

Discovery kit with STM32F303VC MCU



STM32F3DISCOVERY top view.
Picture is not contractual.

Product status link

[STM32F3DISCOVERY](#)

Features

- STM32F303VCT6 microcontroller featuring 256-Kbyte Flash memory and 48-Kbyte RAM in an LQFP100 package
- USB FS
- ST MEMS motion sensor, 3-axis digital output gyroscope
- ST MEMS system-in-package featuring a 3D digital linear acceleration sensor and a 3D digital magnetic sensor
- Ten LEDs:
 - LD1 (red) for 3.3 V power on
 - LD2 (red/green) for USB communication
 - Eight user LEDs: LD3/10 (red), LD4/9 (blue), LD5/8 (orange) and LD6/7 (green)
- 1 user and reset push-buttons
- Board connectors:
 - USB FS Mini-B connector
 - ST-LINK Mini-B USB connector
 - Extension header for all LQFP100 I/Os for quick connection to prototype board and easy probing
- Flexible power-supply options:
 - ST-LINK USB connector or USB FS connector
 - External 3 V or 5 V supply voltage
- On-board debugger/programmer ST-LINK/V2 for PCB version A or B, or ST-LINK/V2-B for PCB version C and newer:
 - Debug port
 - Mass storage and Virtual COM port with ST-LINK/V2-B only
- Support of a wide choice of Integrated Development Environments (IDEs) including IAR™, Keil®, and STM32CubeIDE

Description

The STM32F3DISCOVERY allows users to easily develop applications with the STM32F3 Series mixed-signal microcontroller based on the Arm® Cortex®-M4. It includes everything required for beginners and experienced users to get started quickly.

Based on the STM32F303VCT6, it includes an ST-LINK/V2 or ST-LINK/V2-B embedded debug tool, accelerometer, gyroscope and e-compass ST MEMS, USB connection, LEDs and push-buttons.

1 Ordering information

To order the [STM32F3DISCOVERY](#) Discovery kit, refer to [Table 1](#). For a detailed description, refer to the user manual on the product web page. Additional information is available from the datasheet and reference manual of the target STM32.

Table 1. List of available products

Order code	Board reference	User manual	Target STM32	Differentiating feature
STM32F3DISCOVERY	MB1035	UM1570	STM32F303VCT6	ST-LINK/V2 for PCB version A or B
				ST-LINK/V2-B for PCB version C and newer

1.1 Product marking

Evaluation tools marked as “ES” or “E” are not yet qualified and therefore not ready to be used as reference design or in production. Any consequences deriving from such usage will not be at ST charge. In no event, ST will be liable for any customer usage of these engineering sample tools as reference designs or in production.

“E” or “ES” marking examples of location:

- On the targeted STM32 that is soldered on the board (For an illustration of STM32 marking, refer to the STM32 datasheet “Package information” paragraph at the www.st.com website).
- Next to the evaluation tool ordering part number that is stuck or silk-screen printed on the board.

1.2 Codification

The meaning of the codification is explained in [Table 2](#).

Table 2. Codification explanation

STM32XXDISCOVERY	Description	Example: STM32F3DISCOVERY
STM32XX	MCU series in STM32 32-bit Arm Cortex MCUs	STM32F3 Series
DISCOVERY	Discovery kit	Discovery kit

The order code is mentioned on a sticker placed on the top or bottom side of the board.

2 Development environment

The STM32F3DISCOVERY runs with the STM32F303VC 32-bit microcontroller based on the Arm® Cortex®-M4 core.

Note: Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.



2.1 System requirements

- Windows® OS (7, 8 and 10), Linux® 64-bit, or macOS®
- USB Type-A to Mini-B cable

Note: macOS® is a trademark of Apple Inc. registered in the U.S. and other countries.

2.2 Development toolchains

- IAR™ - EWARM (see [note](#))
- Keil® - MDK-ARM (see [note](#))
- STMicroelectronics - STM32CubeIDE

Note: On Windows® only.

2.3 Demonstration software

The demonstration software, included in the STM32Cube MCU Package corresponding to the on-board microcontroller, is preloaded in the STM32 Flash memory for easy demonstration of the device peripherals in standalone mode. It uses the USER push-button to switch the operation of the eight LEDs into different modes from simple blinking mode, to indicate the gyroscope movements, or the direction of the North Pole. The latest versions of the demonstration source code and associated documentation can be downloaded from the www.st.com/stm32f3discovery webpage.

Revision history

Table 3. Document revision history

Date	Version	Changes
3-Sep-2012	1	Initial release.
11-Mar-2013	2	Modified title and added <i>Ordering information</i> . Added information on STM32F313xx MCUs in <i>Description</i> .
24-Oct-2014	3	Updated features list. Updated <i>Section : Development toolchains</i> .
19-Jul-2016	4	Updated <i>Features</i> list to introduce the information that boards come with ST-LINK/V2 or ST-LINK/V2-B.
29-Jan-2020	5	Removed power-supply limitation in Description and reorganized the entire document: <ul style="list-style-type: none"> • Updated Features, Ordering information, System requirements, Development toolchains and Demonstration software • Added Product marking and Codification

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