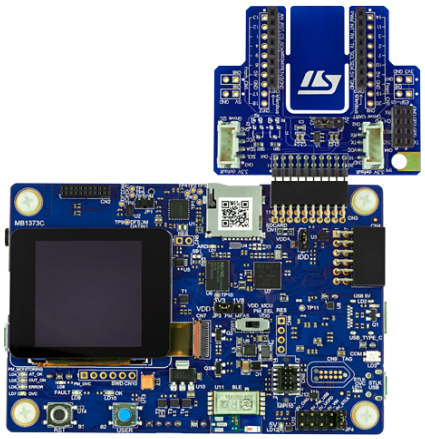
STM32L562E-DK

Data brief

Discovery kit with STM32L562QE MCU



STM32L562E-DK top view. Picture is not contractual.

Product status link
STM32L562E-DK

Features

- STM32L562QEI6QU microcontroller featuring 512 Kbytes of Flash memory and 256 Kbytes of SRAM in BGA132 package
- 1.54" 240 x 240 pixel-262K color TFT LCD module with parallel interface and touch-control panel
- USB Type-C™ Sink device FS
- On-board Energy Meter: 300 nA to 150 mA measurement range with dedicated USB interface
- SAI Audio CODEC
- MEMS digital microphones
- 512-Mbit Octal-SPI Flash memory
- Bluetooth® V4.1 low energy module
- iNEMO 3D accelerometer and 3D gyroscope
- 2 user LEDs
- User and Reset push-buttons
- Board connectors:
  - USB Type-C™
  - microSD™ card
  - Stereo headset jack including analog microphone input
  - JTAG debugger
  - DPM dynamic-power measurement interface for external device
  - STMod+ expansion connector with fan-out expansion board for Wi-Fi®, Grove and mikroBUS™ compatible connectors
  - PMOD expansion connector
  - Audio MEMS daughterboard expansion connector
  - ARDUINO® Uno V3 expansion connector
- Flexible power-supply options: ST-LINK USB V_{BUS} or external sources
- On-board STLINK-V3 debugger/programmer with USB re-enumeration capability: mass storage, Virtual COM port and debug port
- Comprehensive free software libraries and examples available with the STM32CubeL5 MCU Package
- Support of a wide choice of Integrated Development Environments (IDEs): Keil® MDK-ARM, IAR™ EWARM, GCC-based IDEs

Description

The STM32L562E-DK Discovery kit is a complete demonstration and development platform for Arm® Cortex®-M33 with TrustZone® and ARMv8-M mainline security extension core-based STM32L562QEI6QU microcontroller, with 512 Kbytes of Flash memory and 256 Kbytes of SRAM.

The STM32L562E-DK Discovery kit makes use of the STM32L562QEI6QU innovative ultra-low-power oriented features to enable prototyping for many wearable or sensor applications, with state-of-the-art energy efficiency, secure boot, and TrustZone-based software isolation.

For even more user-friendliness, the onboard STLINK-V3 debugger provides out-of-the-box loading and debugging capabilities, as well as USB Virtual COM port bridge.

1 Ordering information

To order the STM32L562E-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
STM32L562E-DK	• MB1373 • MB1280(1)	UM2617	STM32L562QEI6QU

1. *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 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.

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 side of the board.

Table 2. Codification explanation

STM32TTXXY-DK	Description	Example: STM32L562E-DK
STM32TT	MCU series in STM32 Arm Cortex MCUs	STM32L5 Series
XX	MCU product line in the series	STM32L562
Y	STM32 Flash memory size: • E for 512 Kbytes	512 Kbytes

2 Development environment

The STM32L562E-DK Discovery kit runs with the STM32L562QEI6QU 32-bit microcontroller based on the Arm® Cortex®-M33 core with TrustZone® and the ARMv8-M mainline security extension.

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

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

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
30-Sep-2018	1	Initial release