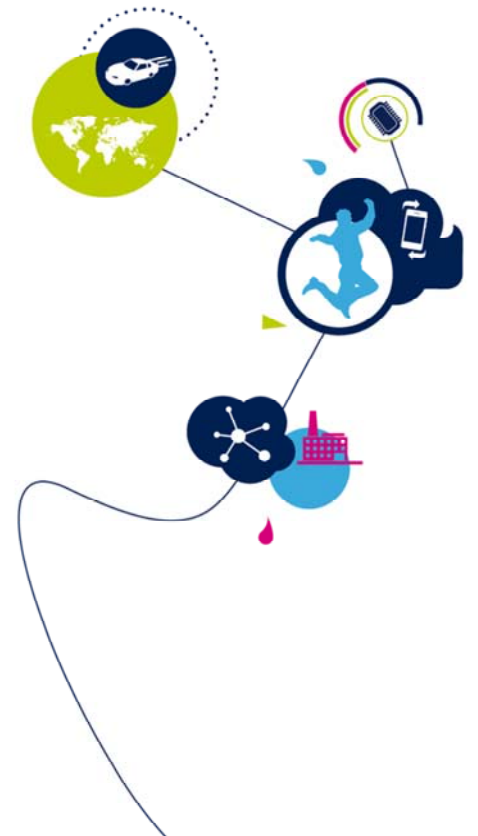


# STM32G4 Boards

Revision 1.0



Hello, and welcome to the presentation of this STM32 evaluation boards.

It covers the main features of the evaluation boards dedicated to the STM32G4 series.

The demonstration software included with these boards will allow you to become more familiar with this new high-performance microcontroller.



- Discover the high-performance STM32G4 MCU
  - Enables a wide diversity of applications
  - Benefits from security and connectivity features
  - Integrated rich and advanced analog
  - Comes with various packaged software examples and an embedded debugger

## Application benefits

- Designed for performance and versatility
- Turnkey demonstration firmware
- Develop your own application



The STM32G4 evaluation boards offers everything required for users to get started quickly and develop applications easily.

These boards enable a wide diversity of applications taking benefit from security, connectivity and motor control features.

The STM32G4 evaluation boards come with the STM32 comprehensive software HAL library together with various packaged software examples.

They also embed a debug probe that helps you develop your own applications from the existing examples.



# STM32G4

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## A Rich Offer from the Start

### Broad portfolio

From 32KB up to 512KB of Flash memory

#### 3x Product lines

- G4x4: Hi-Resolution line (Digital Pwr)
- G4x3: Performance line (Rich Analog)
- G4x1: Access line



All packages in production  
LQFP, QFN, BGA...

### Various HW boards

#### 3x Evaluation boards

Giving access to full features

2x Nucleo64 (G431 & G474)

1x Nucleo32

#### Motor Control Nucleo pack

#### Discovery Kits

- Digital Power (Lighting, SMPS, USB-PD...)
- Portable Oscilloscope (Analog)
- ESC for drones (Motor Control)



### Embedded SW solutions

#### Embedded SW solutions

Available on ST web site

STM32Cube G4

CubeMX



#### 3x Tool chain support

KEIL, IAR, STM32 CubeIDE



#### Motor Control SDK

Software Dev. Kit



#### Safety and Security



The STM32G4 microcontrollers have three sub-families:

- STM32G4x4: hi-resolution line
- STM32G4x3: performance line
- STM32G4x1: access line.

Two types of evaluation boards are available:

- STM32 Nucleo
- Evaluation boards

Three discovery kits complement the evaluation boards: digital power, portable oscilloscope and electronic speed controller.

Embedded software solutions are available to quickly develop applications based on STM32G4, including a motor control software development kit.

# STM32G4 Nucleo boards

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64-pin

32-pin

## STM32 Nucleo

Flexible prototyping

- NUCLEO-G431RB
- NUCLEO-G474RE
- NUCLEO-G431KB



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 connectors, STM32 Nucleo boards can easily be extended with a large number of specialized application hardware add-ons (Nucleo-64 include Arduino Uno rev3 & ST morpho connectors, Nucleo-32 include Arduino Nano connectors).

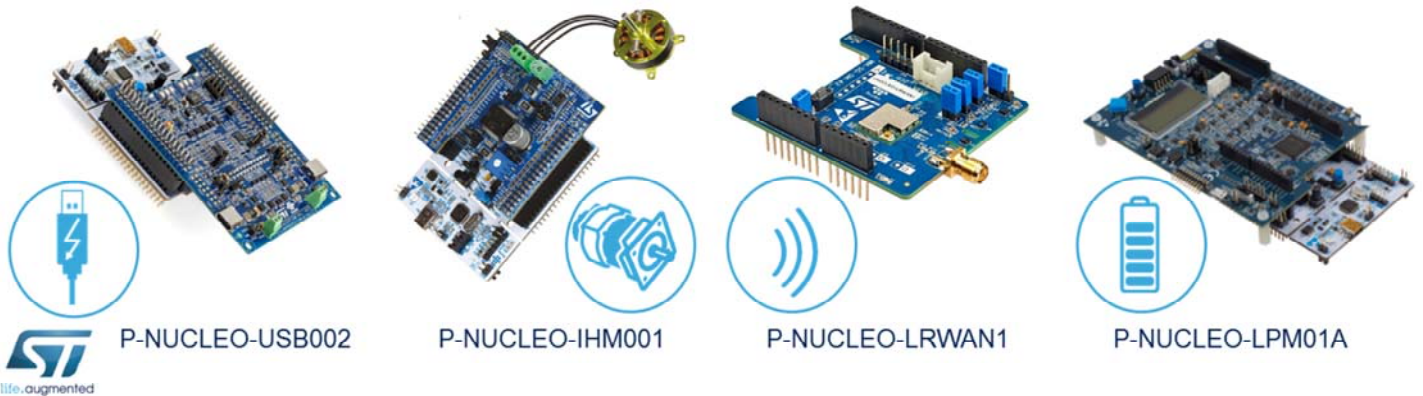
The STM32 Nucleo boards integrate an ST-Link debugger/programmer, so there is no need for a separate probe.

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

# STM32 Nucleo expansion boards

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- 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



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.

For example, USB Type-C™ and Power Delivery, motor control, LORA and power consumption measurement boards are available.



# STM32G4 Evaluation boards

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## Evaluation boards

### Full feature STM32G4 evaluation

- STM32G484E-EVAL
- STM32G474E-EVAL
- STM32G474E-EVAL1



The STM32 eval boards have been designed as a complete demonstrator and development platform for the STM32 MCUs and MPUs.

They carry external circuitry, such as transceivers, sensors, memory interfaces, displays and many more.

The evaluation boards can be considered as a reference design for application development.



## Motor Control Pack

Full feature for Motor Control and Analog

- P-NUCLEO-IHM03

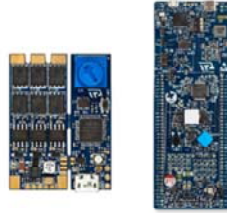


The STM32 motor control Nucleo pack P-NUCLEO-IHM03 is a kit composed of :

- The NUCLEO-G431RB Nucleo-64 board
- The X-NUCLEO-IHM16M1 motor driver expansion board
- A Low Voltage motor.

# STM32G4 Discovery boards

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## Discovery kits

Key feature prototyping

- B-G474E-DPOW1
- B-G431B-ESC1



STM32 Discovery kits are a cheap and complete solution for the evaluation of the outstanding capabilities of STM32 MCUs.



- Refer to [www.st.com/stm32nucleo](http://www.st.com/stm32nucleo)
  - Ordering information
  - Getting started manual, user's manual and application notes
  - Board schematics
  - Application development environment support
  - Demonstration firmware sources



For more information on the STM32G4 Nucleo board, go to [www.st.com/stm32nucleo](http://www.st.com/stm32nucleo).