

# STM32C0 MCU SERIES

## Entry-level 32-bit MCU for cost-sensitive applications



### Your next 8-bit MCU is a 32-bit!

The STM32C0, ST's most affordable 32-bit MCU, makes 32-bit capabilities accessible to all developers.

Bridging the gap between 8- or 16-bit MCUs and higher performance 32-bit MCUs, the STM32C0 provides access to the benefits of STM32 designs. Powered by the industry-standard Arm® Cortex®-M0+ core running at 48 MHz, the STM32C0 lets developers do more with less.

- For developers working with 32-bit MCUs, the STM32C0 offers an entry-level solution that leaves room for future product upgrades to the STM32G0 series or other STM32 MCUs.
- For designers developing applications usually served by 8-bit or 16-bit MCUs, the STM32C0 allows you to upgrade your design, with a limited impact on your cost structure and additional support thanks to a proven STM32 ecosystem.

The STM32C0 series offers up to 32 Kbytes of flash memory, and 6 to 12 Kbytes of RAM. It is available in a variety of 8- to 48-pin packages, including the WLCSP12, the UFQFPN and the tiny 3x3 mm UFQFPN20 package.

#### KEY FEATURES & BENEFITS

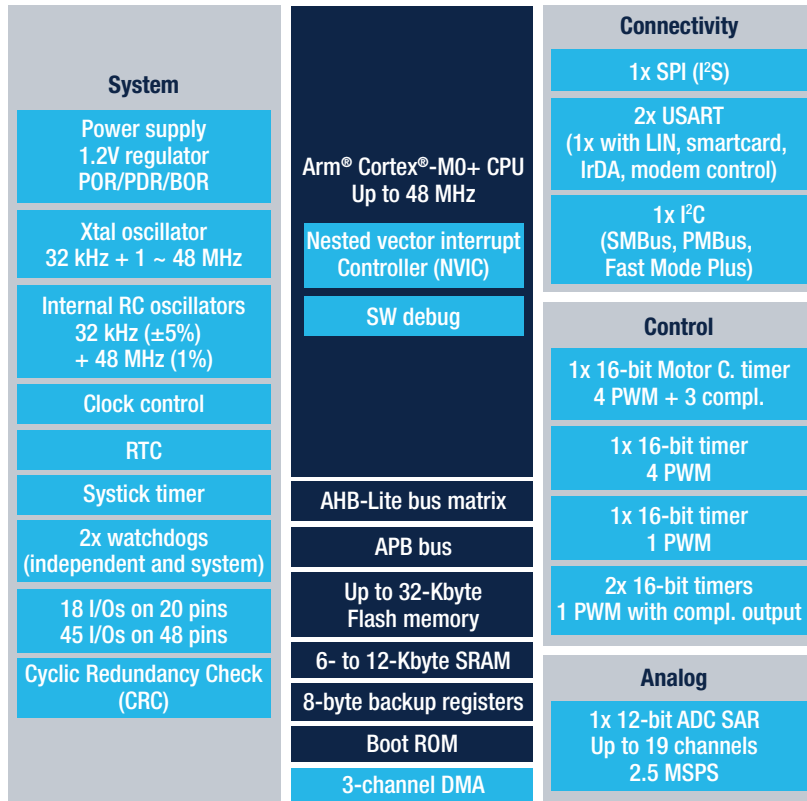
- **Affordability:** helps you reduce costs thanks to an attractive price point and an optimized BOM
- **Reliability:** benefits from proven STM32 quality & reliability
- **Continuity:** offers a consistent pinout with STM32G0 and shares the same technological platform

#### KEY APPLICATIONS

- Smart home
- Industrial devices
- Consumer devices



## STM32C0x1 BLOCK DIAGRAM



## EMBEDDED SOFTWARE

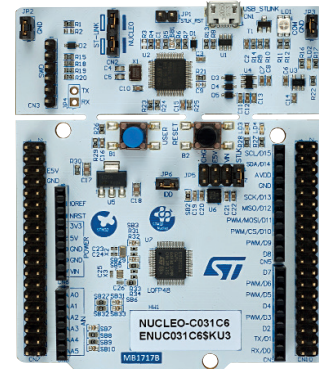
The STM32CubeC0 package includes the STM32Cube HAL and low-layer (LL) APIs peripheral drivers, plus a consistent set of middleware components (RTOS, USB, USB Power Delivery, FatFS, graphics and STM32 touch sensing). All embedded software utilities come with a full set of examples running on ST boards.

With the STM32CubeC0 package, developers can use a free, proven software suite with direct access to Azure RTOS middleware components.

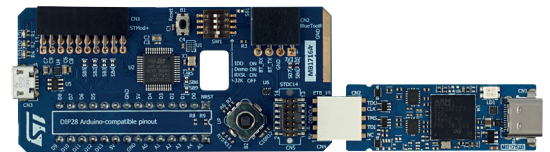
**STM32C0 ONLINE TRAINING**  
[www.st.com/stm32c0-online-training](http://www.st.com/stm32c0-online-training)

## HARDWARE TOOLS

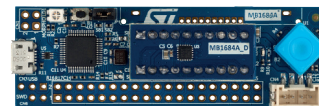
A full set of evaluation boards enables flexible prototyping as well as full STM32C0 evaluation.



NUCLEO-C031C6  
Prototyping



STM32C0316-DK  
Mini evaluation board



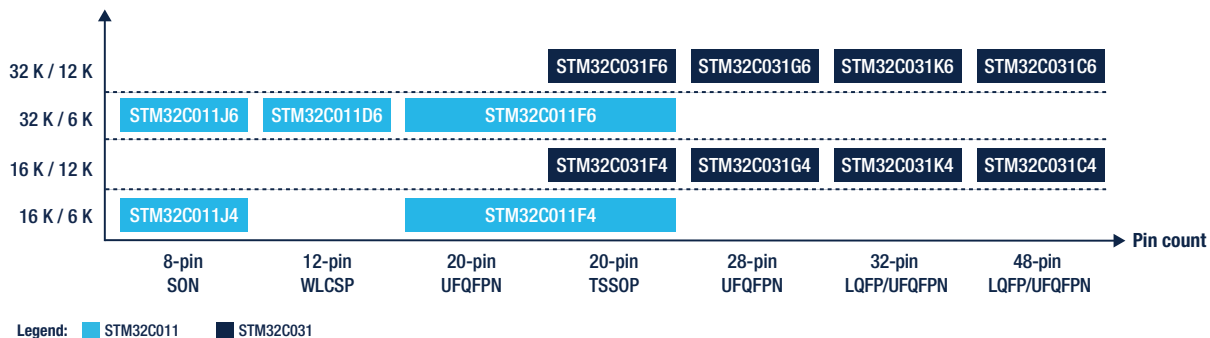
STM32C0116-DK  
Wired sample board

## SOFTWARE TOOLS



## STM32C0 PORTFOLIO

Flash memory size / RAM size (bytes)



© STMicroelectronics - January 2023 - Printed in United Kingdom - All rights reserved  
 ST and ST logo are trademarks or registered trademarks of STMicroelectronics International NV or its affiliates in the EU and/or other countries. For additional information about ST trademarks, please refer to [www.st.com/trademarks](http://www.st.com/trademarks). All other product or service names are the property of their respective owners.

