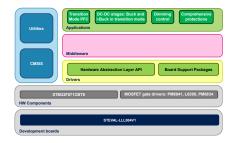




75 W digitally controlled constant current HB LED driver



Features

- Firmware implementation based on the STM32F071xx line of 32-bit microcontrollers
- PI loop control of PFC section
- · Hysteretic control of buck and inverse buck section
- Source code freely available with developer-friendly license terms

Description

The STSW-LLL004FW software package is designed to support the STEVAL-LLL004V1 75 W digitally controlled constant current LED driver.

The application firmware controls the PFC stage and the two DC-DC converters in Transition Mode. The firmware also manages the LED current according to the selected dimming level. Advanced timers and precise ADCs allow the firmware to dim the LEDs down to 0.5% of the maximum brightness level with flicker free operation for both analog and digital techniques.

The firmware continuously monitors input mains voltage for high and low cut-offs and output LED current for short circuit protection.

The firmware is based on libraries generated from STM32CubeMX on the STM32F071CB high performance 32-bit ARM® Cortex®-M0 microcontroller.

| | Summary table | | |
|-------|---|---------------------|--|
| | /AL-LLL004V1 ation board | STEVAL- LLL004V1 | |
| Corte | stream ARM ex-M0 Access MCU with 128 es Flash, 48 MHz and CEC ions | STM32F071CB | |



Revision history

Table 1. Document revision history

| Date | Version | Changes |
|-------------|---------|------------------|
| 04-Dec-2018 | 1 | Initial release. |

DB3641 - Rev 1 page 2/3



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.

© 2018 STMicroelectronics - All rights reserved

DB3641 - Rev 1 page 3/3