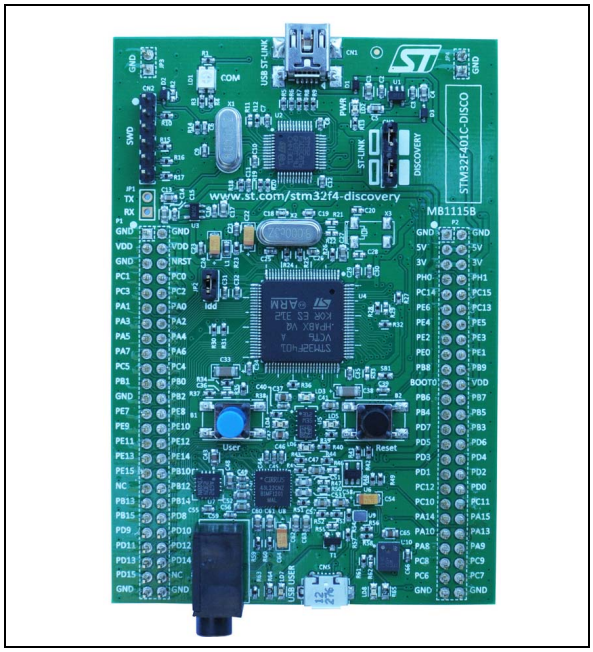
32F401CDISCOVERY

Discovery kit with STM32F401VC MCU

Data brief

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 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 *Section : Features* and *Section : Description* to introduce STM32CubeF4 and STSW-STM32136. Updated *Section : System requirements* and *Section : Development toolchains*.
03-Feb-2016	3	Updated *Section : Ordering information*.