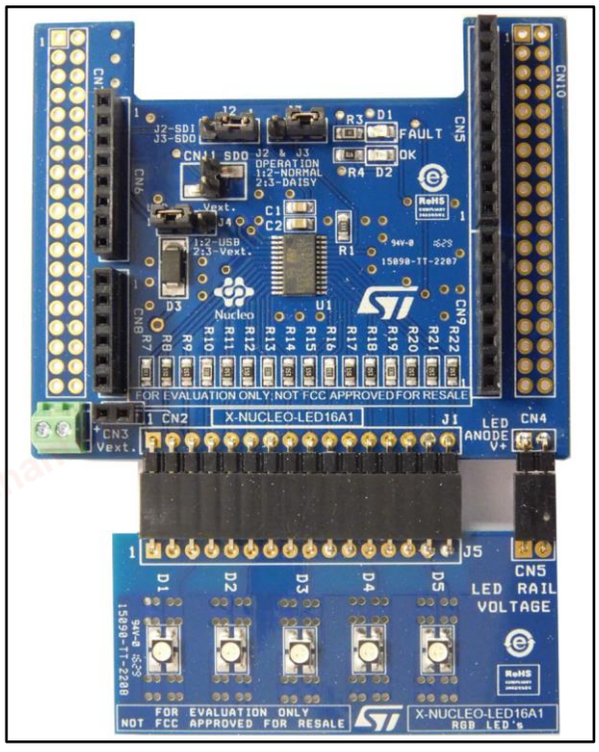
chanhvinh.com

X-NUCLEO-LED16A1

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

Data brief



- 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.

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
  - $V_{external}$

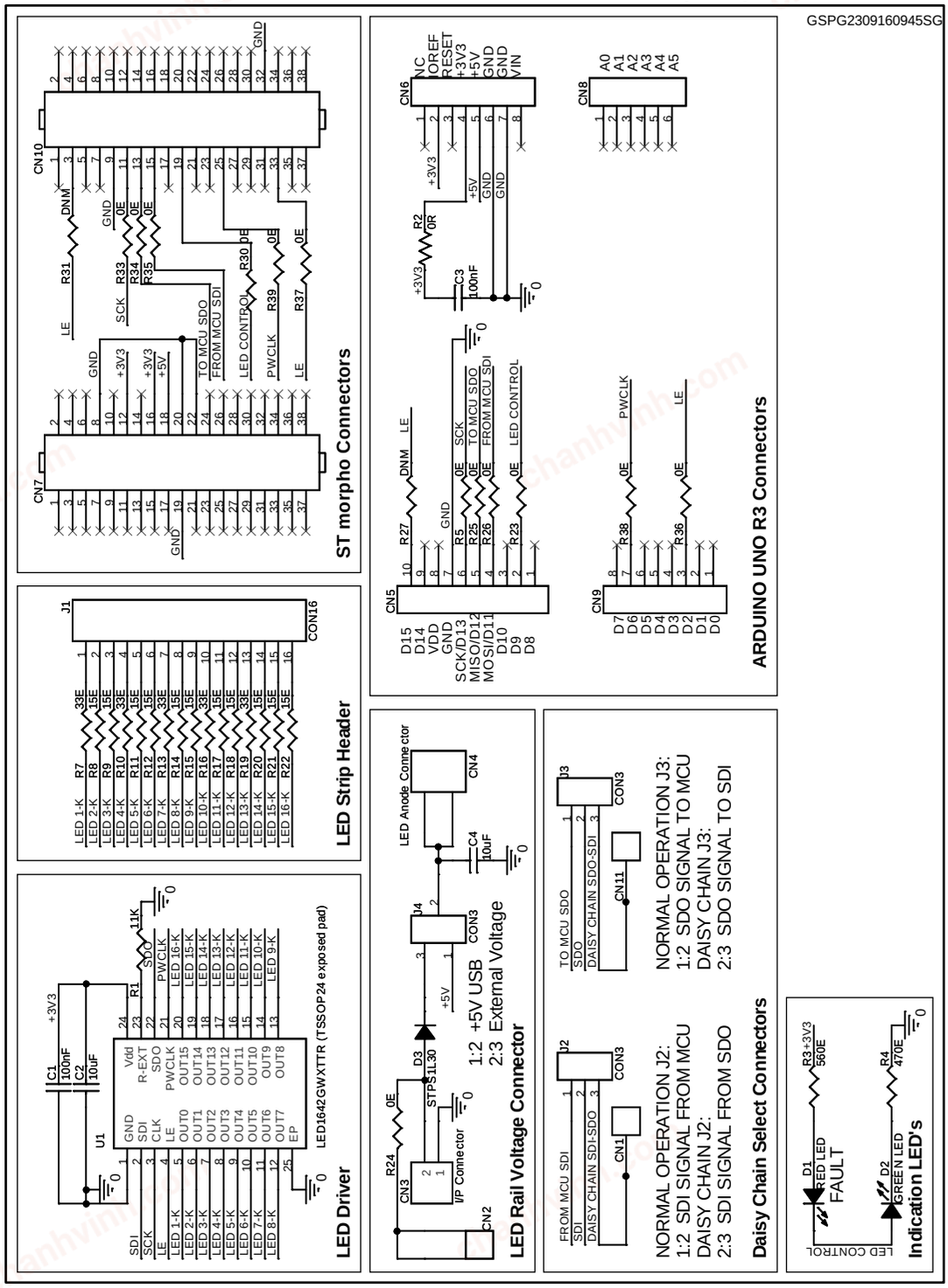
For further information contact your local STMicroelectronics sales office

www.st.com

chanhvinh.com

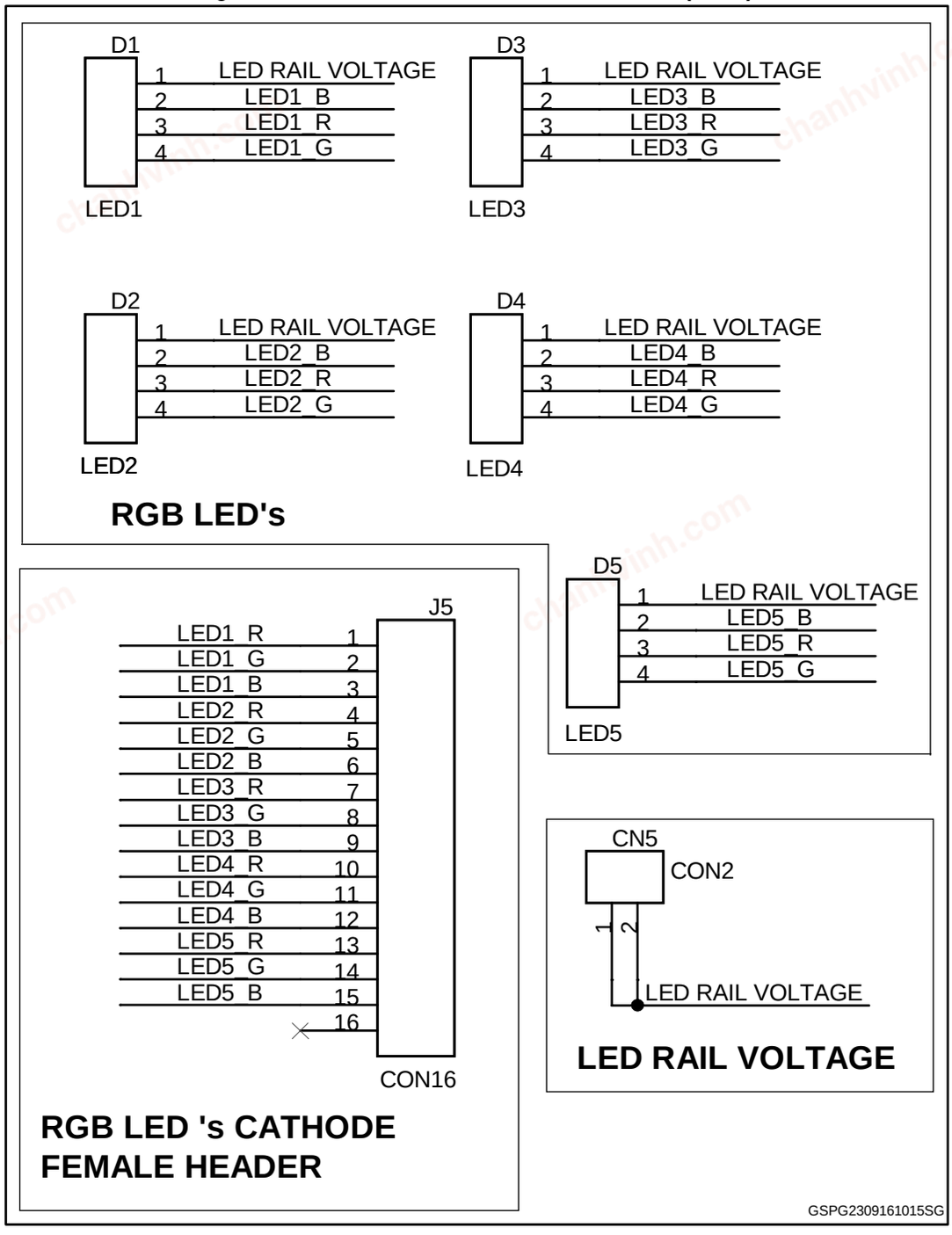
1 Schematic diagrams

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



chanhvinh.com

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



chanhvinh.com

2 Revision history

Table 1: Document revision history

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

chanhvinh.com

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2016 STMicroelectronics – All rights reserved