STM32L476G-EVAL

Evaluation board with STM32L476ZG MCU

## Features

- STM32L476ZGT6 microcontroller with 1-Mbyte Flash memory and 128-Kbyte RAM
- Four power supply options: power jack, ST-LINK/V2-1 USB connector, USB OTG FS connector, daughterboard
- Microcontroller supply voltage: 3.3 V or range from 1.71 V to 3.6 V
- Two MEMS digital microphones
- Two jack outputs for stereo audio headphone with independent content
- Slot for microSD™ card supporting SD, SDHC, SDXC
- 4-Gbyte microSD™ card bundled
- 16-Mbit (1M x 16 bit) SRAM device
- 128-Mbit (8M x 16 bit) NOR Flash memory device
- 256-Mbit Quad-SPI Flash memory device with Double Transfer Rate (DTR) support
- RF-EEPROM with I^2C bus
- EEPROM supporting 1 MHz I^2C-bus communication speed
- RS-232 port configurable for communication or STM32L476ZGT6 flashing
- IrDA transceiver (only supported up to MB1144 C-01 version of the board, no more supported from MB1144 C-02 version)
- USB OTG FS Micro-AB port
- CAN 2.0A/B-compliant port
- Joystick with four-way controller and selector
- Reset and wake-up / tamper buttons
- Touch-sensing button
- Light-dependent resistor (LDR)
- Potentiometer
- Coin battery cell for power backup
- LCD glass module daughterboard (MB979) with 40x8-segment LCD driven directly by STM32L476ZGT6
- 2.8-inch 320x240 dot-matrix color TFT LCD panel with resistive touchscreen
- Smartcard connector and SWP support
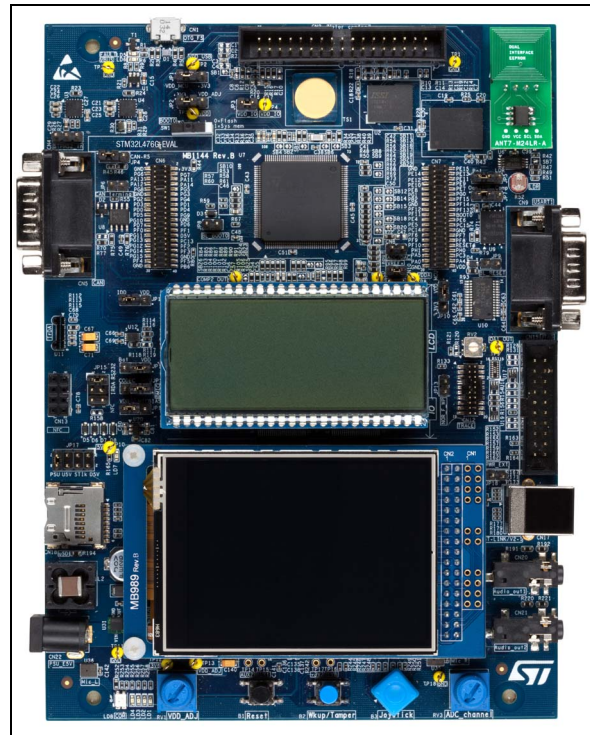
1. Picture is not contractual.

- NFC transceiver connector
- Connector for ADC input and DAC output
- Power-metering demonstration with dual-channel, sigma-delta modulator
- PT100 thermal sensor with dual-channel, sigma-delta modulator
- STM32L476ZGT6 current consumption measurement circuit
- Access to comparator and operational amplifier of STM32L476ZGT6
- Extension connector for motor-control module
- JTAG/SWD, ETM trace debug support, user interface through USB virtual COM port, embedded ST-LINK/V2-1 debug and flashing facility
- Extension connector for daughterboard

December 2016

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Description

The STM32L476G-EVAL evaluation board has been designed as a complete demonstration and development platform for STMicroelectronics ARM$^®$ Cortex$^®$-M4 core-based STM32L476ZGT6 microcontroller with three I^{2}C buses, three SPI interfaces, six USART ports, CAN port, SWPMI, two SAI ports, 12-bit ADC, 12-bit DAC, LCD driver, internal 128-Kbyte SRAM and 1-Mbyte Flash memory, Quad-SPI port, touch-sensing capability, USB OTG FS port, LCD controller, Flexible Memory Controller (FMC), JTAG debugging support.

The full range of hardware features on the board helps user to evaluate all the peripherals (USB OTG FS, USART, digital microphones, ADC and DAC, dot-matrix TFT LCD, LCD glass module, IrDA (supported up to version MB1144 C-01 of the board), LDR, SRAM, NOR Flash memory device, Quad-SPI Flash memory device, microSD$^™$ card, sigma-delta modulators, smartcard with SWP, CAN transceiver, I^{2}C, EEPROM, RF-EEPROM) and develop applications. Extension headers allow easy connection of a daughterboard or wrapping board for a specific application.

An ST-LINK/V2-1 is integrated on the board, as embedded in-circuit debugger and programmer for the STM32 MCU and the USB virtual COM port bridge.

System requirement

- Windows$^®$ OS (XP, 7 or 8) or Linux 64-bit or Mac OS$^®$ X
- USB Type-A to Type-B or Mini-B cable

Development toolchains

- ARM$^®$ Keil$^®$: MDK-ARM$^{™}$ [a]
- IAR$^{™}$: EWARM[a]
- GCC-based IDEs (free AC6: SW4STM32, Atollic$^®$ TrueSTUDIO$^®$ [a] and others)

Demonstration software

Demonstration software is preloaded in the STM32L476G-EVAL Flash memory, for easy demonstration of the device peripherals in stand-alone mode. For more information and to download the latest available version, refer to the STM32L476ZGT6 demonstration software available on the *www.st.com* website.

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a. On Windows$^®$ only.

Ordering Information

To order the STM32L476G-EVAL board with the STM32L476ZGT6 MCU refer to the table below.

Table 1. Order code

Order code	Target STM32
STM32L476G-EVAL	STM32L476ZGT6

Revision history

Table 2. Document revision history

Date	Revision	Changes
21-Jan-2015	1	Initial release.
23-Oct-2015	2	Updated *Section : Features*.
16-Dec-2016	3	Updated: *Features* since IrDA transceiver is no more supported from board revision C-02.

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