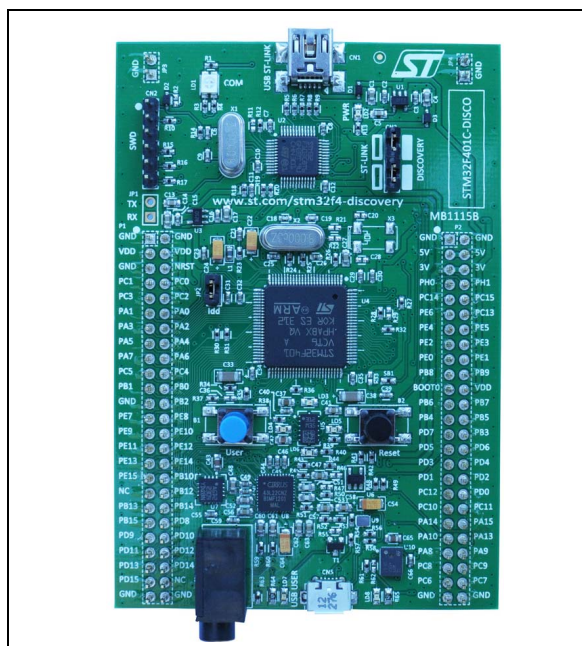


### Features

- STM32F401VCT6 microcontroller featuring 256 Kbytes of Flash memory, 64 Kbytes 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)  $V_{BUS}$  and LD8 (red) over-current
- Two pushbuttons (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



1. Picture not contractual.

### Description

The 32F401CDISCOVERY Discovery kit allows users to easily develop applications with the STM32F401 high performance MCUs with ARM<sup>®</sup> Cortex<sup>®</sup>-M4 32-bit core. It offers everything required either for beginners or experienced users, to get quickly started.

Based on the STM32F401VCT6, 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, a USB OTG micro-AB connector, LEDs and pushbuttons.

## System requirements

- Windows® OS (XP, 7, 8)
- USB type A to Mini-B cable

## Development toolchains

- IAR® EWARM (IAR Embedded Workbench®)
- Keil® MDK-ARM™
- GCC-based IDEs (free AC6: SW4STM32, Atollic® TrueSTUDIO®,...)

## Demonstration software

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

The latest versions of the demonstration source code and associated documentation can be downloaded from the [www.st.com/stm32f4-discovery](http://www.st.com/stm32f4-discovery) webpage.

## Ordering information

The Discovery kit with the STM32F401VC MCU (order code STM32F401C-DISCO) is replaced by the Discovery kit with the order code STM32F411E-DISCO.

## Revision history

**Table 1. Document revision history**

Date	Revision	Changes
10-Sep-2013	1	Initial version.
20-Oct-2014	2	Updated <a href="#">Section : Features</a> and <a href="#">Section : Description</a> to introduce STM32CubeF4 and STSW-STM32136. Updated <a href="#">Section : System requirements</a> and <a href="#">Section : Development toolchains</a> .
03-Feb-2016	3	Updated <a href="#">Section : Ordering information</a> .

**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.

© 2016 STMicroelectronics – All rights reserved