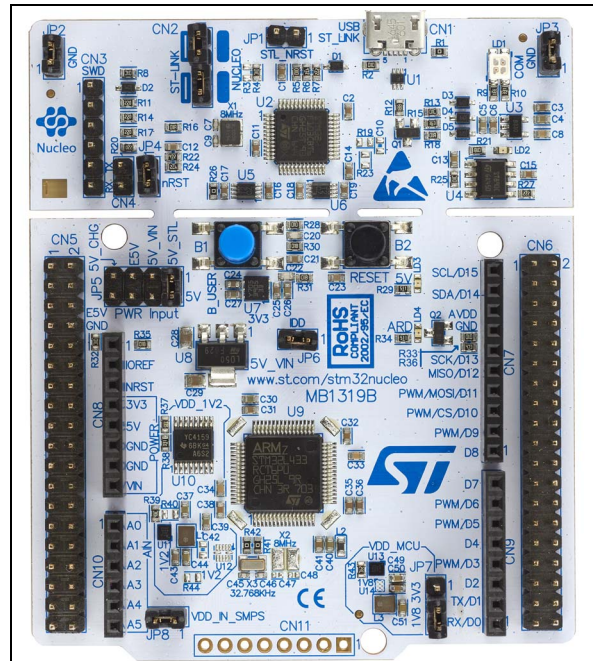


Features

- STM32 microcontroller in LQFP64 package
- SMPS: significantly reduces power consumption in Run mode
- One user LED shared with Arduino
- Two push-buttons: USER and RESET
- LSE crystal: 32.768 kHz crystal oscillator
- Expansion connectors:
 - Arduino™ Uno V3
 - ST Morpho
 - external SMPS experimentation dedicated connector
- Flexible power-supply options: ST-LINK USBV_{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
- Support of a wide choice of Integrated Development Environments (IDEs) including IAR™, Keil®, GCC-based IDEs

Description

The STM32 Nucleo-64-P boards (NUCLEO-L433RC-P, NUCLEO-L452RE-P) provide an affordable and flexible way for users to try out new concepts and build prototypes with the STM32 microcontroller, choosing from the various combinations of performance, power consumption and features.



1. Picture is not contractual.

Arduino™ Uno V3 connectivity, and ST morpho headers provide an easy means of expanding the functionality of the Nucleo open development platform with a wide choice of specialized shields. The STM32 Nucleo-64-P board does not require any separate probe as it integrates the ST-LINK/V2-1 debugger/programmer. The STM32 Nucleo-64-P board comes with the STM32 comprehensive software HAL library, together with various packaged software examples.

System requirements

- Windows® OS (XP, 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, is preloaded in the board-mounted (STM32 microcontroller) 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/stm32nucleo website.

Ordering information

To order the Nucleo-64-P board for the targeted STM32 microcontroller, refer to [Table 1](#).

Table 1. Ordering information

Order code	Target STM32
NUCLEO-L433RC-P	STM32L433RCT6P
NUCLEO-L452RE-P	STM32L452RET6P

a. On Windows® only.

The meaning of the NUCLEO-LxxxRy-P codification is explained in [Table 2](#) with an example.

Table 2. Codification explanation

NUCLEO-LxxxRy-P	Description	Example: NUCLEO-L452RE-P
STM32Lxxx	STM32 product line	STM32L452
R	STM32 package pin count	64 pins
y = 1 Mbyte	STM32 Flash memory size: – 8 for 64 Kbytes – B for 128 Kbytes – C for 256 Kbytes – E for 512 Kbytes – G for 1 Mbytes – H for 1.5 Mbytes – I for 2 Mbytes	E: 512 Kbytes
P = SMPS	MCU has SMPS function	-

This order code is mentioned on a sticker placed on the underside of the board.

Revision history

Table 3. Document revision history

Date	Revision	Changes
23-May-2017	1	Initial version.

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