

Evaluation boards with STM32H7x7XI MCUs



STM32H757I-EVAL top view. Picture is not contractual.

Product status link

[STM32H747I-EVAL](#)
[STM32H757I-EVAL](#)

Features

- STM32H747XIH6 and STM32H757XIH6 Arm® Cortex®-M4 and Cortex®-M7 microcontrollers with 2 Mbytes of flash memory and 1 Mbyte of RAM in a TFBGA240+25 package
- 4" 480×800 TFT color LCD with MIPI DSI® interface and capacitive touch panel
- Ethernet compliant with IEEE-802.3-2002
- USB OTG HS and OTG FS
- I²C compatible serial interface
- RTC with rechargeable backup battery
- SAI audio DAC
- ST-MEMS digital microphones
- 8-Gbyte (or more) SDIO 3.0 interface microSD™ card
- 8 M×32bit SDRAM, 1 M×16bit SDRAM and 8 M×16bit NOR flash memory
- 1-Gbit twin Quad-SPI NOR flash memory or two 512-Mbit Quad-SPI NOR flash memories
- Potentiometer
- 4 color user LEDs
- Reset, wakeup, tamper, or key buttons
- Joystick with 4-direction control and selector
- Board connectors:
 - Power jack
 - 3 USB interfaces with Micro-AB connector
 - RS-232 communications
 - Ethernet RJ45
 - CAN FD compliant connection
 - Stereo headset jack including analog microphone input
 - 2 audio jacks for external speakers
 - microSD™ card
 - JTAG/SWD and ETM trace
 - Extension connectors and memory connectors for daughterboard or wire-wrap board
- Flexible power-supply options: ST-LINK USB V_{BUS}, USB connector, or external sources
- 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 STM32Cube MCU Package
- Support of a wide choice of Integrated Development Environments (IDEs) including IAR Embedded Workbench®, MDK-ARM, and STM32CubeIDE

1 Description

The [STM32H747I-EVAL](#) and [STM32H757I-EVAL](#) Evaluation boards (STM32H7x7I-EVAL) are high-end development platforms for the [STM32H747XI](#) and [STM32H757XI](#) microcontrollers, respectively. They are based on the high-performance Arm® Cortex®-M4 and Cortex®-M7 cores. The STM32H7x7I-EVAL Evaluation boards provide access to all the STM32 peripherals for user applications, and include an embedded STLINK-V3E debugger/programmer.

The full range of the STM32H7x7I-EVAL hardware features helps develop applications and evaluate all peripherals: USB OTG HS and OTG FS, Ethernet, CAN FD, USART, audio DAC and ADC, digital microphone, SRAM, SDRAM, NOR flash memory, twin Quad-SPI flash memory, microSD™ 3.0 card, 4" 480×800 TFT color LCD with MIPI DSI® interface and capacitive touch panel, and cryptographic hardware accelerator (available only on [STM32H757XI](#) devices).

The expansion connectors provide an easy way to add specialized features, while ETM trace is supported through external probes.

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



2 Ordering information

To order the [STM32H757I-EVAL](#), 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	Differentiating feature
STM32H747I-EVAL	<ul style="list-style-type: none"> • MB1166⁽¹⁾ 	UM2525	STM32H747XIH6	-
STM32H757I-EVAL	<ul style="list-style-type: none"> • MB1246⁽²⁾ • MB1256⁽³⁾ 		STM32H757XIH6	Cryptography

1. LCD board.
2. Main board.
3. *microSD™* transceiver board.

2.1 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.

2.2 Codification

The meaning of the codification is explained in Table 2.

Table 2. Codification explanation

STM32XXYYZ-EVAL	Description	Example: STM32H757I-EVAL
STM32XX	MCU series in STM32 32-bit Arm Cortex MCUs	STM32H7 series
YY	MCU product line in the series	STM32H747/757 includes the STM32H757xx MCUs
Z	STM32 flash memory size: <ul style="list-style-type: none"> I for 2 Mbytes 	2 Mbytes
EVAL	Toolkit type: <ul style="list-style-type: none"> EVAL: Evaluation board 	Evaluation board

3 Development environment

3.1 System requirements

- Multi-OS support: Windows® 10, Linux® 64-bit, or macOS®
- USB Type-A or USB Type-C® to Micro-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.

3.2 Development toolchains

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

1. On Windows® only.

3.3 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
14-Dec-2018	1	Initial release.
21-May-2019	2	Updated Quad-SPI memory feature in <i>Features</i> . Reorganized the entire document: <ul style="list-style-type: none">• Updated the cover page• Updated <i>Ordering information</i>• Added <i>Product marking</i>• Added <i>Codification</i>
25-Apr-2023	3	Updated <i>Ordering information</i> , <i>Product marking</i> , <i>Codification</i> , <i>System requirements</i> , and <i>Development toolchains</i> .



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