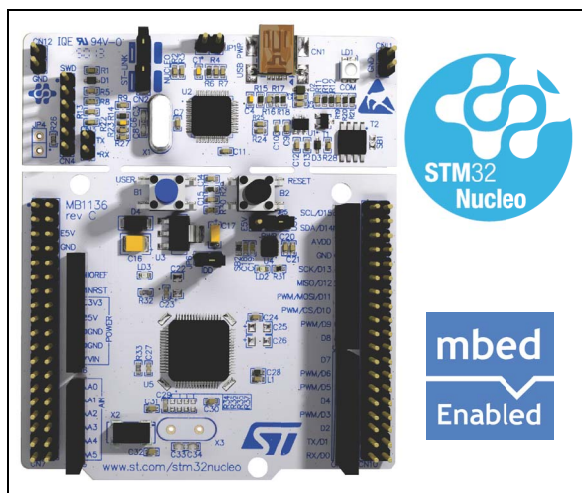


### Features

- STM32™ microcontroller with LQFP64 package
- Two types of extension resources
  - Arduino Uno Revision 3 connectivity
  - STMicroelectronics Morpho extension pin headers for full access to all STM32 I/Os
- mbed-enabled (*mbed.org*)
- On-board ST-LINK/V2-1 debugger/programmer with SWD connector
  - selection-mode switch to use the kit as a standalone ST-LINK/V2-1
- Flexible board power supply
  - USB VBUS or external source (3.3 V, 5 V, 7 - 12 V)
  - Power management access point
- Three LEDs
  - USB communication (LD1), user LED (LD2), power LED (LD3)
- Two push buttons: USER and RESET
- USB re-enumeration capability: three different interfaces supported on USB
  - Virtual Com port
  - Mass storage
  - Debug port
- Supported by wide choice of Integrated Development Environments (IDEs) including IAR™, Keil®, GCC-based IDEs



### Description

The STM32 Nucleo board provides an affordable and flexible way for users to try out new ideas and build prototypes with any STM32 microcontroller line, choosing from the various combinations of performance, power consumption and features. The Arduino™ connectivity support and ST Morpho headers make it easy to expand the functionality of the STM32 Nucleo open development platform with a wide choice of specialized shields.

The STM32 Nucleo board does not require any separate probe as it integrates the ST-LINK/V2-1 debugger/programmer.

The STM32 Nucleo board comes with the STM32 comprehensive software HAL library together with various packaged software examples, as well as direct access to mbed online resources.

**Table 1. Device summary**

| Reference     | Part number                                                                                                                                                                          |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NUCLEO-XXXXRX | NUCLEO-F030R8,<br>NUCLEO-F072RB, NUCLEO-F091RC,<br>NUCLEO-F103RB,<br>NUCLEO-F302R8, NUCLEO-F303RE,<br>NUCLEO-F334R8,<br>NUCLEO-F401RE, NUCLEO-F411RE<br>NUCLEO-L053R8, NUCLEO-L152RE |

# 1 Ordering information

[Table 2](#) lists the order codes and the respective targeted MCU.

**Table 2. Ordering information**

| Order code    | Targeted MCU  |
|---------------|---------------|
| NUCLEO-F030R8 | STM32F030R8T6 |
| NUCLEO-F072RB | STM32F072RBT6 |
| NUCLEO-F091RC | STM32F091RCT6 |
| NUCLEO-F103RB | STM32F103RBT6 |
| NUCLEO-F302R8 | STM32F302R8T6 |
| NUCLEO-F303RE | STM32F303RET6 |
| NUCLEO-F334R8 | STM32F334R8T6 |
| NUCLEO-F401RE | STM32F401RET6 |
| NUCLEO-F411RE | STM32F411RET6 |
| NUCLEO-L053R8 | STM32L053R8T6 |
| NUCLEO-L152RE | STM32L152RET6 |

The meaning of NUCLEO-TXXXRY codification is as follows:

- TXXX describes the STM32 MCU product line
- R describes the pin count (R for 64 pins)
- Y describes the code size (8 for 64K, B for 128K, E for 512K)

The order code is printed on a sticker placed at the top or bottom side of the board.

## 2 Revision history

**Table 3. Document revision history**

| Date        | Revision | Changes                                                                                                                                                                                                     |
|-------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10-Feb-2014 | 1        | Initial release.                                                                                                                                                                                            |
| 13-Feb-2014 | 2        | Added <a href="#">Table 1: Device summary</a> and updated <a href="#">Table 2: Ordering information</a> .                                                                                                   |
| 11-Apr-2014 | 3        | Extended the applicability to NUCLEO-F302R8.<br>Updated <a href="#">Table 1: Device summary</a> and <a href="#">Table 2: Ordering information</a> .                                                         |
| 26-May-2014 | 4        | Extended the applicability to NUCLEO-L053R8, NUCLEO-F072RB, NUCLEO-F334R8 and NUCLEO-F411RE<br>Updated <a href="#">Table 1</a> and <a href="#">Table 2</a> .                                                |
| 09-Sep-2014 | 5        | Extended the applicability to NUCLEO-F091RC and NUCLEO-F303RE.<br>Updated <a href="#">Features</a> .<br>Updated <a href="#">Table 1: Device summary</a> and <a href="#">Table 2: Ordering information</a> . |

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