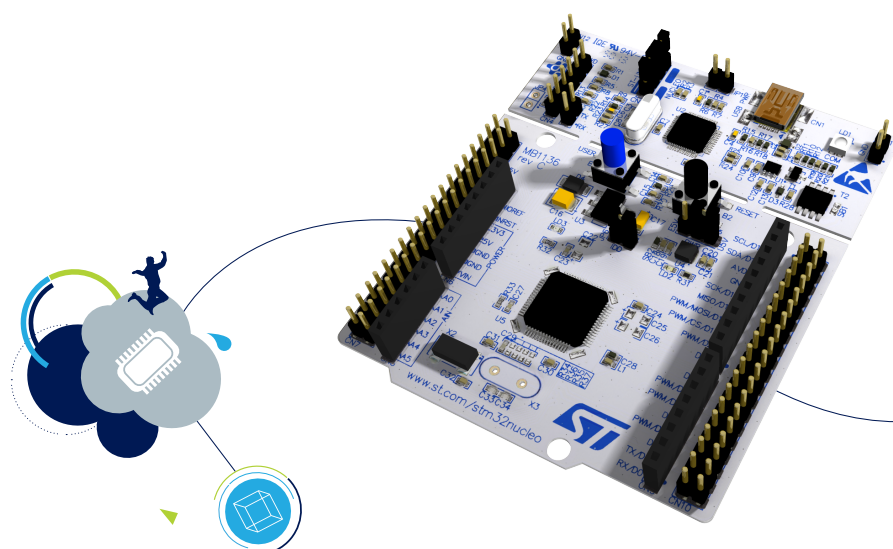


# STM32

## Nucleo boards



## Open STM32 development platform for flexible prototyping

The highly affordable STM32 Nucleo boards allow anyone to try out new ideas and to quickly create prototypes with any STM32 MCU.

Sharing the same Arduino connectors and ST Morpho headers, STM32 Nucleo boards can easily be extended with a large number of specialized application hardware add-ons.

The STM32 Nucleo boards integrate an ST-Link debugger/programmer, so there is no need for a separate probe.

A comprehensive STM32 software HAL library together with various software examples are provided with the STM32 Nucleo boards, and seamlessly work with a wide range of development environments including IAR EWARM, Keil MDK-ARM, mbed and GCC-based IDEs.

All STM32 Nucleo users have free access to the mbed online resources (compiler, C/C++ SDK, and developer community) at [www.mbed.org](http://www.mbed.org) allowing to build a complete application in only a few minutes.

### KEY FEATURES


- Includes one STM32 microcontroller in 64-pin package
- On-board ST-LINK/V2-1 debugger/programmer
- Wide extension capabilities with specialized shields:
  - Arduino™ Uno rev3 connectivity support
  - Access to all MCU pins through ST Morpho connectors
- Direct access to mbed online resources.
- Supported by IAR, Keil, and GCC-based IDEs (Atollic...)



## STM32 NUCLEO BOARD SELECTOR GUIDE

Unified offering with scalable performance/features/power mix

[www.st.com/stm32nucleo](http://www.st.com/stm32nucleo)

| Part number   | STM32 part number | Core and memory configurations                                | STM32 Series                             |   |
|---------------|-------------------|---|--|---|
| NUCLEO-L053R8 | STM32L053R8T6     | 32 MHz Cortex-M0+ core<br>64-KB Flash, 8-KB SRAM              | Ultra-low-power MCU                      |    |
| NUCLEO-L152RE | STM32L152RET6     | 32 MHz Cortex-M3 core<br>512-KB Flash, 80-KB SRAM             |  |    |
| NUCLEO-F030R8 | STM32F030R8T6     | 48 MHz Cortex-M0 core<br>64-KB Flash, 8-KB SRAM               | Entry-level MCU                          |    |
| NUCLEO-F070RB | STM32F070R8T6     | 48 MHz Cortex-M0 core<br>128-KB Flash, 16-KB SRAM             |  |   |
| NUCLEO-F072RB | STM32F072RBT6     | 48 MHz Cortex-M0 core<br>128-KB Flash, 16-KB SRAM             |  |   |
| NUCLEO-F091RC | STM32F091RCT6     | 48 MHz Cortex-M0 core<br>256-KB Flash, 32-KB SRAM             |  |   |
| NUCLEO-F103RB | STM32F103RBT6     | 72 MHz Cortex-M3 core<br>128-KB Flash, 20-KB SRAM             | Mainstream MCU                           |    |
| NUCLEO-F302R8 | STM32F302R8T6     | 72 MHz Cortex-M4 core<br>64-KB Flash, 16-KB SRAM              | Mixed-signal MCU with<br>DSP and FPU     |   |
| NUCLEO-F303RE | STM32F303RET6     | 72 MHz Cortex-M4 core<br>512-KB Flash, 80-KB SRAM             |  |   |
| NUCLEO-F334R8 | STM32F334R8T6     | 72 MHz Cortex-M4 core<br>64-KB Flash, 16-KB SRAM,<br>HR timer |  |   |
| NUCLEO-F401RE | STM32F401RET6     | 84 MHz Cortex-M4 core<br>512-KB Flash, 96-KB SRAM             | High-performance MCU<br>with DSP and FPU |  |
| NUCLEO-F411RE | STM32F411RET6     | 100 MHz Cortex-M4 core<br>512-KB Flash, 128-KB SRAM,<br>BAM   |  |   |

## STM32 NUCLEO EXPANSION BOARDS

No limit to the number of possibilities

[www.st.com/x-nucleo](http://www.st.com/x-nucleo)

STM32 Nucleo development boards may easily be expanded through a variety of add-on boards. These expansion boards open the door to any type of application leveraging the appropriate mix of performance/peripherals/power within the comprehensive STM32 family.

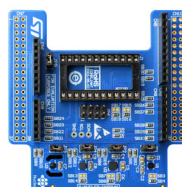
Each expansion board carries the necessary components to implement specialized features of a chosen application, and comes with complementary STM32 software modules.



Connect BLE



Connect NFC



Sense motion and environmental



Sense proximity and light



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