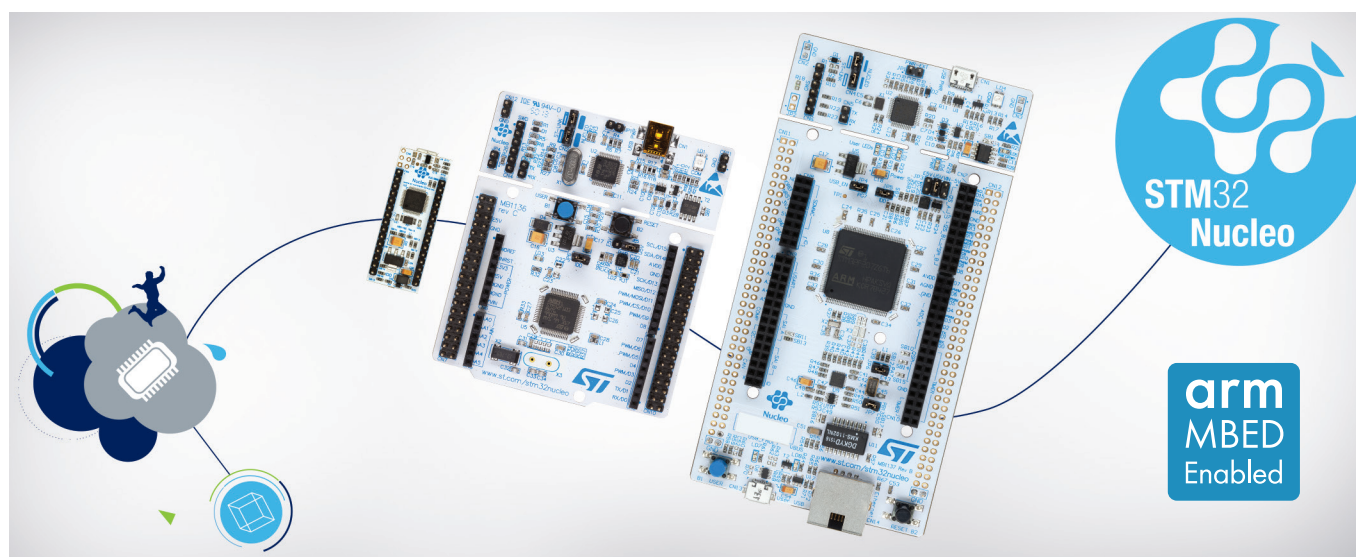


# STM32 Nucleo boards

## Unified scalable offering



## 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.

STM32 Nucleo boards can easily be extended with a large number of specialized application hardware add-ons thanks to Arduino Uno Rev3 and ST morpho connectors on Nucleo-144 and Nucleo-64, ST Zio connectors on Nucleo-144, and Arduino Nano connectors on Nucleo-32.

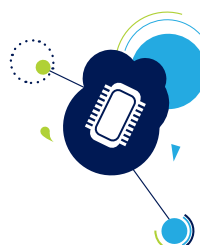
Moreover, Nucleo boards integrate an ST-Link debugger/programmer, so there is no need for a separate probe.

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

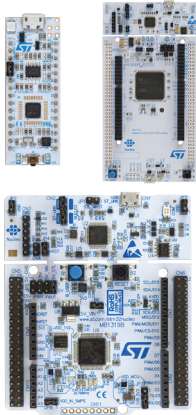
Most STM32 Nucleo boards can be seamlessly used with Mbed online resources (compiler, C/C++ SDK, and developer community) at [www.mbed.org](http://www.mbed.org) allowing to build a complete application in only a few minutes.

### KEY FEATURES

- Includes one STM32 microcontroller in a 32-pin, 64-pin or 144-pin package
- On-board ST-LINK debugger/programmer:
  - Virtual COM port
  - Mass storage
- Wide extension capabilities with specialized shields:
  - Arduino Uno rev3 connectors on Nucleo-64 and Nucleo-144
  - Access to a wider range of peripherals through Zio connectors on Nucleo-144
  - Access to all MCU pins through ST morpho connectors on Nucleo-64 and Nucleo-144
  - Arduino Nano connectors on Nucleo-32
- Direct access to Mbed online resources for most boards
- Supported by IAR, Arm Keil, Arm® Mbed™ online, and GCC-based IDEs



## STM32 NUCLEO DEVELOPMENT BOARDS



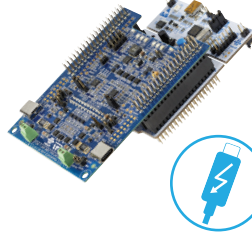
[www.st.com/stm32nucleo](http://www.st.com/stm32nucleo)

## STM32 NUCLEO EXPANSION BOARDS

STM32 Nucleo development boards can 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.



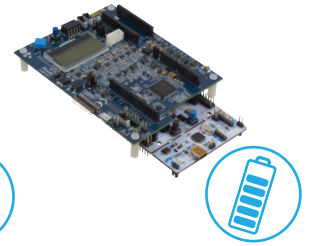
P-NUCLEO-IHM03



P-NUCLEO-USB001 / USB002



I-NUCLEO-LRWAN1



X-NUCLEO-LPM01A

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

## MULTIPLE IDE SUPPORT

emproG

IAR  
SYSTEMS

RAISONANCE

arm  
KEIL\*

ac6

arm  
MBED

TASKING

SEGGER

SYSPROGS

STM32  
CubeIDE

SYSTEM

ARDUINO

Free IDEs Note (\*): free for STM32F0/G0/L0

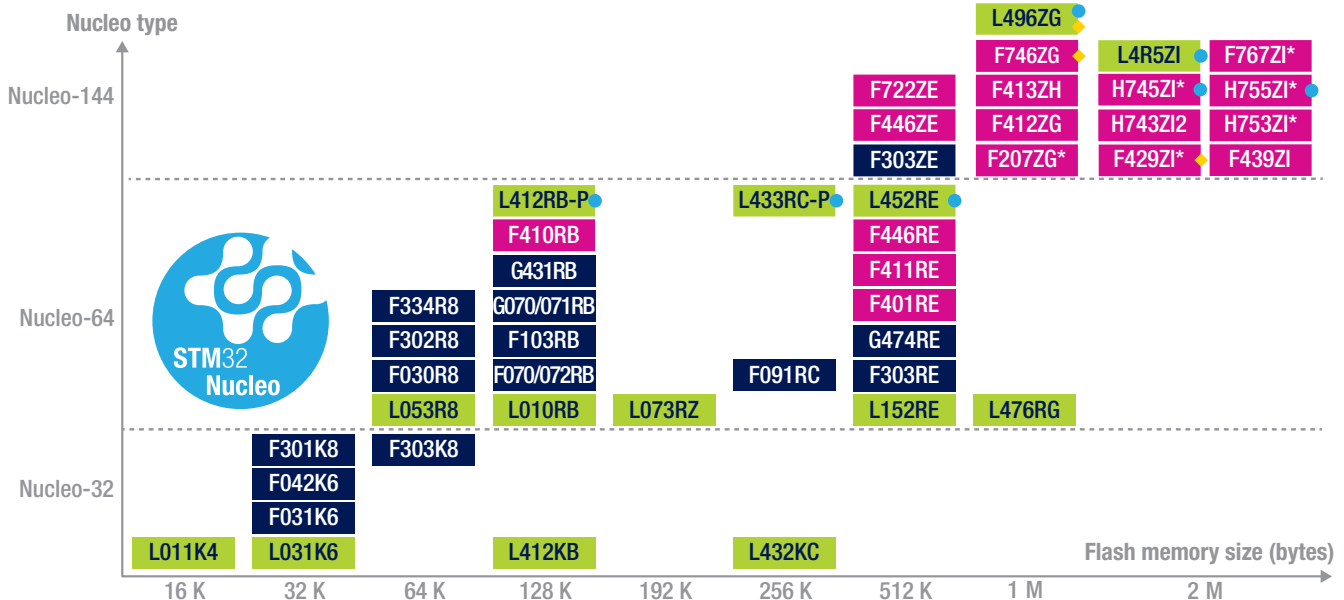
## EMBEDDED SOFTWARE

STM32 Nucleo boards are supported in the corresponding STM32 MCU packages with many pre-configured example projects for IAR, Keil and AC6 SW4STM32.

- STM32Cube Expansion package available at [www.st.com/x-cube](http://www.st.com/x-cube)
- STM32Cube MCU package available at [www.st.com/stm32cubemcupack](http://www.st.com/stm32cubemcupack)
- STM32CubeIDE is a free all-in-one multi-OS development tool available at [www.st.com/stm32cubeide](http://www.st.com/stm32cubeide)



## STM32 NUCLEO BOARD PORTFOLIO



Legend: Mainstream Ultra-low-power High-performance SMPS version available HW crypto/Hash version available

Note: \* Ethernet 10/100 Mbps

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