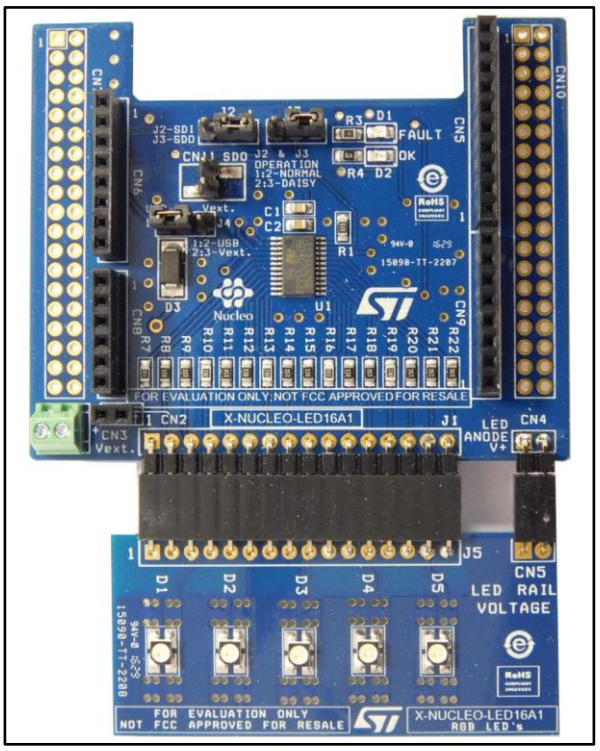
X-NUCLEO-LED16A1

16 channel LED driver expansion board based on LED1642GW for STM32 Nucleo

Data brief



Features

- 16 constant current output channels
- Output current: from 3 mA to 40 mA
- 20 V current generator rated voltage
- Provision for cascading multiple expansion boards
- Current adjustment:
  - 7-bit global current gain adjustment in two ranges
  - Current programmable through external resistor
  - 12/16-bit PWM grayscale brightness control
- Selectable LED Bus voltage supply
  - USB
  - $V_{external}$
- Error detection
  - Open LED
  - Shorted LED
- Thermal shutdown
- Compatible with STM32 Nucleo board
- Equipped with Arduino™ UNO R3 connector
- RoHS compliant

Description

The X-NUCLEO-LED16A1 is an STM32 Nucleo expansion board designed to provide an application for the 16 channel LED driver LED1642GW. Multiple drivers can also be cascaded by coupling X-NUCLEO-LED16A1 expansion boards.

Depending upon the end application, RGB or single color LEDs can be connected to the board. Separate brightness control is possible for each channel.

It is compatible with the STM32 Nucleo board family and equipped the Arduino™ UNO R3 connector layout.

1 Schematic diagrams

Figure 1: X-NUCLEO-LED16A1 circuit schematic (1 of 2)

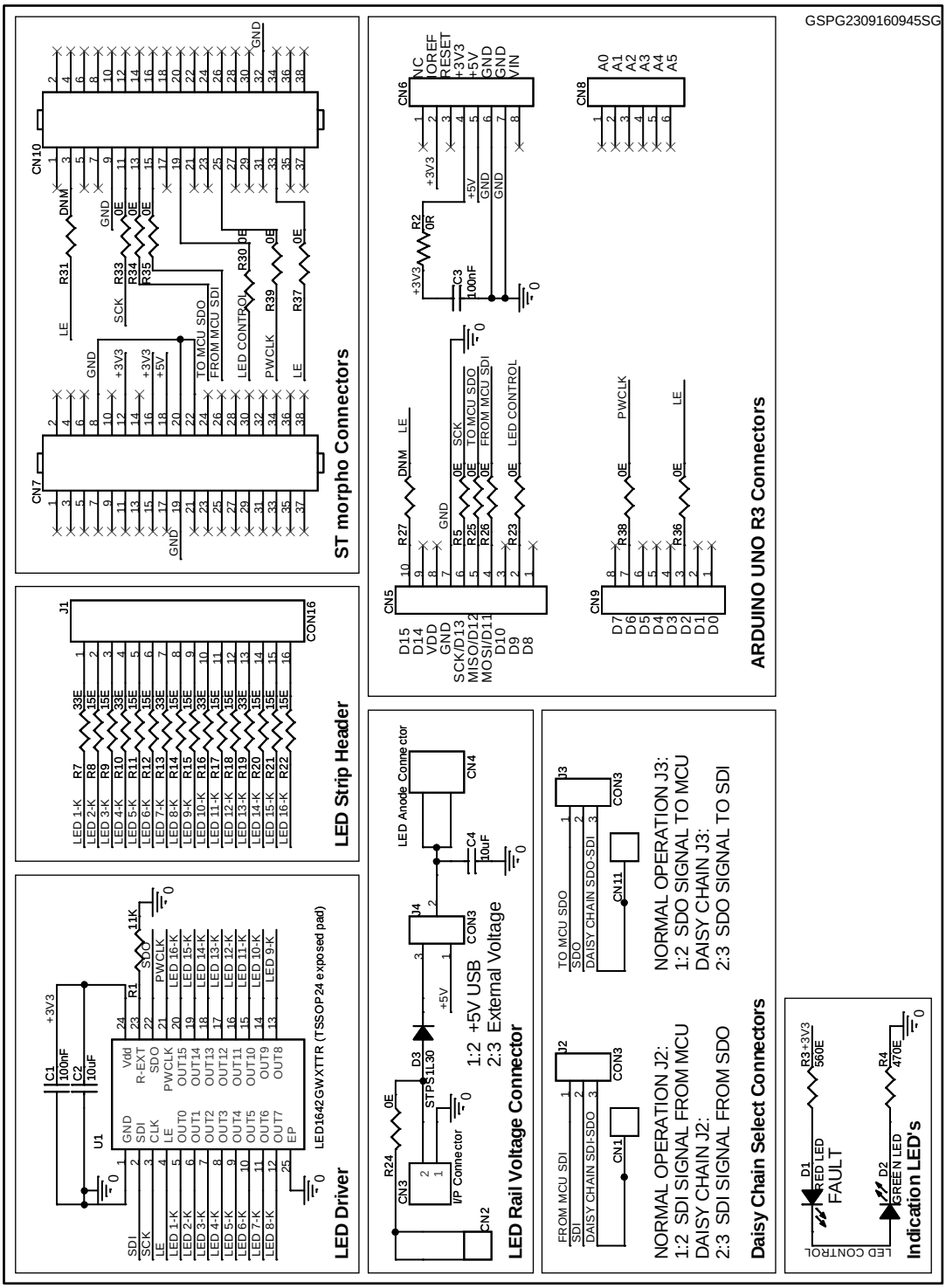
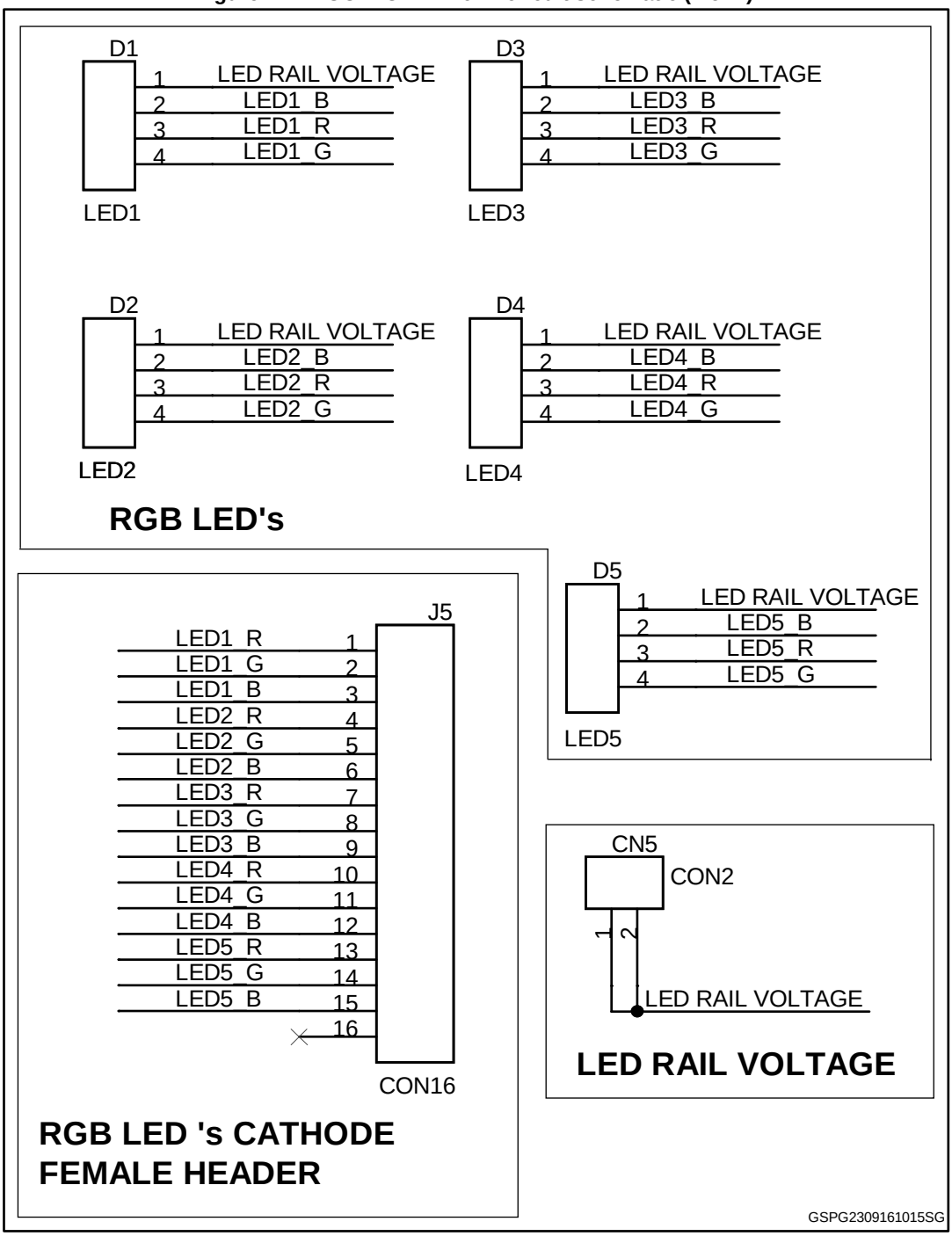


Figure 2: X-NUCLEO-LED16A1 circuit schematic (2 of 2)



2 Revision history

Table 1: Document revision history

Date	Version	Changes
02-Dec-2016	1	Initial release.