STM32
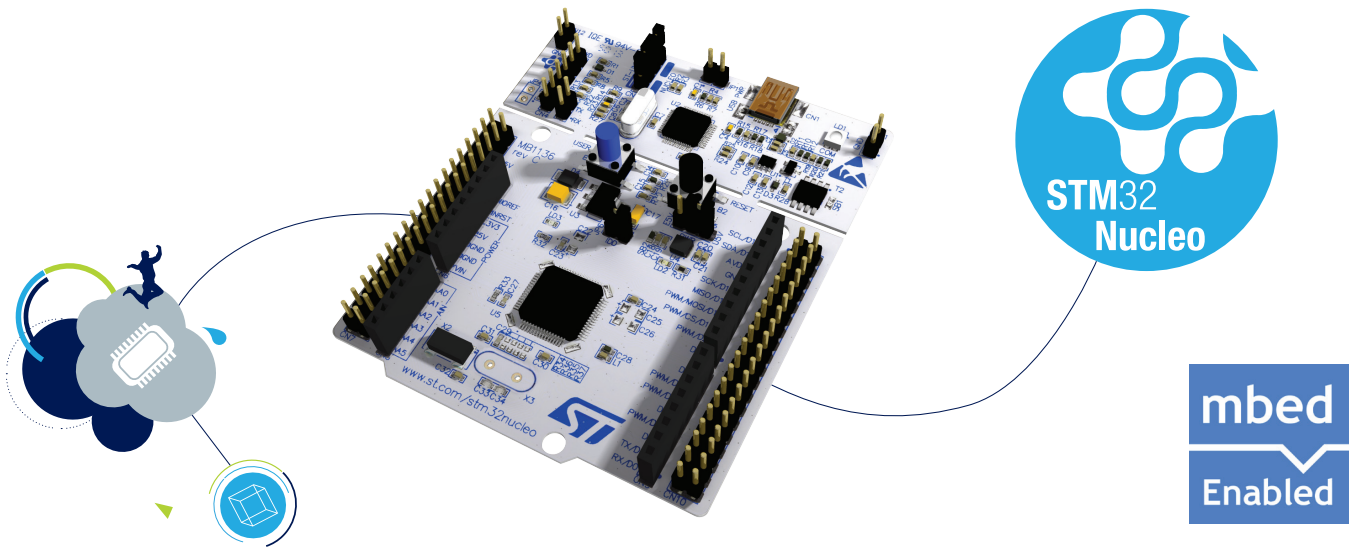# Nucleo boards

Open STM32 development platform for flexible prototyping

The highly affordable STM32 Nucleo boards allow anybody 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 a ST-Link debugger/programmer, so that there is no need for any 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, 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** 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 scalable offering

www.st.com/stm32nucleo

Part number	STM32 part number	Core and memory configurations	STM32 Series	
NUCLEO-L053R8	STM32L053R8T6	Cortex-M0+ 32 MHz 64-KB Flash, 8-KB SRAM	Ultra-low-power MCU	STM32 L0
NUCLEO-L152RE	STM32L152RET6	Cortex-M3 32 MHz 512-KB Flash, 80-KB SRAM	Ultra-low-power MCU	STM32 L1
NUCLEO-F030R8	STM32F030R8T6	Cortex-M0 48 MHz 64-KB Flash, 8-KB SRAM	Entry-level MCU Value line	STM32 F0
NUCLEO-F072RB	STM32F072RBT6	Cortex-M0 48 MHz 128-KB Flash, 16-KB SRAM	Entry-level MCU	STM32 F0
NUCLEO-F103RB	STM32F103RBT6	Cortex-M3 72 MHz 128-KB Flash, 20-KB SRAM	Mainstream MCU	STM32 F1
NUCLEO-F302R8	STM32F302R8T6	Cortex-M4 72 MHz 64-KB Flash, 16-KB SRAM	Mixed-signal MCU with DSP and FPU	STM32 F3
NUCLEO-F334R8	STM32F334R8T6	Cortex-M4 72 MHz 64-KB Flash, 16-KB SRAM	Mixed-signal MCU with DSP and FPU	STM32 F3
NUCLEO-F401RE	STM32F401RET6	Cortex-M4 84 MHz 512-KB Flash, 96-KB SRAM	High-performance MCU with DSP and FPU Dynamic efficiency line	STM32 F4
NUCLEO-F411RE	STM32F411RET6	Cortex-M4 100 MHz 512-KB Flash, 128-KB SRAM	High-performance MCU with DSP and FPU Dynamic efficiency line	STM32 F4

STM32 NUCLEO EXPANSION BOARDS

No limit to possibilities

www.st.com/x-nucleo

STM32 Nucleo may easily be expanded through a variety of add-on boards: this opens 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.

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