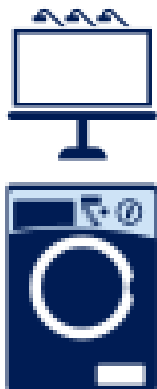
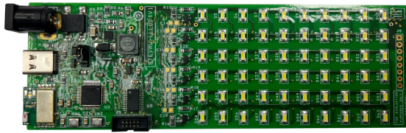


60 LED (6 x 10) cost-effective matrix display based on STP16CPC26 with Bluetooth low energy and Android app



Features

- Cost effective 16-bit LED driving scheme
- Driver for 6x10 LED matrix with individual LED control and row-wise scanning
- USB Type-C and DC jack connector for DC input power
- Bluetooth Smart connectivity and Android application for hassle free demonstration
- Connector for stacking multiple LED drivers in daisy chain configuration
- Preconfigured demos (selected through on-board switches):
 - with brightness control
 - with speed control
 - with blink rate (flashing) control

Description

The [STP16CPC26](#) low voltage 16-bit constant current LED sink driver on the STEVAL-LLL005V1 evaluation board ensures a cost effective 6x10 LED matrix with individual LED control.

The LED driver evaluation board includes a jumper to select between powering the board through a standard DC jack input or a USB Type-C connector, as well as two control switches.

An Android app is also available for enhanced user experience and control.

The [SPBTLE-RF](#) very low power module for Bluetooth Smart v4.1 allows communication with the board via your smartphone.

The [STM32F030](#) mainstream ARM Cortex-M0 Value line MCU with 64 Kbytes of Flash, 48 MHz CPU manages driving and transmission of data over BLE.

Summary table	
STEVAL-LLL005V1 evaluation board	STEVAL-LLL005V1
STP16CPC26 low voltage 16-bit constant current LED sink driver	STP16CPC26
SPBTLE-RF very low power module for Bluetooth Smart v4.1	SPBTLE-RF
STM32F030 mainstream ARM Cortex-M0 Value line MCU	STM32F030

1 Schematic diagrams

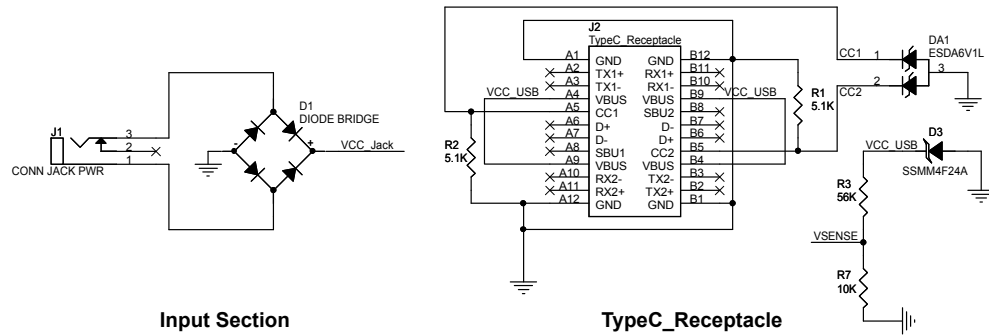
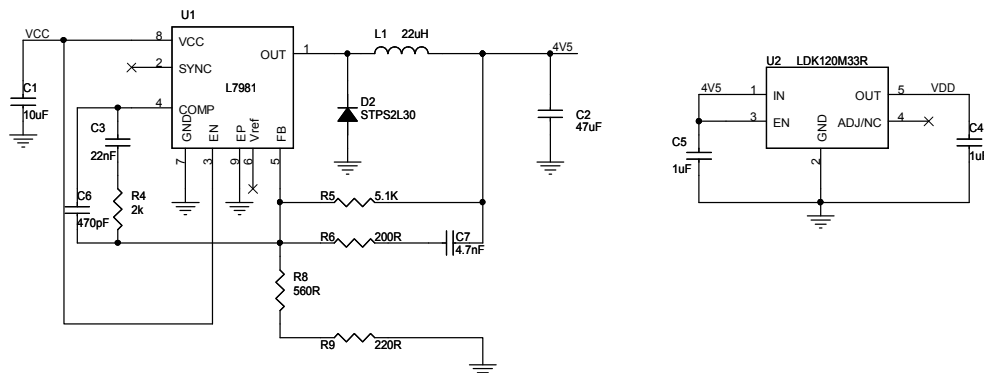
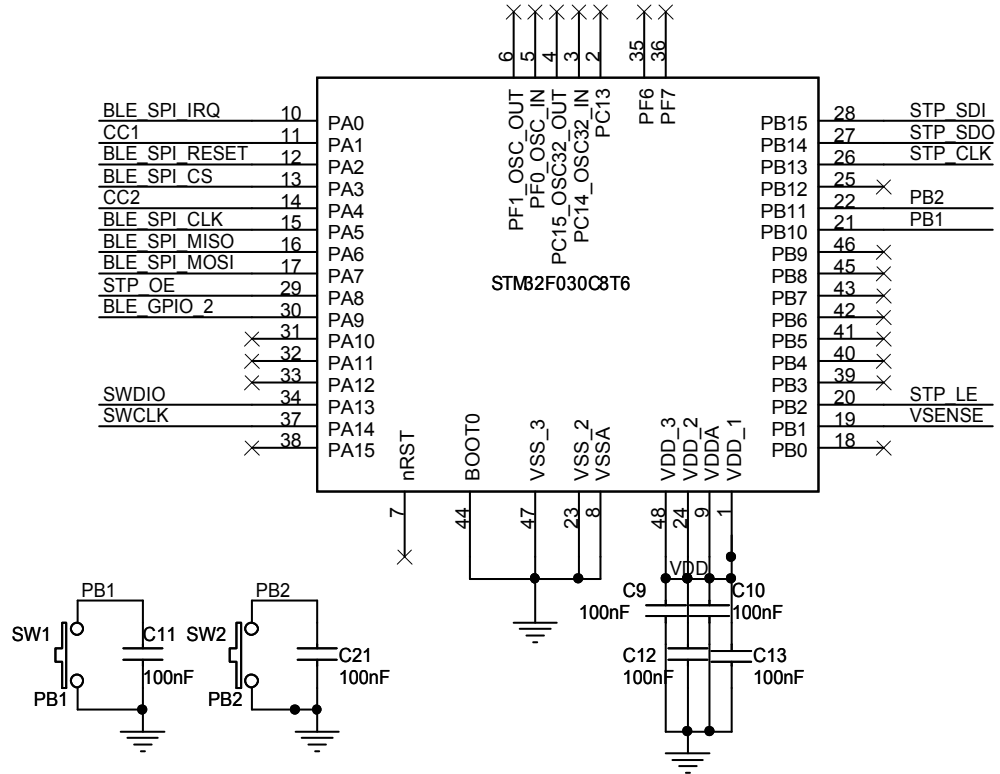
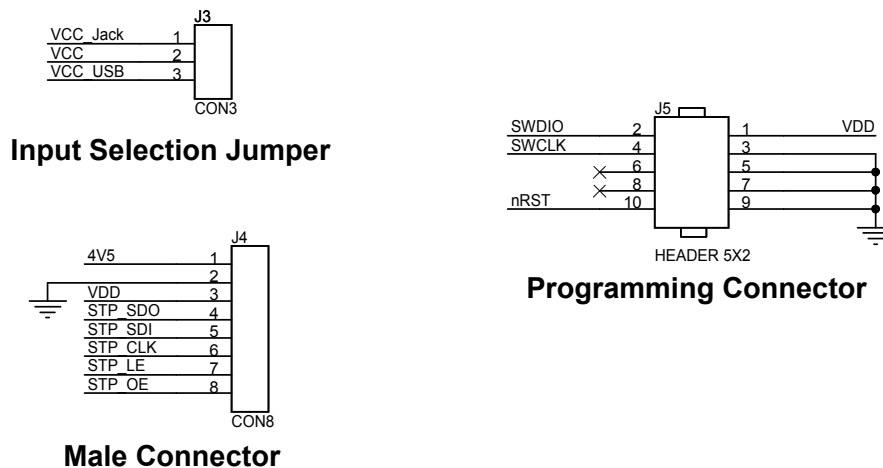
Figure 2. Input power jack and USB Type-C section

Figure 3. DC-DC step down and LDO regulator section


Figure 4. Microcontroller section

Figure 5. Input power selection, board extension and programming connector section


Revision history

Table 1. Document revision history

Date	Version	Changes
09-Jan-2018	1	Initial release.