Evaluation boards with STM32H7x7XI MCUs

Picture is not contractual.

Product status link
STM32H747I-EVAL
STM32H757I-EVAL

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^{SM} interface and capacitive touchpanel
- Ethernet compliant with IEEE-802.3-2002
- USB OTG_HS and OTG_FS
- I^2C compatible serial interface
- RTC with rechargeable backup battery
- SAI audio DAC
- ST-MEMS digital microphones
- 8-Gbyte (or more) SDIO3.0 interface microSD™ 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™ 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} 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™, Keil®, GCC-based IDEs

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For further information contact your local STMicroelectronics sales office.

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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℠ 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.*

arm

STM32H747I-EVAL STM32H757I-EVAL

Ordering information

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
STM32H747I-EVAL	• MB1246	UM2525	STM32H747XIH6U	-
STM32H757I-EVAL	• MB1166(1)		STM32H757XIH6U	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* 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: • I for 2 Mbytes	2 Mbytes

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3 Development environment

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*.

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 Features. Reorganized the entire document: • Updated the cover page • Updated Ordering information • Added Product marking • Added Codification

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