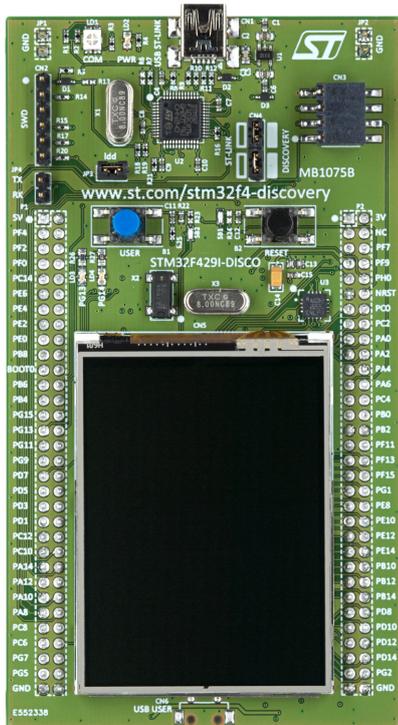


Discovery kit with STM32F429ZI MCU



32F429IDISCOVERY top view. Picture is not contractual.

Features

- STM32F429ZIT6 Arm® Cortex®-M4 core-based microcontroller with 2 Mbytes of flash memory and 256 Kbytes of RAM, in an LQFP144 package
- 2.4" QVGA TFT LCD
- USB OTG
- ST-MEMS motion sensor 3-axis digital output gyroscope
- 64-Mbit SDRAM
- Reset and user push-buttons
- Six LEDs:
 - LD1 (red/green) for USB communication
 - LD2 (red) for 3.3 V power-on
 - Two user LEDs: LD3 (green) and LD4 (red)
 - Two USB OTG LEDs: LD5 (green) V_{BUS} and LD6 (red) OC (overcurrent)
- Board connectors:
 - USB Micro-AB
 - 2.54 mm pitch expansion
- Flexible power-supply options: ST-LINK USB V_{BUS} , USB connector, or external sources
- Comprehensive free software libraries and examples available with the STM32Cube MCU Package
- On-board ST-LINK/V2-B debugger/programmer with USB re-enumeration capability: mass storage, Virtual COM port, and debug port
- Support of a wide choice of Integrated Development Environments (IDEs) including IAR Embedded Workbench®, MDK-ARM, and STM32CubeIDE

Description

With the STM32F429 Discovery kit (32F429IDISCOVERY), users develop applications easily on the STM32F429 high-performance MCUs with Arm® Cortex®-M4 core. The Discovery kit includes a 2.4" QVGA TFT LCD, an external 64-Mbit SDRAM, an ST-MEMS gyroscope, a USB OTG Micro-AB connector, LEDs, and push-buttons.

An embedded ST-LINK/V2-B debugger/programmer is included. The board comes with the STM32 comprehensive free software libraries and examples available with the STM32CubeF4 MCU Package.

Product status link

[32F429IDISCOVERY](#)

1 Ordering information

To order the 32F429IDISCOVERY Discovery kit, refer to Table 1. For a detailed description, refer to its user manual on the product web page. Additional information is available from the datasheet and reference manual of the target microcontroller.

Table 1. List of available products

Order code	Board reference	User manual	Target STM32
STM32F429I-DISC1 ⁽¹⁾	MB1075	UM1670	STM32F429ZIT6

1. STM32F429I-DISC1 with ST-LINK/V2-B replaces obsolete STM32F429I-DISCO with ST-LINK/V2.

1.1 Product marking

The stickers located on the top or bottom side of all PCBs provide product information:

- First sticker: product order code and product identification, generally placed on the main board featuring the target device.

Example:

Product order code
Product identification

- Second sticker: board reference with revision and serial number, available on each PCB.

Example:

MBxxxx-Variant-yyz	
syywwxxxxx	

On the first sticker, the first line provides the product order code, and the second line the product identification.

On the second sticker, the first line has the following format: “MBxxxx-Variant-yyz”, where “MBxxxx” is the board reference, “Variant” (optional) identifies the mounting variant when several exist, “y” is the PCB revision, and “zz” is the assembly revision, for example B01. The second line shows the board serial number used for traceability.

Parts marked as “ES” or “E” are not yet qualified and therefore not approved for use in production. ST is not responsible for any consequences resulting from such use. In no event will ST be liable for the customer using any of these engineering samples in production. ST’s Quality department must be contacted prior to any decision to use these engineering samples to run a qualification activity.

“ES” or “E” 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.

Some boards feature a specific STM32 device version, which allows the operation of any bundled commercial stack/library available. This STM32 device shows a “U” marking option at the end of the standard part number and is not available for sales.

To use the same commercial stack in their applications, the developers might need to purchase a part number specific to this stack/library. The price of those part numbers includes the stack/library royalties.

1.2 Codification

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

Table 2. Codification explanation

32XXYYZDISCOVERY	Description	Example: 32F429IDISCOVERY
XX	MCU series in STM32 32-bit Arm Cortex MCUs	STM32F4 series
YY	MCU product line in the series	STM32F429
Z	STM32 flash memory size: <ul style="list-style-type: none">• I for 2 Mbytes	2 Mbytes
DISCOVERY	Discovery kit	Discovery kit

2 Development environment

The 32F429IDISCOVERY Discovery kit runs with the STM32F429ZIT6 32-bit microcontroller based on the Arm® Cortex®-M4 processor.

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



2.1 System requirements

- Multi-OS support: Windows® 10, Linux® 64-bit, or macOS®
- USB Type-A or USB Type-C® to Mini-B cable

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

Linux® is a registered trademark of Linus Torvalds.

Windows is a trademark of the Microsoft group of companies.

2.2 Development toolchains

- IAR Systems® - IAR Embedded Workbench®⁽¹⁾
- Keil® - MDK-ARM⁽¹⁾
- STMicroelectronics - STM32CubeIDE

1. 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. The latest versions of the demonstration source code and associated documentation can be downloaded from www.st.com.

Revision history

Table 3. Document revision history

Date	Revision	Changes
6-Sep-2013	1	Initial release.
29-Sep-2014	2	Updated <i>Features</i> and <i>Description</i> to introduce STM32CubeF4 and STSW-STM32138. Updated ST MEMS feature. Updated <i>System requirements</i> and <i>Development toolchains</i> .
23-Oct-2015	3	Updated <i>Features</i> , <i>Description</i> , and <i>Product marking</i> .
28-Oct-2016	4	Updated <i>Features</i> and <i>Description</i> to inform that the new STM32F429I-DISC1 order code has replaced the old STM32F429IDISCO order code.
22-Apr-2020	5	Removed all references to obsolete STM32F429I-DISCO. Updated ST MEMS details in <i>Features</i> . Reorganized the entire document: <ul style="list-style-type: none"> • Updated <i>Features</i>, <i>Description</i>, <i>Ordering information</i>, and <i>Development toolchains</i> • Added <i>Codification</i>
26-Jan-2024	6	Removed the references to Arm® Mbed™.

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