

Features

- STM32F411VET6 microcontroller featuring 512 KB of Flash memory, 128 KB of RAM in an LQFP100 package
- On-board ST-LINK/V2 with selection mode switch to use the kit as a standalone ST-LINK/V2 (with SWD connector for programming and debugging)
- Board power supply: through USB bus or from an external 5 V supply voltage
- External application power supply: 3 V and 5 V
- L3GD20: ST MEMS motion sensor 3-axis digital output gyroscope
- LSM303DLHC: ST MEMS system-in-package featuring a 3D digital linear acceleration sensor and a 3D digital magnetic sensor
- MP45DT02: ST MEMS audio sensor, omnidirectional digital microphone
- CS43L22, audio DAC with integrated class D speaker driver
- Eight LEDs:
 - LD1 (red/green) for USB communication
 - LD2 (red) for 3.3 V power on
 - Four user LEDs: LD3 (orange), LD4 (green), LD5 (red) and LD6 (blue)
 - Two USB OTG LEDs: LD7 (green) VBus and LD8 (red) over-current
- Two push-buttons (user and reset)
- USB OTG with micro-AB connector
- Extension header for LQFP100 I/Os for a quick connection to the prototyping board and an easy probing
- Comprehensive free software including a variety of examples, part of STM32CubeF4 package or STSW-STM32136 for legacy Standard Libraries usage



Description

The Discovery kit for STM32F411 line helps you to discover the entry level microcontrollers of the STM32 F4 series and to develop your applications easily. It offers everything required for beginners and experienced users to get started quickly.

Based on the STM32F411VET6, it includes an ST-LINK/V2 embedded debug tool, a gyroscope, an e-compass and digital microphone ST MEMS, an audio DAC with an integrated class D speaker driver, an OTG micro-AB connector, LEDs and push-buttons.

System requirements

- Windows PC (XP, 7, 8)
- USB type A to Mini-B cable.

Development toolchains

- IAR EWARM (IAR Embedded Workbench®)
- Keil® MDK-ARM™
- GCC-based IDE (Atollic® TrueSTUDIO®,...).

Demonstration software

The demonstration software is preloaded in the board Flash memory. It uses the button User and the LEDs to switch from a simple blinking of the LEDs to an indication of the movements of the board. Connect the board to a PC with a second USB cable, it is now recognized as a standard mouse.

The latest versions of the demonstration source code and associated documentation can be downloaded from www.st.com/stm32f4-discovery.

Ordering information

To order the Discovery kit for STM32F411 line microcontrollers, use the order code: STM32F411E-DISCO.

Revision history

Table 1. Document revision history

Date	Revision	Changes
04-Nov-2014	1	Initial version.

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2014 STMicroelectronics – All rights reserved



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[STMicroelectronics:](#)

[STM32F411E-DISCO](#)