

Discovery kit with STM32L152RC MCU



32L152CDISCOVERY top view.
Picture is not contractual.

Product status link

32L152CDISCOVERY

Features

- **STM32L152RC** Arm® Cortex®-M3 core-based microcontroller with 256 Kbytes of flash memory, 32 Kbytes of RAM, and 8 Kbytes of data EEPROM in an LQFP64 package
- 24-segment 4-common LCD in a DIP28 package
- Four LEDs:
 - LD1 (red/green) for USB communication
 - LD2 (red) for 3.3 V power-on
 - Two user LEDs, LD3 (green) and LD4 (blue)
- User and reset push-buttons
- One linear touch sensor and four touchkeys
- Board connectors:
 - Serial Wire Debug Port (SWD)
 - Extension header for LQFP64 I/Os for quick connection to prototyping board and easy probing
- Flexible power-supply options: ST-LINK USB V_{BUS} or external sources
- External application power supply: 3 V and 5 V
- I_{DD} current measurement
- Comprehensive free software libraries and examples available with the STM32Cube MCU Package
- On-board ST-LINK/V2 debugger/programmer with USB re-enumeration capability: 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

The 32L152CDISCOVERY Discovery kit helps the development of applications based on the STM32L1 Series microcontrollers and benefit from the ultra-low-power features of these devices.

Based on the **STM32L152RC** microcontroller, this Discovery kit includes an ST-LINK/V2 embedded debugging tool interface, a 24-segment 4-common LCD, LEDs, push-buttons, a linear touch sensor, and touchkeys.

1 Ordering information

To order the 32L152CDISCOVERY ultra-low-power Discovery kit, refer to Table 1. For a detailed description of each board, refer to its 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
STM32L152C-DISCO ⁽¹⁾	MB963	UM1079	STM32L152RCT6

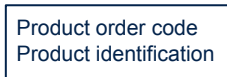
1. The former STM32L-DISCOVERY Discovery kit offered the same features except for the STM32L152RB microcontroller with 128 Kbytes of flash memory, 16 Kbytes of RAM, and 4 Kbytes of data EEPROM.

1.1 Product marking

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

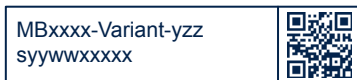
- First sticker: product order code and product identification, generally placed on the main board featuring the target device.

Example:



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

Example:



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-yzz”, 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: 32L152CDISCOVERY
32XX	MCU series in STM32 32-bit Arm Cortex MCUs	STM32L1 Series
YY	MCU product line in the series	STM32L151/152
Z	STM32 flash memory size: <ul style="list-style-type: none"> C for 256 Kbytes 	256 Kbytes
DISCOVERY	Toolkit type: <ul style="list-style-type: none"> DISCOVERY: Discovery kit 	Discovery kit

2 Development environment

The 32L152CDISCOVERY Discovery kit runs on STM32L1 Series microcontrollers based on the Arm[®] Cortex[®]-M3 core.

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.

Revision history

Table 3. Document revision history

Date	Revision	Changes
29-Apr-2011	1	Initial release.
11-May-2011	2	Replaced slider by linear touch sensor and touch key by touchkey.
16-Apr-2013	3	Added 32L152CDISCOVERY Discovery kit and related features.
29-Sep-2014	4	Updated <i>Features</i> to introduce STSW-STM32072. Updated <i>System requirements</i> and <i>Development toolchain</i> .
14-Dec-2022	5	Document reshuffled to the latest standards, including title, Features , Description , Ordering information with new Product marking , and Development environment .

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