



STEVAL-ILL031V1

Digital constant-current controller for LED driving based on the STM8S208x

Data brief

Features

- DC input voltage: 48 V
- Buck stage adapts output voltage to drive LEDs with selected current
- Four DC-DC buck converters allow driving of 4 LED strings, managing up to 120 W
- Employs 3 W LEDs to obtain 30 W-per-string (10 LEDs in series in each string)
- Low voltage-sensing circuitry
- Logic level MOSFETs driven by the microcontroller without gate driver (ground referred)
- High efficiency (up to 98%)
- RoHS compliant



Description

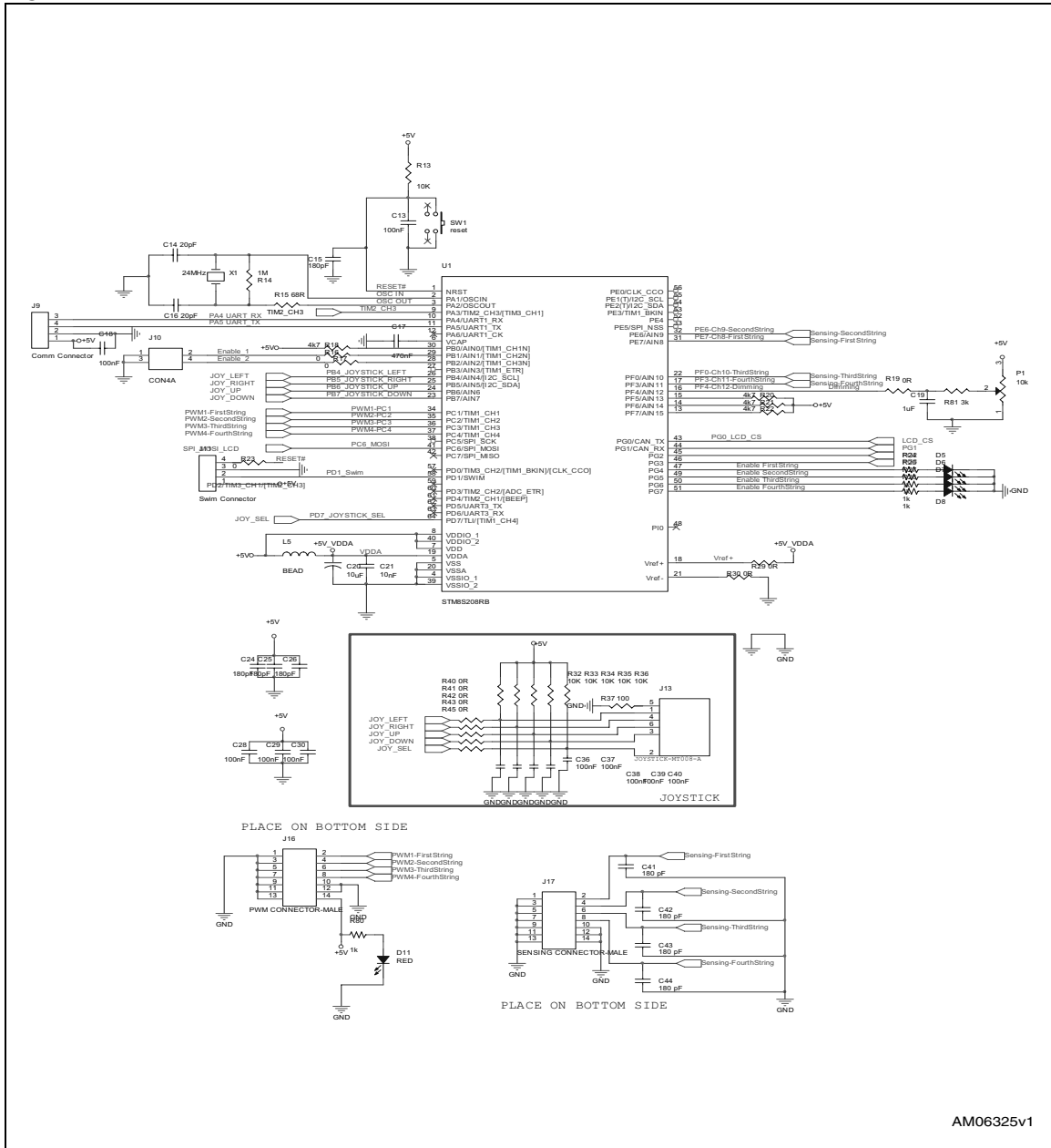
The purpose of the STEVAL-ILL031V1 demonstration board is to present a new digital approach to performing real average current control on an LED streetlighting platform.

This LED streetlight platform is developed on a DC-DC “inverse buck” converter, taking advantage of power switch control and conditioning signal circuitry for current sensing.

Benefits of this design include low energy consumption, low maintenance, and reduced size and weight. The solution is customized for streetlighting application, but can be extended to many other segments.

1 Schematic diagrams

Figure 1. Control board schematic



AM06325v1

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
23-Apr-2010	1	Initial release.

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