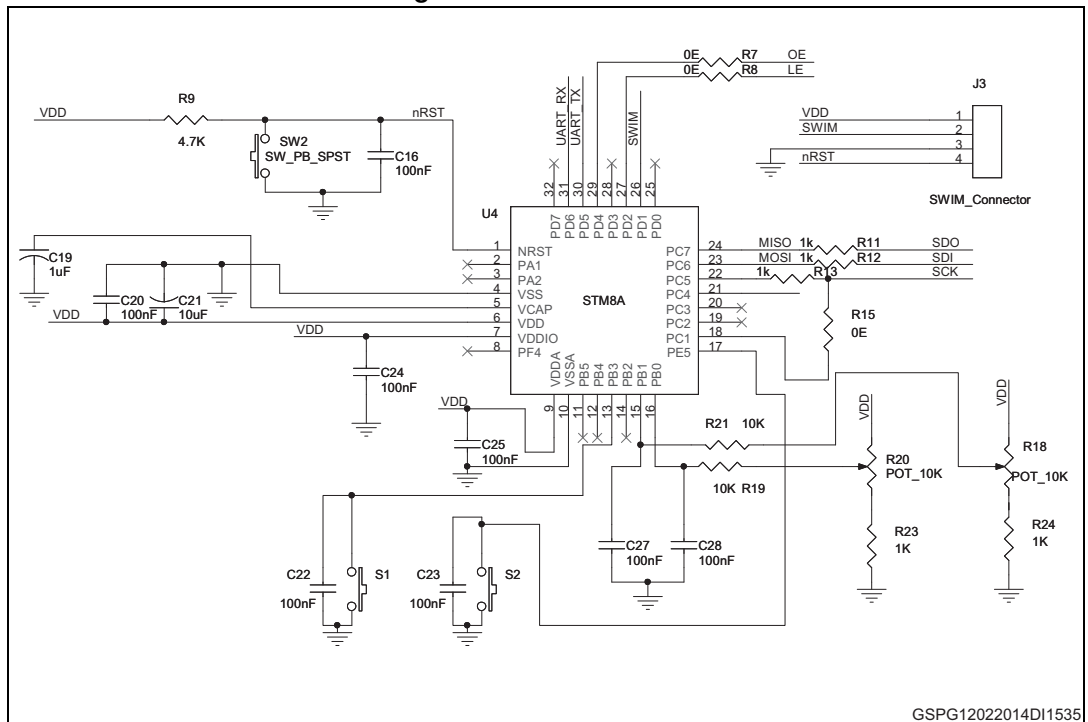
# 1 Schematic diagrams

Figure 1. Power section



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Figure 2. Microcontroller



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Figure 3. Jumpers to simulate open circuit

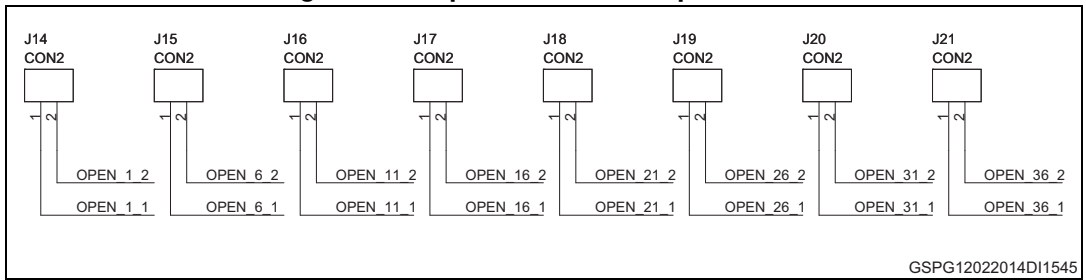


Figure 4. Jumpers to simulate short circuit

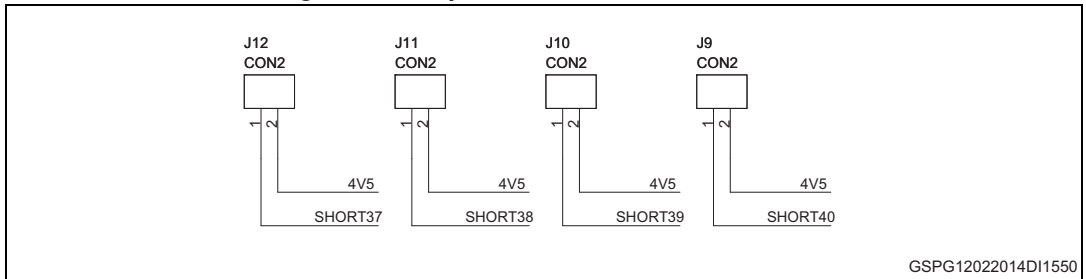


Figure 5. Connector

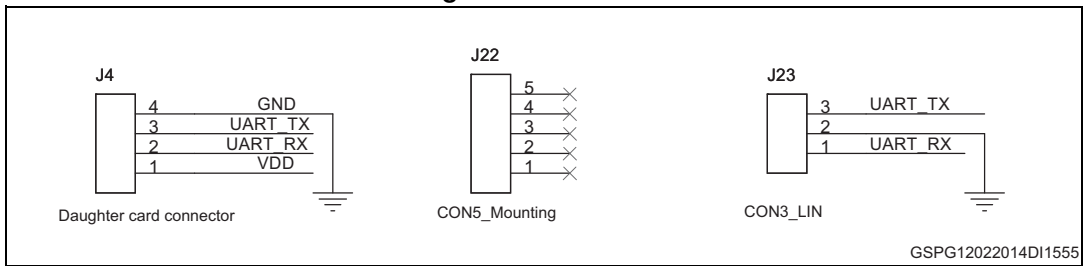
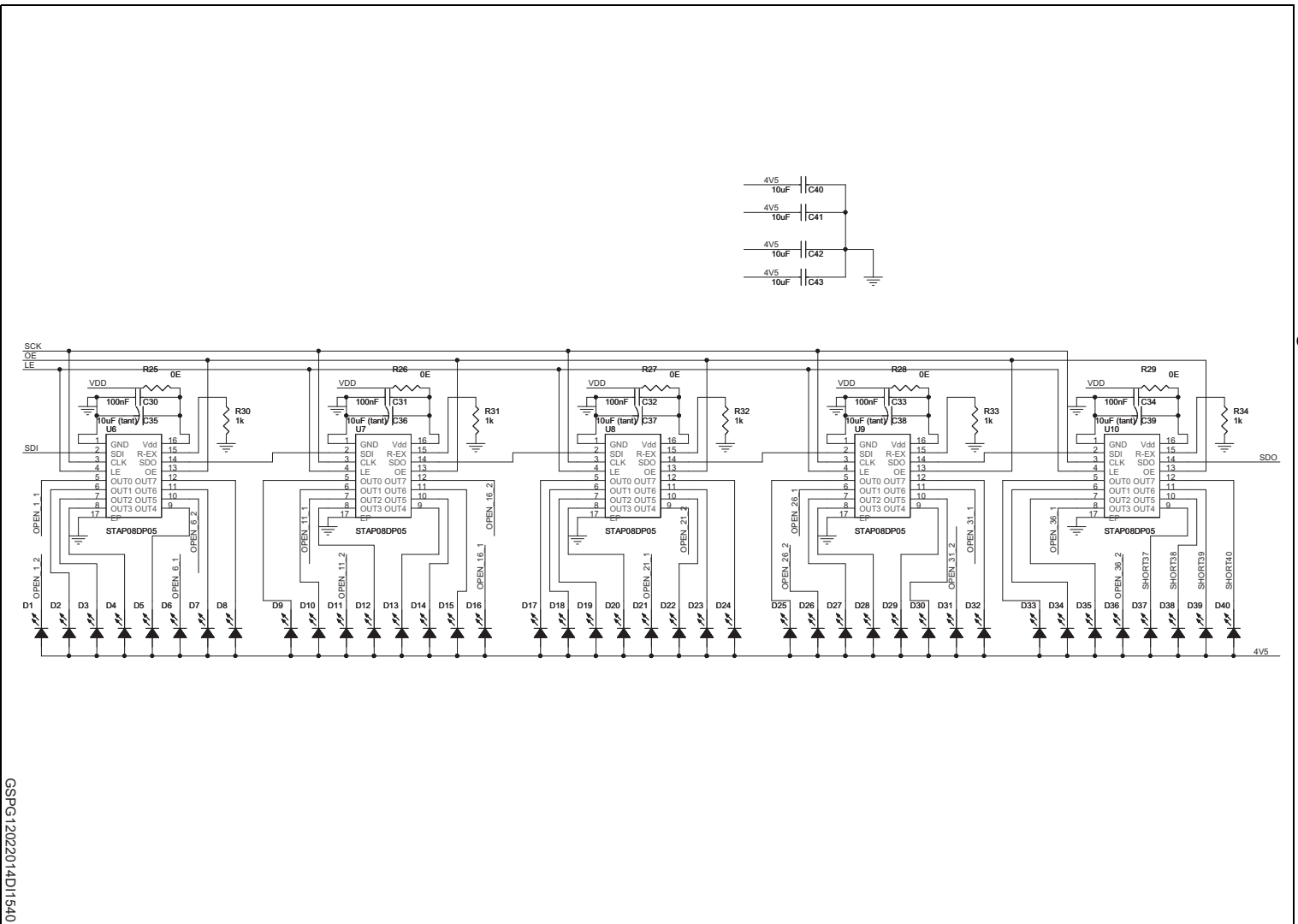


Figure 6. LED driver section



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Figure 7. USB section

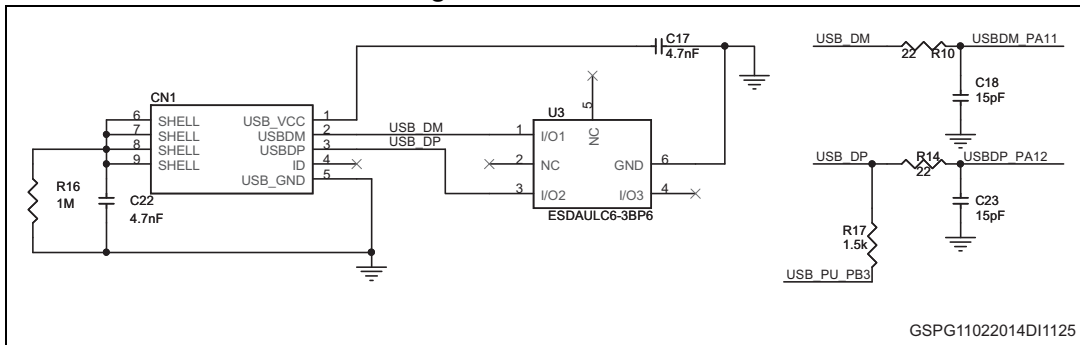


Figure 8. STM32 section

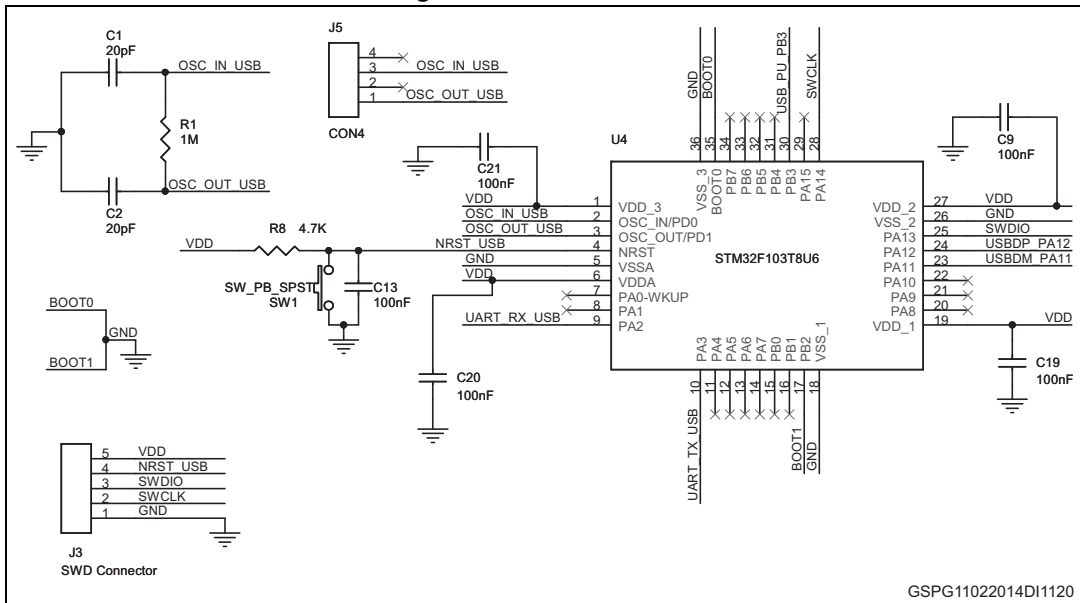
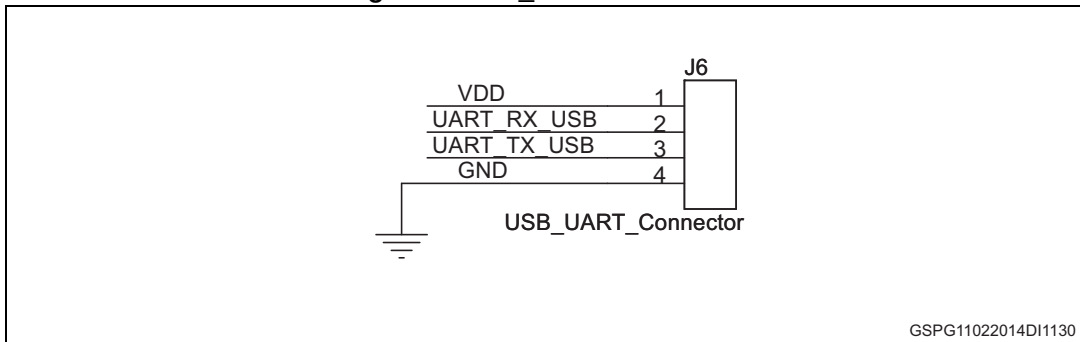


Figure 9. USB\_UART connector



## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
07-Aug-2014	1	Initial release.

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