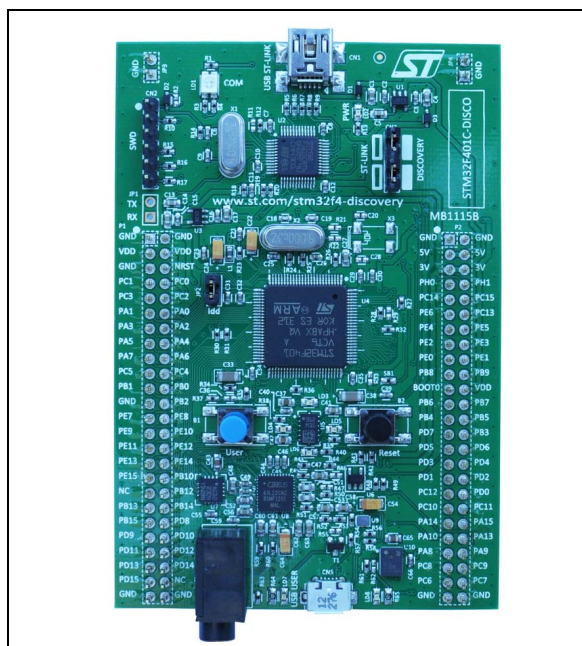


### Features

- 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® Cortex®-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.<br>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> .                                                                                                                                                                                         |

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