

Discovery kit with STM32H735IG MCU



STM32H735G-DK top view. Picture is not contractual.

Product status link

[STM32H735G-DK](#)

Features

- STM32H735IGK6U microcontroller featuring 1 Mbyte of Flash memory and 564 Kbytes of SRAM in UFBGA176+25 package
- 4.3" TFT 480×272 pixels colored LCD module with capacitive touch panel and RGB interface
- Ethernet compliant with IEEE-802.3-2002 and PoE (Power over Ethernet)
- USB OTG FS
- SAI audio codec
- One ST-MEMS digital microphone
- 512-Mbit Octal-SPI NOR Flash memory
- 128-Mbit HyperRAM™
- Two user LEDs
- User and reset push-buttons
- Fan-out daughterboard
- Three CAN FDs
- Board connectors:
 - USB FS Micro-AB
 - USB ST-LINK Micro-B
 - Ethernet RJ45
 - Stereo headset jack including analog microphone input
 - Audio header for external speakers
 - microSD™ card
 - TAG connector 10-pin footprint
 - SMA connector
 - Arm® Cortex® 10-pin 1.27 mm-pitch debug connector over STDC14 footprint
 - ARDUINO® Uno V3 expansion connector
 - STMod+ expansion connector
 - Pmod™ Type-2A and Type-4A expansion connector
 - Audio MEMS daughterboard expansion connector
- Flexible power-supply options:
 - STLINK-V3E USB connector
 - USB OTG FS connector
 - 5 V delivered by RJ45 (Power over Ethernet)
 - 5 V delivered by ARDUINO®
 - USB charger
- On-board STLINK-V3E debugger/programmer with USB re-enumeration capability: mass storage, Virtual COM port, and debug port
- Comprehensive free software libraries and examples available with the [STM32CubeH7 MCU Package](#)
- Support of a wide choice of Integrated Development Environments (IDEs) including IAR™, Keil®, and STM32CubeIDE

Description

The STM32H735G-DK Discovery kit is a complete demonstration and development platform for Arm® Cortex®-M7 core-based STM32H735IGK6U microcontroller, with 1 Mbyte of Flash memory and 564 Kbytes of SRAM.

The STM32H735G-DK Discovery kit is used as a reference design for user application development before porting to the final product, thus simplifying the application development.

The full range of hardware features available on the board helps users to enhance their application development by an evaluation of all the peripherals (such as USB OTG FS, Ethernet, microSD™ card, USART, CAN FD, SAI audio DAC stereo with audio jack input and output, MEMS digital microphone, HyperRAM™, Octo-SPI Flash memory, RGB interface LCD with capacitive touch panel, and others). ARDUINO® Uno V3, Pmod™ and STMod+ connectors provide easy connection to extension shields or daughterboards for specific applications.

STLINK-V3E is integrated into the board, as the embedded in-circuit debugger and programmer for the STM32 MCU and USB Virtual COM port bridge.

The STM32H735G-DK board comes with the STM32CubeH7 MCU Package, which provides an STM32 comprehensive software HAL library as well as various software examples.

1 Ordering information

To order the STM32H735G-DK 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 STM32.

Table 1. List of available products

Order code	Board references	User manual	Target STM32
STM32H735G-DK	<ul style="list-style-type: none"> • MB1520 • MB1315⁽¹⁾ • MB1280⁽²⁾ 	<ul style="list-style-type: none"> • UM2679 • UM2695 	STM32H735IGK6U

1. LCD board.
2. Fan-out board.

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.

This board features 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.

In order to use the same commercial stack in his application, a developer may 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](#). The order code is mentioned on a sticker placed on the top or bottom side of the board.

Table 2. Codification explanation

STM32TXXY-DK	Description	Example: STM32H735G-DK
STM32TT	MCU series in STM32 32-bit Arm Cortex MCUs	STM32H7 Series
XX	MCU product line in the series	STM32H725/735
Y	STM32 Flash memory size: <ul style="list-style-type: none"> • G for 1 Mbyte 	1 Mbyte
DK	DK for Discovery kit	Discovery kit

2 Development environment

STM32H735G-DK runs with the STM32H735IG 32-bit microcontroller based on the Arm® Cortex®-M7 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 Micro-B cable

Note: macOS® is a trademark of Apple Inc. registered in the U.S. and other countries.
All other trademarks are the property of their respective owners.

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. 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	Version	Changes
10-Apr-2020	1	Initial release.

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