STEVAL-ILL028V1

RGB LED driver for color displays and backlighting based on the STP1612PW05 and STM32

Data brief

Features

- Three STP1612PW05 (in QFN24 4 x 4 mm packages) connected to 16 RBG high-brightness LEDs
- One STM32 microcontroller using an internal HS oscillator
- One ST1S10 high-efficiency switching DC-DC power supply
- 7.5 - 18 V DC power supply with undifferentiated polarity and overvoltage protection
- DC input current: 0.7 A max, standard supply connector
- LED current regulation
- Test points for each main signal
- Microcontroller firmware update through JTAG interface
- Error LED and overtemperature LED for each driver
- 3 jumpers to disconnect the LEDs from the driver to test error detection mode
- 3 jumpers to enable LED shorting from the driver to test error detection mode
- Mini USB for board-to-PC connection
- Incudes firmware to evaluate board features in standalone and non-standalone modes:
  - Adjustable color and brightness of each LED
  - Animated text
 - GUI software for LED diagnostics
- RoHS compliant

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controlled through an STM32 microcontroller SPI interface and DMA (optional).

Description

The STEVAL-ILL028V1 demonstration board is an RGB LED driver for color displays and backlighting, designed as a platform for demonstrating the performance of the STP1612PW05 independent PWM LED driver,

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1 Schematic diagram

Figure 1. Connectors, buttons, UART

Figure 2. Microcontroller, USB, power supply
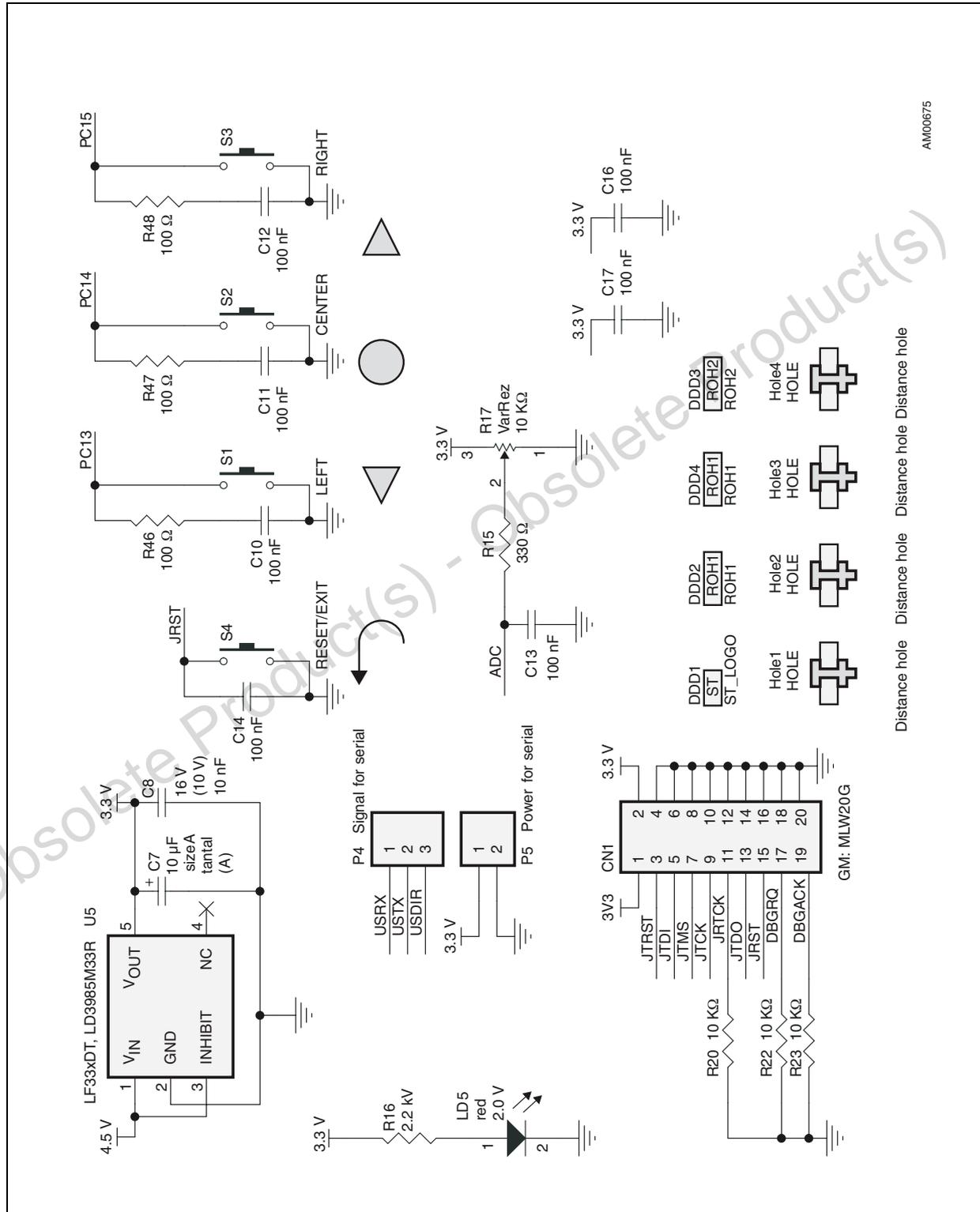
Figure 3. High-brightness LEDs
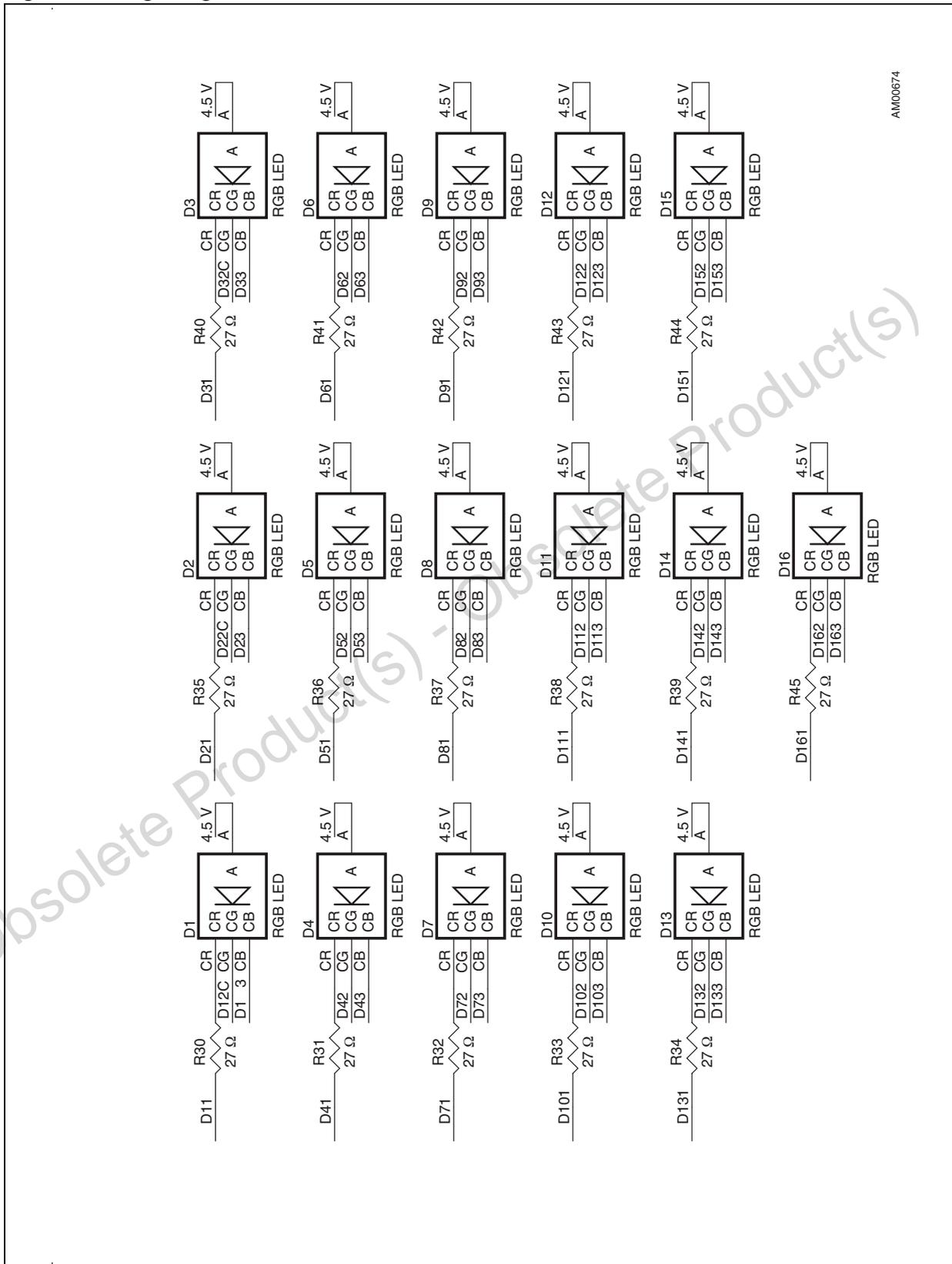
Figure 4.   LED drivers
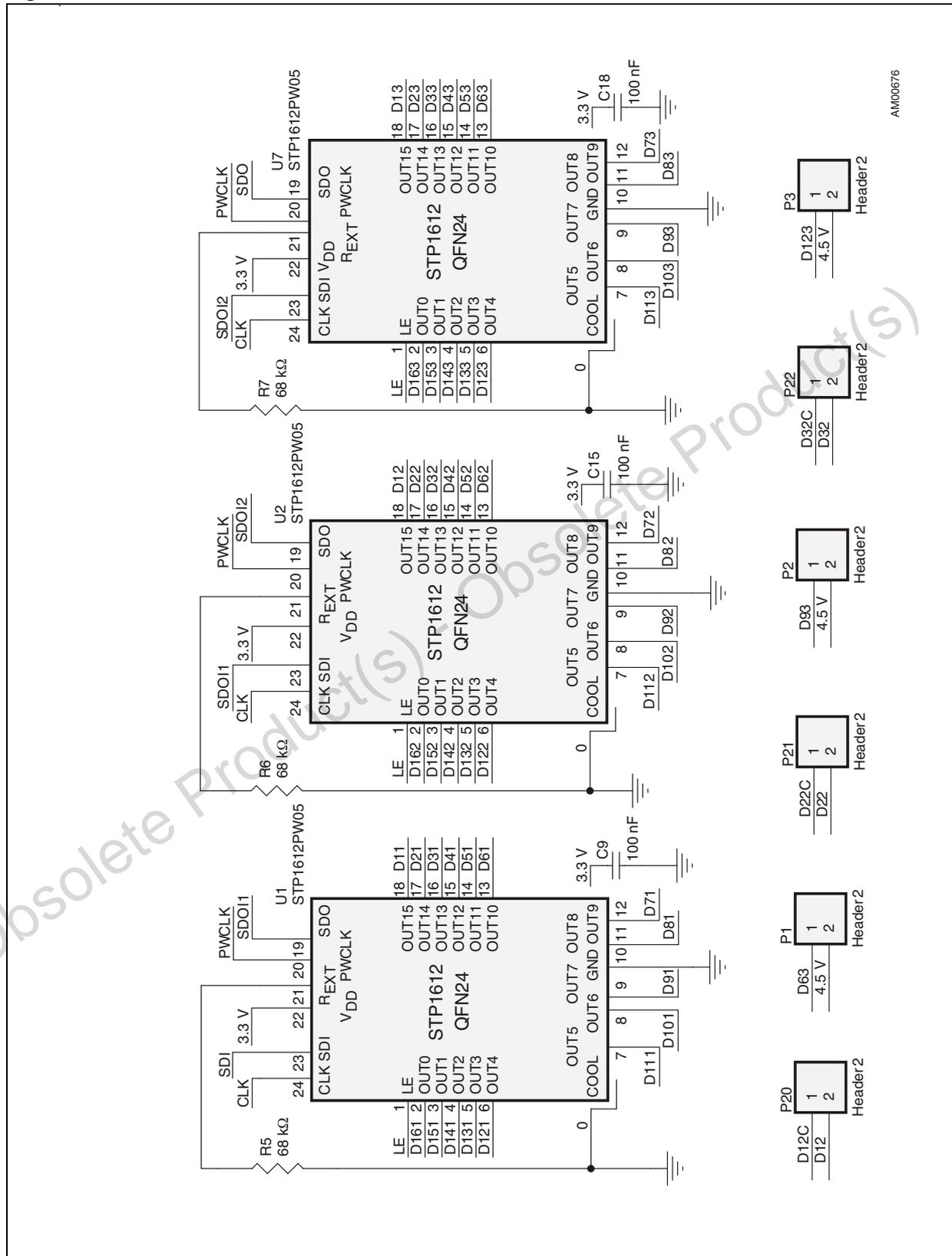
2 Revision history

Table 1.   Document revision history

Date	Revision	Changes
16-Jun-2010	1	Initial release.

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