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Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









STEVAL-ILL061V1

High brightness RGB LED array driver with local dimming and diagnostics based on the LED1642GW and STM32

Data brief



Features

- High brightness 4x4 RGB LED matrix
- Complete hardware and software package
- Various preconfigured and programmable patterns
- Open/short error simulation and real-time detection
- 6 to 28 V DC polarity-independent power supply
- GUI for advanced driver configuration
- RoHS compliant

Description

The STEVAL-ILL061V1 is a high brightness RGB LED array driver system evaluation board with local dimming and diagnostics based on LED1642GW independent PWM LED driver controlled through an STM32 microcontroller SPI interface.

An ST L7981 DC-DC converter provides the voltages/power for overall functioning of the board.

Schematic diagrams STEVAL-ILL061V1

Schematic diagrams

Figure 1: STEVAL-ILL061V1 power supply

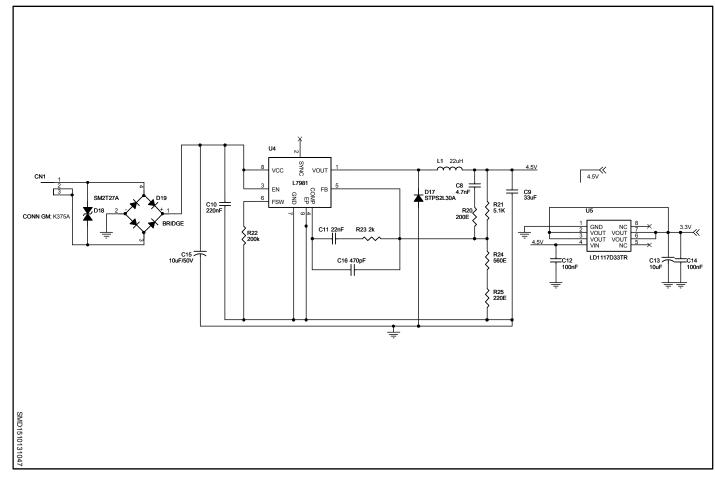
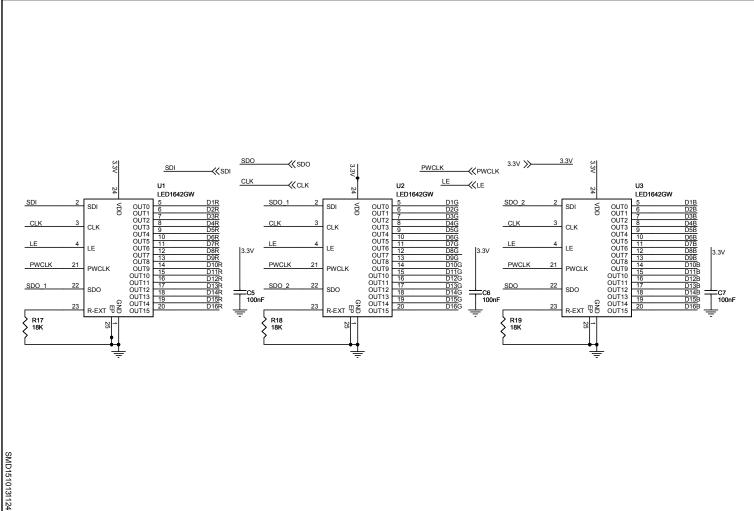




Figure 2: STEVAL-ILL061V1 LED drivers

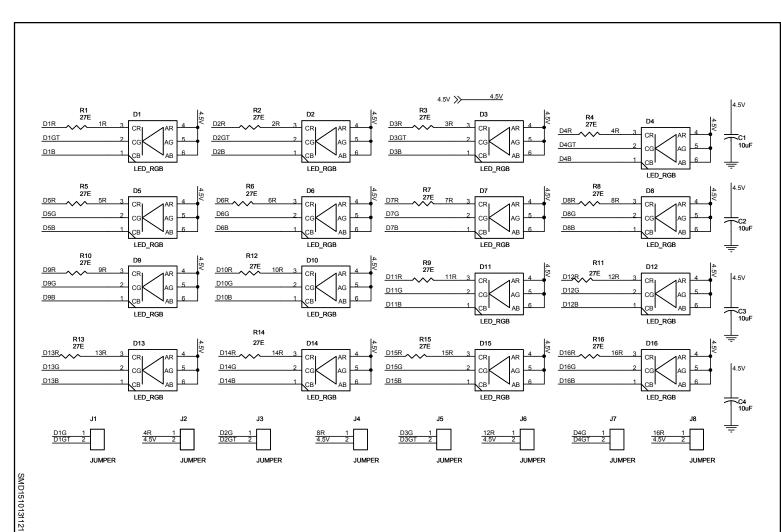




3.3V JTRST JTDO C17 100nF 3.3V JTDI JTCK C18 100nF Part Reference = STM32F103CX(C6T6) = U1 3.3V R26 2.2K JTRST JRST C24 ADC 100nF SDO C25 100nF ≪sdo CLK SDO R33 500k SDI -≪SDI PWCLK **≪**PWCLK R32 500k CLK -≪clk R36 -≪LE SHLD_M GND _M D+ M D- M D1 D4 CAP NP GNDVCC D3 USB B Type 440247-2 USBDN USB_ESD, USBLC6-2P6 JRST PC13 PC15 R27 330E R28 POT_10K ADC C23 100nF CN2 R31 10K R34 10K R35 10K GM: MLW20G SMD1510131113

Figure 3: STEVAL-ILL061V1 microcontroller, USB, JTAG connector, buttons, potentiometer

Schematic diagrams
Figure 4: STEVAL-ILL061V1 high brightness LEDs, open/short circuit jumpers





DocID025387 Rev 1

Revision history STEVAL-ILL061V1

Revision history 2

Date	Revision	Changes
15-Oct-2013	1	Initial release.

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