32L4R9IDISCOVERY

## Discovery kit with STM32L4R9AI MCU

Data brief

Features

- STM32L4R9AII6 microcontroller with 2-Mbyte Flash memory and 640-Kbyte RAM in UFBGA169 package
- 1.2" 390x390 pixel AMOLED round display panel with 16-million colors depth, MIPI$^®$ DSI interface, and capacitive touch panel
- USB OTG FS
- On-board current measurement
- SAI audio codec
- ST-MEMS digital microphones
- 16-Mbit asynchronous PSRAM
- 512-Mbit Octo-SPI Flash
- 2 user LEDs
- 1 reset push-button
- 4-direction joystick with selection button
- Board connectors:
    - 8-bit camera
    - USB OTG FS with Micro-AB
    - Stereo headset jack including analog microphone input
    - microSD™ card
- Board expansion connectors:
    - Arduino™ Uno V3
    - STMod+
    - PMOD
    - EXT_I2C
- Flexible power-supply options:
    - ST-LINK USB V_{BUS} or external sources
- On-board ST-LINK/V2-1 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 package
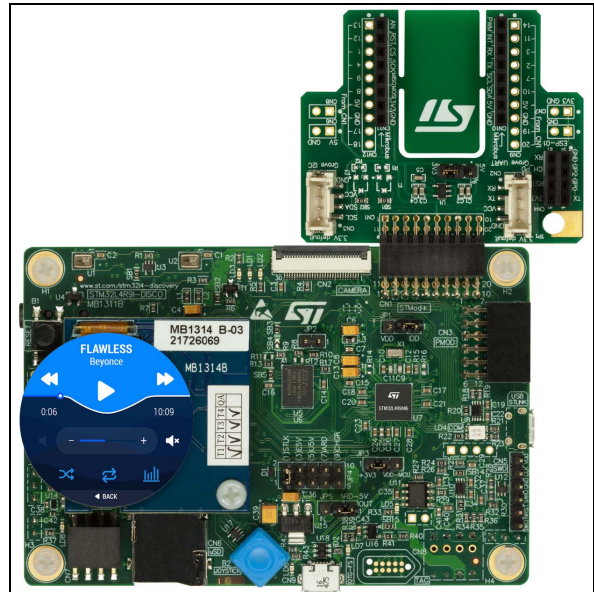
Picture is not contractual.

- Support of a wide choice of integrated development environments (IDEs), including IAR™, Keil$^®$ and GCC-based IDEs

Description

The 32L4R9IDISCOVERY kit is a complete demonstration and development platform for STMicroelectronics Arm$^®$ Cortex$^®$-M4 core-based STM32L4R9AI microcontroller.

Leveraging the innovative ultra-low-power oriented features, 640 Kbytes of embedded RAM, graphics performance (Chrom-ART Accelerator™), and DSI controller offered by the STM32L4R9AI, the 32L4R9IDISCOVERY kit enables users to easily prototype applications with state-of-the-art energy efficiency, as well as stunning audio and graphics rendering with direct support for AMOLED DSI round LCD display.

For even more user-friendliness, the on-board ST-LINK/V2-1 debugger provides out-of-the-box programming and debugging capabilities.

System requirements

- Windows® OS (7, 8 and 10), Linux® 64-bit or macOS®
- USB Type-A to Micro-B cable

Development toolchains

- Keil® MDK-ARM[a]
- IAR™ EWARM[a]
- GCC-based IDEs including free SW4STM32 from AC6

Demonstration software

The demonstration software, included in the STM32Cube package corresponding to the on-board MCU, 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 the www.st.com/stm32l4-discovery web page.

Ordering information

To order the 32L4R9IDISCOVERY Discovery kit, refer to *Table 1*:

Table 1. Ordering information

Order code	Target STM32
STM32L4R9I-DISCO	STM32L4R9AII6

Technology partners

MACRONIX:
- 512-Mbit Octo-SPI NOR Flash memory device, part number MX25LM51245GXDI00

GOVISIONOX OPTOELECTRONICS:
- 1.2 inch 390x390 AMOLED Display, part number G1120TB103GF-001

---

a. On Windows® only

Revision history

Table 2. Document revision history

Date	Revision	Changes
12-Sep-2017	1	Initial version
10-Oct-2017	2	Updated display panel item in section *Features*.

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.