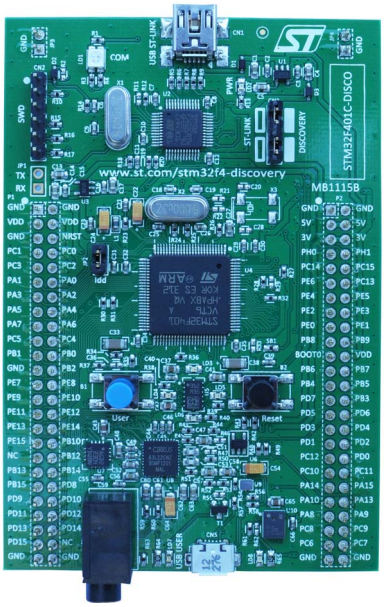
32F401CDISCOVERY

Discovery kit for STM32F401 line

Data brief

Features

- STM32F401VCT6 microcontroller featuring 256 KB of Flash memory, 64 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 STM32F401 Discovery 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 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, 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 (ARM® 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 STM32F401 line microcontrollers, use the STM32F401C-DISCO order code.

Revision history

Table 1. Document revision history

Date	Revision	Changes
10-Sep-2013	1	Initial version.
20-Oct-2014	2	Updated *Section : Features* and *Section : Description* to introduce STM32CubeF4 and STSW-STM32136. Updated *Section : System requirements* and *Section : Development toolchains*.

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