

# STM32G0 Series Mainstream MCUs



## Entry-level Arm® Cortex-M0+ MCUs - Efficiency at its best

The STM32G0 Series is not simply another Arm® Cortex®-M0+ microcontroller. It is setting a new definition of what an efficient microcontroller must offer. This is all about best optimization, down to each and every detail, to offer the best value for money and allow you to achieve your goals with the minimum BOM cost and the maximum flexibility for upgrades.

The STM32G0x0 Value Line embeds an accurate internal clock allowing further cost saving, and makes no compromise on what matters. The STM32G0x1 line provides upgraded features in analog, timer resolution up to 2x<sub>fcpu</sub> (7.8ns) and is IoT ready with enhanced security features. It supports the latest USB type-C specification including Power Delivery 3.0.

### EFFICIENT

- Arm® Cortex® M0+ at 64 MHz
- Compact cost: maximum I/Os count
- Best RAM/Flash Ratio
- Smallest possible package down to 8-pin
- Large platform up to 512 Kbyte Flash in small packages
- 500 nA in standby with RTC, 3.5 µA in stop mode, <100 µA/MHz
- Accurate internal high-speed clock 1% RC
- Best optimization, down to each and every detail
- Offers the best value for money
- Free tool suite



### ROBUST

- Low electromagnetic susceptibility, EMC
- Clock Monitoring and 2 Watchdogs
- Voltage monitoring with interrupts and reset
- Error correction on Flash, parity on RAM
- IoT ready with embedded security
- Hardware AES-256 encryption or the new Securable Memory Area.
- Safe Firmware upgrade / Install

### SIMPLE

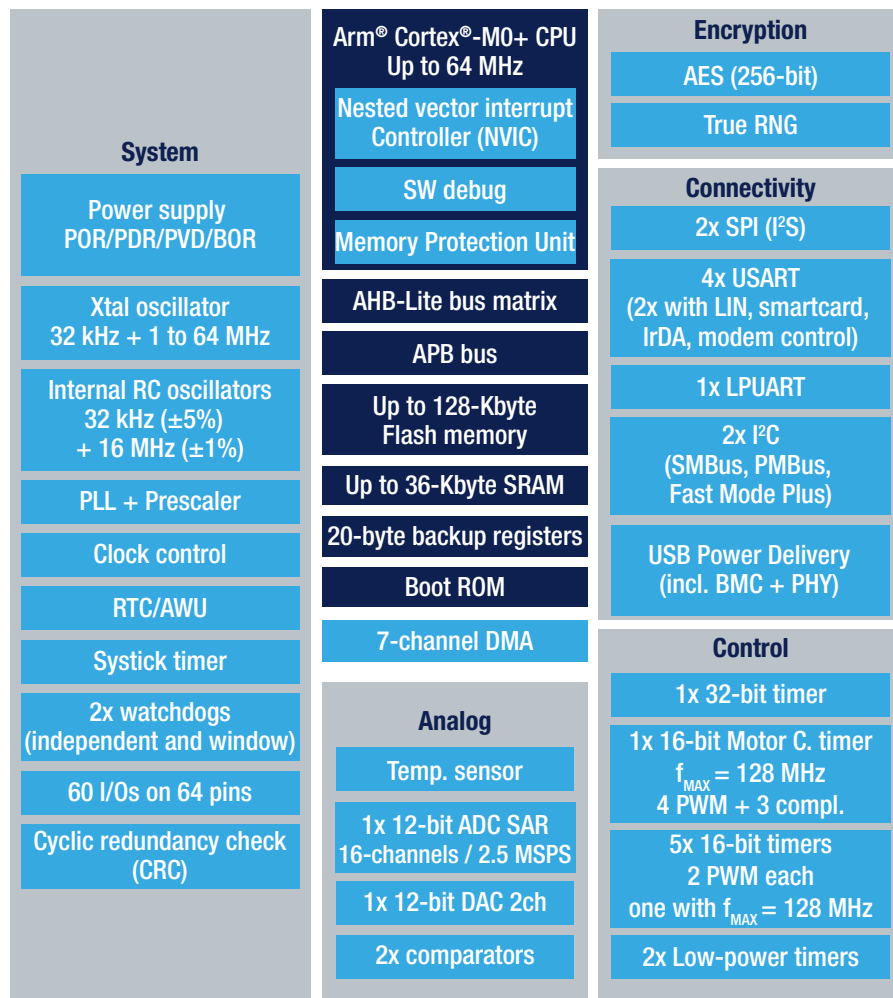
- Easy to configure thanks to the intuitive and graphic STM32CubeMX configuration tool.
- Easy to develop based on the Hardware Abstraction Layer library (HAL) or the low-layer library (LL) allowing maximum re-use and faster time-to-market.



**STM32GO ONLINE  
TRAINING**

[www.st.com/stm32g0-online-training](http://www.st.com/stm32g0-online-training)

## STM32G081 BLOCK DIAGRAM



## HARDWARE TOOLS

A full set of evaluation boards enables flexible prototyping as well as full STM32G0 evaluation.



STM32G081B-EVAL  
Evaluation board



STM32G071B-DISCO  
USB Type-C™ Discovery Kit



NUCLEO-G070RB / NUCLEO-G071RB  
(64-pin Nucleo)

## SOFTWARE TOOLS

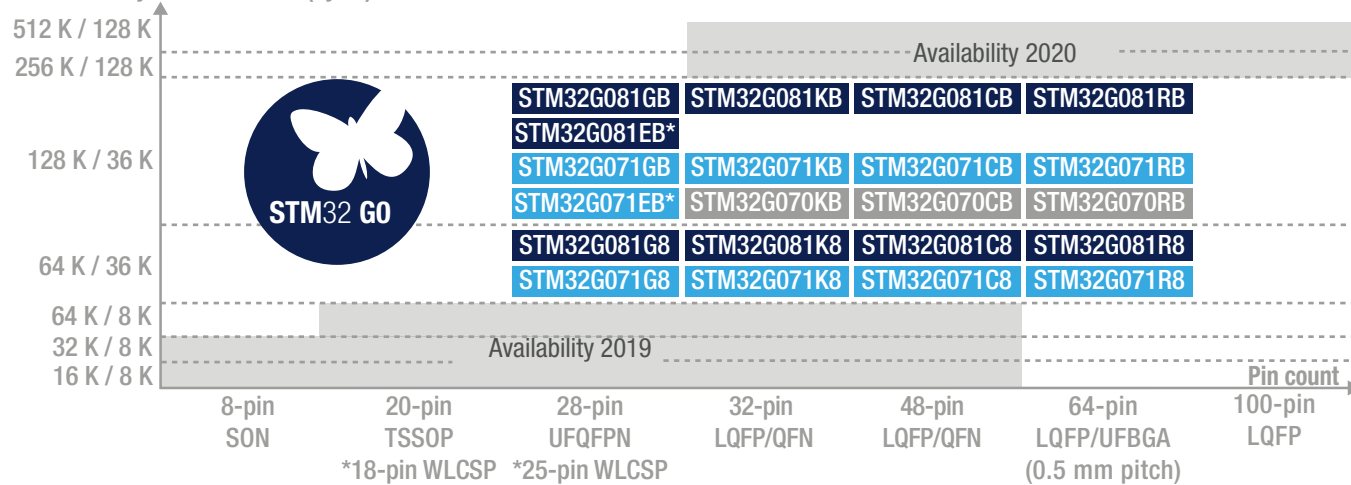
STM32CubeMX enables fast development thanks to its MCU clock configurator, power consumption calculator and code generation tools.

## EMBEDDED SOFTWARE

The STM32CubeGO 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 STMicroelectronics boards.

## STM32G0 PORTFOLIO

Flash memory size / RAM size (bytes)



STM32G0x1 Access line  
 With 128-/256-bit AES Hardware Encryption

STM32G0x1 Access line  
 Without 128-/256-bit AES Hardware Encryption

STM32G0x0 Value line