STEVAL-TLL006V2

New high-power LED driver demo board for single flash with I²C interface based on STCF06 (with motherboard based on µPSD)

Data brief

Features

- Buck-boost DC-DC converter
- Drives one power LED up to:
  - 1.5 A between 3.5 V to 5.5 V
  - 1.3 A between 3.0 V to 5.5 V
  - 1 A between 2.7 V to 5.5 V
- Efficiency up to 85%
- LED current control
- 1.8 MHz fixed frequency PWM
- Full I²C control
- Motherboard based on µPSD used as USB bridge
- RoHS compliant

Description

The STEVAL-TLL006V2 demonstration board implements a flash LED driver using the STCF06 device, which is a buck-boost current mode converter with an I²C interface.

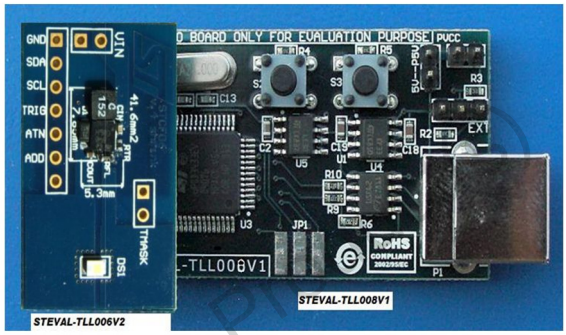
As technology for external components has greatly improved, in this new version “V2” it was possible to shrink the original application and maintain the same level of performance or similar.

The flash LED driver STCF06 has a high operational frequency (1.8 MHz) which allows the use of small external components.

The STEVAL-TLL006V2 is designed for driving a single LED with a forward voltage range from 2.7 to 5 V.

For easy connection to the PC, a motherboard is supplied based on µPSD which is used as a bridge.

The STCF06 motherboard uses a USB human interface device class to communicate with the PC. It is not necessary to install any driver, if the operating system is able to enumerate USB human interface devices.



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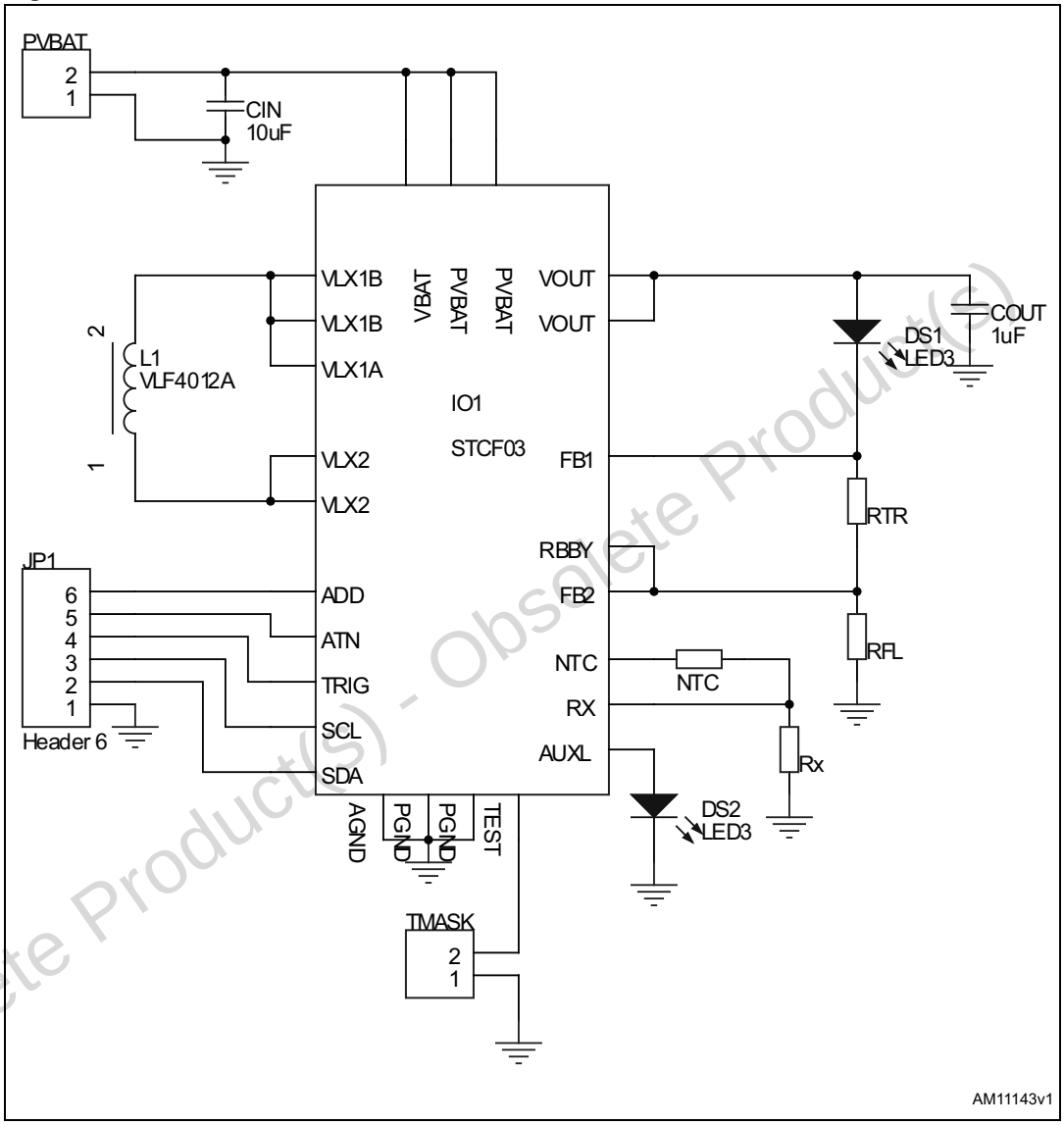
Connect the motherboard to the PC through the USB cable (AB type). Wait until the computer enumerates the control board and displays the message that new hardware has been found and is ready to use. It is then possible to run the data packet creator application by pressing the “Connect board” button.

1 Schematic

Figure 1. Circuit schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
28-Mar-2012	1	Initial release.

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