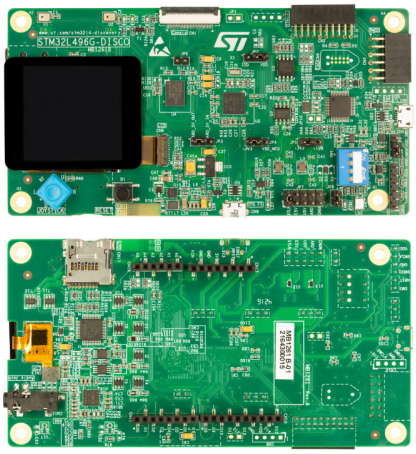
32L496GDISCOVERY

Data brief

Discovery kit with STM32L496AG MCU



32L496GDISCOVERY top and bottom views. Pictures are not contractual.

Product status link
32L496GDISCOVERY

Features

- STM32L496AGI6 Arm® Cortex®-M4 core-based microcontroller featuring 1 Mbyte of flash memory and 320 Kbytes of RAM, in a UFBGA169 package
- 1.54-inch 240 x 240-pixel TFT color LCD with parallel interface
- SAI audio codec, with stereo output, including analog microphone input
- Stereo digital MEMS microphones
- 8-Mbit PSRAM
- 64-Mbit Quad-SPI flash
- Eight LEDs including three user-controllable ones
- Reset push-button
- 4-way joystick with selection
- Board connectors:
  - 8-bit camera
  - Stereo headset jack
  - microSD™ card holder with included card
  - USB Micro-B
  - USB Micro-AB
  - STMod+ and Pmod™
  - ARDUINO® Uno V3
- On-board ST-LINK/V2-1 debugger/programmer with USB re-enumeration capability: mass storage, Virtual COM port, and debug port
- Flexible power-supply options: ST-LINK USB V_{BUS}, USB OTG FS connector, or external sources
- 1.8 and 3.3 V possible MCU supply voltages
- IDD measurement
- 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

Description

The 32L496GDISCOVERY Discovery kit is a complete demonstration and development platform for STMicroelectronics Arm® Cortex®-M4 core-based STM32L496AG microcontroller. Thanks to the innovative ultra-low-power-oriented features, extended RAM, and graphics performance (Chrom-ART Accelerator) offered by the STM32L496AG, the 32L496GDISCOVERY Discovery kit is designed to enable easy prototyping for many applications, including audio and graphics, with state-of-the-art energy efficiency. For even more user-friendliness, the on-board ST-LINK/V2-1 debugger provides out-of-the-box loading and debugging capabilities.

1 Ordering information

To order the 32L496GDISCOVERY 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 microcontroller.

Table 1. Ordering information

Order code	Board reference	User manual	Target STM32
STM32L496G-DISCO	• MB1261(1) • MB1280(2)	UM2160	STM32L496AGI6

1. *Main board*
2. *Fanout board*

1.1 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-yzz
  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-yzz"*, 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.

1.2 Codification

The meaning of the codification is explained in Table 2.

Table 2. Codification explanation

32L4XXYDISCOVERY	Description	Example: 32L496GDISCOVERY
32L4	MCU series in STM32 32-bit Arm Cortex MCUs	STM32L4 series
XX	MCU product line in the series	STM32L4x6 product line
Y	STM32 flash memory size: • G for 1 Mbyte	1 Mbyte
DISCOVERY	Discovery kit	Discovery kit

2 Development environment

The 32L496GDISCOVERY board runs with the STM32L496AGI6 32-bit microcontroller based on the Arm® Cortex®-M4 core.

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

2.1 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.

2.2 Development toolchains

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

1. *On Windows® only.*

Revision history

Table 3. **Document revision history**

Date	Revision	Changes
1-Feb-2017	1	Initial release.
14-Apr-2022	2	Reshuffled document to the latest standards, including the removal of *Demonstration software* and *Technology partners* obsolete sections.
06-Sep-2024	3	Updated Features aligned with the associated user manual and Ordering information table with fanout board information.

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