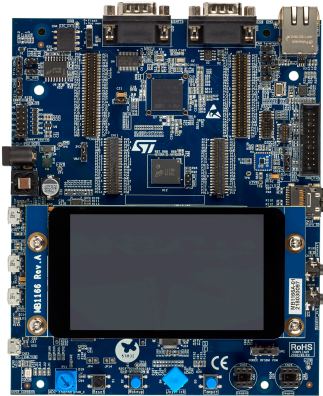


## Evaluation boards with STM32H7x7XI MCUs



Picture is not contractual.

### Features

- STM32H747XIH6 and STM32H757XIH6 microcontrollers with 2 Mbytes of Flash memory and 1 Mbyte of RAM in TFBGA240+25 package
- 4" 480×800 TFT color LCD with MIPI DSI<sup>SM</sup> interface and capacitive touchpanel
- Ethernet compliant with IEEE-802.3-2002
- USB OTG\_HS and OTG\_FS
- I<sup>2</sup>C compatible serial interface
- RTC with rechargeable backup battery
- SAI audio DAC
- ST-MEMS digital microphones
- 8-Gbyte (or more) SDIO3.0 interface microSD<sup>TM</sup> card
- 8 M×32bit SDRAM, 1 M×16bit SRAM 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
  - FDCAN compliant connection
  - Stereo headset jack including analog microphone input
  - 2 audio jacks for external speakers
  - microSD<sup>TM</sup> 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<sub>BUS</sub> 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<sup>TM</sup>, Keil<sup>®</sup>, GCC-based IDEs

#### Product status link

[STM32H747I-EVAL](#)

[STM32H757I-EVAL](#)

## 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 FS, Ethernet, FD-CAN, 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<sup>SM</sup> interface and capacitive touchpanel, 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 [STM32H747I-EVAL](#) and [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. Ordering information**

| Order code                      | Board reference         | User manual | Target STM32                   | Differentiating features |
|---------------------------------|-------------------------|-------------|--------------------------------|--------------------------|
| <a href="#">STM32H747I-EVAL</a> | • MB1246                | UM2525      | <a href="#">STM32H747XIH6U</a> | -                        |
| <a href="#">STM32H757I-EVAL</a> | • MB1166 <sup>(1)</sup> |             | <a href="#">STM32H757XIH6U</a> | Cryptography             |

1. LCD board.

### 2.1 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 design or in production.

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

- On the targeted STM32 that is soldered on the board (for illustration of STM32 marking, refer to the STM32 datasheet “Package information” paragraph at the [www.st.com](http://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.

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.

### 2.2 Codification

The meaning of the codification is explained in [Table 2](#). The order code is mentioned on a sticker placed on the top side of the board.

**Table 2. Codification explanation**

| STM32H7X7I-EVAL | Description                                  | Example: STM32H757I-EVAL |
|-----------------|--|--------------------------|
| H7              | MCU series in STM32 Arm Cortex MCUs          | STM32H7 Series           |
| X7              | MCU product line in the series               | STM32H757                |
| I               | STM32 Flash memory size:<br>• I for 2 Mbytes | 2 Mbytes                 |

## 3 Development environment

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### 3.1 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.

### 3.2 Development toolchains

- Keil® MDK-ARM (see [note](#))
- IAR™ EWARM (see [note](#))
- GCC-based IDEs

*Note:* 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](http://www.st.com).

## Revision history

**Table 3. Document revision history**

| Date        | Version | Changes   |
|-------------|---------|---|
| 14-Dec-2018 | 1       | Initial release.  |
| 21-May-2019 | 2       | Updated Quad-SPI memory feature in <a href="#">Features</a> . Reorganized the entire document: <ul style="list-style-type: none"><li>• Updated the cover page</li><li>• Updated <a href="#">Ordering information</a></li><li>• Added <a href="#">Product marking</a></li><li>• Added <a href="#">Codification</a></li></ul> |