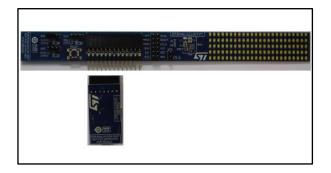


## STEVAL-LLL001V1

## STLED524 evaluation kit (5 x 24 matrix LED display driver)

Data brief



### **Features**

- Operating input voltage from 2.7 V to 5.5 V
- Drives 5 x 24 LED matrix
- Luminance separately adjustable for each LED by internal registers in 255 steps
- Internal registers capable of storing two patterns
- 4-way scroll function with a possibility to lock column data
- 255-step PWM dimming
- SPI interface
- Integrated step-up converter with adjustable output voltage
- Integrated LDO with 3.1 V output at 80 mA
- CSP 56 bumps 0.4 mm pitch 3.4 x 3.0 mm
- RoHS compliant

## **Description**

The STEVAL-LLL001V1 board is designed to demonstrate the features of the STLED524 intelligent matrix LED display driver with a 5 x 24 matrix of SMD white LEDs incorporated on the board.

Two boards can also be joined using the onboard connectors to drive a 10 x 24 LED matrix.

The board is driven by the USB control board for interface with the graphical user interface (GUI), but there is also an SPI interface connector on the STEVAL-LLL001V1 which can be used for customized control.

# 1 Schematic diagrams

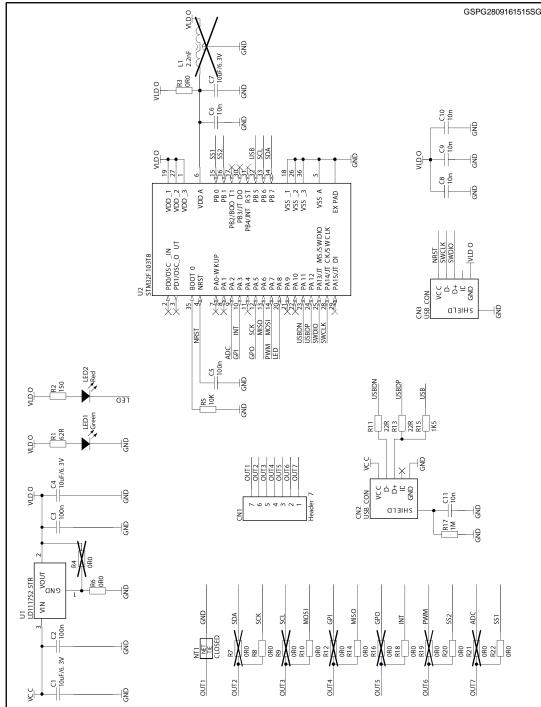


Figure 1: STEVAL-LLL001V1 circuit schematic (1 of 2)

STEVAL-LLL001V1 Schematic diagrams

004 005 023 ¥ 022 025 1 1 10uf-K3V 10uf-K3V VBAT2 VBAT1 IC1 STLED5 24 VOUT C2 10uF/6.3 GND H7ROW 4 ROW 2 F7 ROW 2 ROW 1 E7 ROW 1
ROW 0 047 048 ¥\_049 050 R2 R1 VIO D1 D5COL0 0 COLO MOSI C2 COL1 E6 COL0 1 F6 COL0 2 F5 COL0 3 MISO C1 COL2 SCK B3 COL3 G6COL04 H6COL05 060 SS D8 CLKIN COL5 CLKOUT B1 CLKOUT COL6 G5COL0 6 SYNC D2 SYNC RESET A3 RESET H5COL0 7 E5 COL0 8 COL8 F4 COL0 9 HBCOL1 0 COL1 0 COL1 1 <u>G3</u>COL1 1 H2COL12 G2COL13 COL12 074 PS ET 075 COL13 COL14 H1COL14 F3 COL1 5 TES T COL15 COL16 COL17 F2 COL17
COL18 F1 COL18 COL19 E3 COL19 085 BIZZNE COL19 E3COL19
COL20 E2COL20
COL21 E1COL21
COL22 E4COL22
COL23 D4COL23 AGND2
AGND1
AGND1
PGND
PGND
GND 3 4 8 3 4 4 8 098 097 **▼**<sup>2</sup>099 100 110 115 GSPG2809161530SG

Figure 2: STEVAL-LLL001V1 circuit schematic (2 of 2)

Revision history STEVAL-LLL001V1

# 2 Revision history

**Table 1: Document revision history** 

Date	Version	Changes
07-Oct-2016	1	Initial release.
09-Nov-2016	2	Updated: title, features and description on the cover page.

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